LIFE SPAN DEVELOPMENT

UNIT I

Lesson – 1
FOUNDATIONS OF DEVELOPMENT

Contents

1.0 AIMS AND OBJECTIVES

This Lesson will help understand the foundations of life span development which is fascinating and ever changing.

After going through this Lesson, you will be able to:

i)   describe the early approaches to life span development

ii)   list the meaning of developmental changes

iii)   mention the basic issues of development

iv)   state the obstacles in studying life span development

1.1 INTRODUCTION

Life Span Development or Developmental psychology is the branch of psychology that studies intraindividual changes and interindividual changes within these intraindividual changes. Its task, as La Bouvie has pointed out, is "not only description but also explication of age-related changes in behavior in terms of antecedent-consequent relationships".

Developmental psychologists study developmental change covering the life span horn conception to death. By so doing, they attempt to give a complete picture of growth and decline. Others cover only a segment of the life span-childhood, adulthood, or old age. In this book an attempt will be made to cover all segments and show the important developmental changes at different periods during the entire life span.

Siegel during the early years, as has explained, "Life span psychology was preoccupied with ages and stages. Investigators sought to learn the typical age at which various stages of development occurred". The areas in which research was mainly concentrated were those

considered significant for human evolutional adaptation. For the most part, research studies were concentrated on preschool and school-age children and on adolescents. Only later did research extend downward, first to birth and then to conception, and later upward, to adulthood, old age, and finally to middle age.

The two major reasons for the uneven emphasis of developmental psychology, (1), the study of a particular period in the developmental pattern has been greatly influenced by the desire to solve some practical problem or problems associated with that period. Research in the area of middle age, for example, is an outgrowth of the realization that good adjustments in the latter years of life depend on how well one has adjusted to the physical and psychological changes that normally occur in the middle years.

Since the focus of interest in life span psychology has changed over the years, there are gaps in our knowledge of the different developmental phenomena characteristic of the different periods. These gaps are also due in part to difficulties in studying the different patterns of behavior characteristic of a given period, especially difficulties in getting representative samplings of subjects of a given age and in finding a suitable method for the study of behavior patterns.

(2) The reason for the uneven emphasis is that it is- harder to study people at some stages of life than at others. Getting middle-aged and elderly subjects, for example, is far more difficult than getting preschool or school-age children or even adolescents.

Life Span psychologists have six major objectives: (1) to find out what are the common and characteristic age changes in appearance, in behavior, in interests, and in goals from one developmental period to another; (2) to find out when these changes occur; (3) to find out what causes them; (4) to find out how they influence behavior; (5) to find out whether they can or cannot be predicted; and (6) to find out whether they are individual or universal.

1.1.1 Early Approaches

Early forerunners of the scientific study of development were *baby biographies,* journals kept to record the early development of a child. One early journal, published in 1787 in Germany, contained Dietrich Tiedemann's (1897/1787) observations of his son's sensory, motor, language, and cognitive behavior during the first 21/2 years. Typical of the speculative nature of such observations was Tiedemann's erroneous conclusion, after watching the infant suck more on a cloth tied around something sweet than on a nurse's finger, that sucking appeared to be "not instinctive, but acquired".

It was Charles Darwin, originator of the theory of evolution, who first emphasized the *developmental* nature of infant behavior. In 1877 Darwin published notes on his son Doddy's sensory, cognitive, and emotional development during his first twelve months. Darwin's journal gave "baby biographies" scientific respectability; about thirty more were published during the next three decades.

By the end of the nineteenth century, several important trends in the western world were preparing the way for the scientific study of development. Scientists had unlocked the mystery of conception and were arguing about the relative importance of "nature" and "nurture" (inborn characteristics and experiential influences). The discovery of germs and immunization made it possible for many more children to survive infancy. Laws protecting children from long workdays let them spend more time in school, and parents and teachers became more concerned with identifying and meeting children's developmental needs. The new science of psychology taught that people could understand themselves by learning what had influenced them as children. Still, this new discipline had far to go. For example, adolescence was not considered a separate period of development until the early twentieth century, when G. Stanley Hall, a pioneer in child study, published a popular (though unscientific) book called *Adolescence* (1904/1916).

Hall also was one of the first psychologists to become interested in aging. In 1922, at age

78, he published *Senescence: The Last Half of Life.* Six years later, Stanford University opened the first major scientific research unit devoted to aging. But not until a generation later did the study of aging blossom. Since the late 1930s a number of important long-term studies discussed in the second half of this book, such as those of K. Warner Schaie, George Vaillant, Daniel Levinson, and Ravenna Helson, have focused on intelligence and personality development in adulthood and old age.

1.1.2 Studying the life Span

Today most developmental scientists recognize that development goes on throughout life. This concept of a lifelong process of development that can be studied scientifically is known as life-span development.

Life-span studies grew *out* of research designed to follow children through adulthood. The Stanford Studies of Gifted Children (begun in 1921 under the direction of Lewis M. Terman) trace the development of people (now in old age) who were identified as unusually intelligent in childhood. Other major studies that began around 1930-the Fels Research Institute Study, the Berkeley Growth and Guidance Studies, and the Oakland (Adolescent) Growth Study-have given us much information on long-term development.

Because human beings are complex, the study of life-span development is *inter-disciplinary,* drawing on many fields, or disciplines. These include psychology, psychiatry, sociology, anthropology, biology, genetics (the study of inherited characteristics), family science (the study of family processes), education, history, philosophy, and medicine.

1.2 MEANING OF DEVELOPMENTAL CHANGES

Development means a progressive series of changes that occur as a result of maturation and experience. As Van den Daele has pointed out, "development implies qualitative change". This means that development does not consist merely of adding inches to one's height or of improving one's ability. Instead, it is a complex process of integrating many structures and functions.

There are two essentially antagonistic processes in development take place simultaneously throughout life -growth, or evolution, and atrophy, or involution. Both begin at conception and end at death. In the early years growth predominates, even though atrophic changes occur as early as embryonic life. In the latter part of life, atrophy predominates, though growth does not stop; hair continues to grow, and cells continue to be replaced. With aging, some parts of the body and mind change more than others.

The human being is never static. From conception to death, change is constantly taking place in physical and psychological capacities. As Piaget has explained, structures are "far from being static and given from the start." Instead, a maturing organism undergoes continued and progressive changes in response to experiential conditions, and these result in a complex network of interaction.

As development is continuous, as Bower has pointed out, in the sense that it is a cyclic process with competences developing, and then disappearing, only to appear at a later age, it is not continuous in the sense that it increases constantly but rather in a series of waves with whole segments of development reoccurring repetitively. Bower has explained, newborns walk, if held, and then this ability disappears only to reappear at eight or ten months of age. He explains that the "various explanations of repetitive processes in development thus seem to differ depending on the specific repetition to be explained. What all the explanations have in common, however, is that they preserve the assumption that psychological growth, in spite of its apparent reversals, is a continuous and additive process". When regression to an earlier stage occurs, there is usually a cause for it, as in the regression to awkwardness that occurs with the rapid growth at puberty.   .

The pattern of change resembles a bell shaped curve, rising abruptly at the start and then

flattening out during the middle years, only to decline slowly or abruptly in old age. It is important to recognize that at no time can this pattern be represented by a straight line, though plateau periods of short or long duration may occur in the development of different capacities.

1.2.1 Goal of Life span Changes

It is to enable people to adapt to the environment in which they live. To achieve this goal, self-realization, or, as it is sometimes called, 'Self-actualization," is essential. However, this goal is never static. It may be considered an urge-the urge to do what one is fitted to do, the urge to become the person, both physically and psychologically, that one wants to be.

The way people express this urge depends on the individual's innate abilities and training, not only during the early, formative years of childhood but also as he or she grows older and comes under greater pressures to conform to social expectations.

Since self-realization plays an important role in mental health, people who 'make good personal and social adjustments must have opportunities to express their interests and desires in ways that give them satisfaction but, at the same time, conform to accepted standards. Lack of these opportunities will result in frustrations and generally negative attitudes toward people and toward life in general.

1.2.2 Research on Life span Change

Research on developmental changes during childhood and adolescence has been far more extensive than studies of changes that occur during the later years. Among the reasons for this uneven emphasis is the fact that the many prevailing traditional beliefs about children and adolescents have acted as a spur to researchers, who have set up studies designed to prove or disprove these beliefs. Traditional beliefs concerning the post adolescent years are less numerous, and have had less impact on the direction of research. Further, developmental changes occurring at middle age were regarded as purely physiological and, therefore, outside the scope of psychological research. Changes occurring in old age affected a relatively small percentage of the population and were thus considered less important than changes that occur during the early years. It is now recognized that changes occurring at any developmental stage are worthy of study.

The most important incentive to research about developmental changes has been the nature-nurture controversy which has raged for decades. How important a role-maturation based on genetic factors plays in bringing about developmental changes as compared with environmental pressures and experiences has been the focal point of interest, and many research studies have been devoted to trying to find a satisfactory solution to this controversy.

The research on developmental changes at all stages has been the emergence of a large number of new theories about the causes and effects of such changes. These theories are not always backed up by adequate evidence, 'and a great deal of research is motivated by the desire to substantiate or refute material that has widespread acceptance in the field. Any new theory can lead to controversy and experimentation, but of all theories, none have provided a more powerful incentive to research than Piaget's developmental theories, especially his theories about 'cognitive development. Other views that have inspired numerous studies are Kohlberg's stages of moral development and Gesell's stages of equilibrium and disequilibrium.

1.2.3 Attitudes toward Life span Changes

Changes of a physical or psychological nature are constantly taking place; many people are only vaguely aware of them unless they occur abruptly or markedly affect the pattern of their lives. The changes of old age, for example, usually occur at a much slower pace than those of childhood or adolescence. However, they still require readjustments on the part of all

individuals. But, when individuals can make these adjustments relatively slowly, they themselves or others may not be conscious of them.

Thus when changes are rapid, on the other hand, the individual is only too well aware of them, as are others. During the puberty growth spurt at the end of childhood and the beginning of adolescence, such comments as "My, how you have grown since I last saw you!" are evidence of how others notice these changes.

Similarly, in senescence, when the downward movement begins to accelerate, the elderly are aware of the fact that their health is "failing" and that their minds are "slipping." Constant readjustment to these changes is necessary in the scheduled pattern of their lives. They must slow down as the incapacities and infirmities of old age catch up with them and they must frequently forgo some of the activities that formerly played important roles in their lives.

As there is, a tendency for most people to regard the past as better than the present. And even though most children look forward to the day when they will be "teenagers," when that time comes they often long for the carefree days of their childhood. Similarly, many men who look forward to retirement wish, when the mandatory age for retirement arrives, that they could go back to earlier years when their usefulness and prestige were recognized by the social group.

As and when people become aware of the changes taking place in them, they develop definite attitudes toward these changes. Whether these attitudes will be favorable or unfavorable depends on a number of factors, the most important of which are described below.

1. 2. 4 Some aspects that influence attitudes toward Life span changes

Appearance: Developments that improve one's appearance are welcome and lead to favorable attitudes while those that detract from one's appearance are resisted and every possible attempt is made to camouflage them.

Behaviour: As and when behaviour changes are disconcerting, as during puberty and senescence, they affect attitudes toward the changes unfavorably. The reverse is true when changes are favorable, as occurs, for example, when the helplessness of babyhood gradually gives way to the independence of childhood.

Cultural Stereotypes: From mass media, people learn cultural stereotypes associated with different ages and they use these stereotypes to judge people of those ages.

Cultural Values: Each culture has certain values associated with different ages. Because maximum productivity is associated with young through early middle-age adulthood, attitudes toward this age group are more favorable than attitudes toward other ages.

Role Changes: Attitudes toward people of different ages are greatly influenced by the roles they play. When people change their roles to less favorable ones, as in the case of retirement or widowhood, social attitudes toward them are less sympathetic.

Personal Experiences: Personal experiences have a profound effect on an individual's attitude toward developmental changes. Since the authority and prestige of middle-aged executive's decreases as they approach retirement, their attitudes toward aging are, for example, unfavorably affected. These attitudes are intensified by unfavorable social attitudes.

Check Your Progress 1

State some of the aspects that influence attitudes toward Life span changes.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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1. 3 BASIC ISSUES

Research on human development is a relatively recent endeavor. Studies of children did not begin until the early part of the twentieth century. Investigations into adult development, aging, and change over the life course emerged only in the 1960s and 1970s. Nevertheless, ideas about how people grow and change have existed for centuries. As these speculations combined with research, they inspired the construction of *theories* of development. A theory is an orderly, integrated set of statements that describes, explains, and predicts behaviour. For example, a good theory of infant-caregiver attachment would (1) *describe* the behaviors of babies of 6 to 8 months of age as they seek the affection and comfort of a familiar adult, (2) *explain* how and why infants develop this strong desire to bond with a caregiver, and (3) *predict* the consequences of this emotional bond for relationships throughout life.

Theories are vital tools for two reasons. First, they provide organizing frameworks for our observations of people. In other words, they *guide and give meaning to what we see.* Second, theories that are verified by research provide a sound basis for practical action. Once a theory helps us *understand* development, we are in a much better position to know *what to do* in our efforts to improve the welfare and treatment of children and adults.

Theories are influenced by the cultural values and belief systems of their times. But theories differ in one important way from mere opinion and belief: A theory's continued existence depends on *scientific verification*. This means that the theory must be tested with a fair set of research procedures agreed on by the scientific community and that its findings must endure, or be replicated, over time.

In the field of human development, there are many theories with very different ideas about what people are like and how they change. The study of development provides no ultimate truth because investigators do not always agree on the meaning of what they see. In addition, humans are complex beings; they change physically, mentally, emotionally, and socially. As yet, no single theory has explained all these aspects. However, the existence of many theories helps advance knowledge because researchers are continually trying to support, contradict, and integrate these different points of view.

There are some major theories of human development and research strategies used to test them. We can easily organize them, since almost all take a stance on three basic issues: (1) Is the course of development continuous or discontinuous? (2) Does one course of development characterize all people, or are there many possible courses? (3) Are genetic or environmental factors more important in determining development? Let's look closely at each of these issues.

1.3.1 Continuous or Discontinuous Development?

The best way to describe the differences in capacities between small infants, young children, adolescents, and adults is how the major theories recognize two possibilities.

One view holds that infants and preschoolers respond to the world in much the same way as adults do. The difference between the immature and mature being is simply one of *amount* or *complexity.* For example, when Shanthi was a baby, her perception of a piano melody, memory for past events, and ability to sort objects into categories may have been much like our own. Perhaps her only limitation was that she could not perform these skills with as much information and precision as we can. If this is so, then change in her thinking must be continuous-a process of gradually augmenting the same types of skills that were there to begin with.

A second view regards infants and children as having *unique ways of thinking, feeling, and behaving,* ones quite different from adults'. In other words, development is discontinuous-a process in which new and different ways of interpreting and responding to the world emerge at particular time periods. From this perspective, infant Shanthi was not yet able perceive and organize events and objects as a mature person could. Instead, she moved through a series of developmental steps, each with unique features, until she reached the

highest level of functioning.

Theories that accept the discontinuous perspective regard development as taking place in *stages-qualitative changes* thinking, feeling, and behaving that characterize specific periods of development. In stage theories, development is much like climbing a staircase, with each step corresponding to a more mature, reorganized way of functioning. The stage concept also assumes that people undergo periods of rapid transformation as they step up from one stage to the next. In other words, change is fairly sudden rather than gradual and ongoing.

1.3.2 Course of Development

Stage theorists assume that people everywhere follow same sequence of development. Yet the field of human development is becoming increasingly aware that children and adults live in distinct contexts or unique combinations personal and environmental circumstances that can result different paths of change. For example, a shy individual, fears social encounters develops in very different contexts from those of a social agemate who readily seeks out other people. Children and adults in village societies encounter experiences in their families and communities that differ sharply from those of people in large cities. These different circumstances foster different intellectual capacities, social skills, and feelings about the self and others.

Contemporary theorists regard the contexts that shape development as many-layered and complex. On the personal side, they include heredity and biological makeup. On the environmental side, they include immediate settings, such as home, school, and neighborhood, as well as circumstances more remote from people's everyday lives-community resources, societal values, and historical time period. Finally, a special interest in culture has made researchers more conscious than ever before of diversity in development.

1.3.3 Nature or Nurture

Each theory describes the course of human development, and also each theory takes a stance on a major question about its underlying causes: Are genetic or environmental factors important in determining development? This is the age-old nature-nurture controversy. By *nature,* we mean inborn biological givens-the hereditary information we receive from our parents at the moment of conception. By *nurture,* we mean the complex forces of the physical and social world that influence our biological makeup and psychological experiences before and after birth.

Even though all theories grant at least some role to both nature and nurture, they vary in emphasis. For example, consider the following questions: Is the developing person's ability to think in more complex ways largely the result of an inborn timetable of growth? Or is it primarily influenced by stimulation from parents and teachers? Do children acquire language rapidly because they are genetically predisposed to do so or because parents tutor them from an early age? And what accounts for the vast individual differences among people-in height, weight, physical coordination, intelligence, personality, and social skills? Is nature or nurture more responsible?

The theories take a stand on nature versus nurture affect their explanations of individual differences. Some theorists emphasize *stability-* that individuals who are high or low in a characteristic (such as verbal ability, anxiety, or sociability) will remain so at later ages. These theorists typically stress the importance of *heredity.* If they regard environment as important, they usually point to *early experiences* as establishing a lifelong pattern of behavior. Powerful negative events in the first few years, they argue, cannot be fully overcome by later, more positive ones. Other theorists take a more optimistic view. They emphasize *plasticity*-that change is possible and likely if new experiences support it.

Check Your Progress 2

State basic issues involved in the Life span development.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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1.4 OBSTACLES IN STUDYING LIFE-SPAN DEVELOPMENT

All studies of the Life span are beset by obstacles in varying degrees. The five most common and most serious of these are discussed below.

1.4.1 Representative Samples of Subjects

The first obstacle scientists' encounter in studying development during the life span is securing representative samples of subjects at different age levels, although it is relatively easy to get representative samplings of subjects from among schoolchildren and college students. In the case of newborn infants, however, researchers often meet with strong parental objections. Getting older adolescents and young adults who are not attending school to volunteer as subjects is also difficult because they may not be available for study at anyone particular place.

This difficulty increases with advancing age, which is why so many of the studies relating to the latter years of life have been made on men and women living in institutions, people who unquestionably are not representative of the general population.

Recruiting young adults, middle-aged adults, or the elderly as voluntary participants in experiments has likewise been a difficult task, even when they are paid for their time. Many persons shy away from any testing program, partly because of lack of personal interest but mainly because they are afraid they will not do well and, as a result, create an unfavorable impression. Relying on those who are willing to participate may be creating a bias just as using institutional cases does.

1.4.2 Establishing Rapport with Subjects

The second obstacle scientists' encounter in studying development during the life span is establishing rapport with subjects at different age levels. There is no guarantee that scientists will be able to elicit the information they are seeking from any group unless they are able to establish rapport with their subjects. Therefore, there is no guarantee that the data they obtain is as accurate or as comprehensive as it might have been had a better relationship existed between subjects and experimenters.

The reason for this is that obtaining information from subjects of any age is extremely difficult because most people resent having a stranger pry into their personal affairs. Even schoolchildren and college students, who often take tests or fill out questionnaires as part of their classroom work, show their resentment by being uncooperative or even by falsifying the information they give. This is even truer of adults of all ages. Their resentment at participating in a scientific study may be partially overcome if they are paid to do so, but they tend to regard the experimenter as an invasion of privacy.

As a result, it is questionable whether data obtained from many studies is a true picture of the involved individuals' attitudes, feelings, and values. Only when good rapport can be established with the subjects and when there is evidence of cooperation on their part can great confidence be placed in the results of these studies.

1.4.3 Methodology

The third obstacle scientists' encounter in studying development during the life span is securing a satisfactory method. This is because no one method can be used satisfactorily for studying people at all ages or for investigating all areas of development. Some of the methods that must be resorted to, for lack of better ones, are of dubious scientific value.

Because of the wide age range of subjects and the variety of different areas of development that must be studied to give a composite picture, assorted methods have had to be used. Some have been borrowed from medicine, from the physical sciences, and from related social sciences, especially anthropology and sociology. Some have made use of laboratory settings, and others of the naturalistic settings of the home, school, community, or work environment. Some are regarded as reliable, while others, especially the retrospective and introspective techniques, are of questionable value.

Regardless of the method used, most of the studies have been cross-sectional comparisons of the same abilities at different stages of development. As such, they do not give evidence about developmental trends or about intraindividual variability. Nor is it possible, when using cross-sectional comparisons, to assess the relative behavior constellations of individuals at an early age and similar behavior in adult life.

One of the most serious problems connected with the cross-sectional approach is that it is almost impossible to get comparable groups of subjects for study at different age levels. This can bias the result of studies, especially studies of old age. When mental abilities are studied using the cross-sectional approach, mental decline is reported to be far greater than when the same mental abilities are studied using the longitudinal approach. This, in turn, has given scientific backing to the popular belief that mental decline in old age is not only great but also universal.

Another serious problem associated with the cross-sectional approach is that it does not take into consideration cultural changes which always play a major role in the patterns of physical and mental development. This results in a tendency to interpret any change that may appear as an age change.

Cultural changes affect values, among other things. A comparison of adolescents of today with members of the older generation showed that the latter tend to disapprove more strongly of extravagance than adolescents do. This might be interpreted to mean that members of the older generation have become rigid with age. In reality, the difference is one of cultural values. When members of the older generation were growing up, high value was placed on a prudent spending of money and on having a nest egg for the proverbial rainy day. Today, adolescents are growing up in a culture dominated by the philosophy of "earn more and spend more". Because of the rapid change in cultural values taking place at the present time, children often consider their parents' values old-fashioned.

1.4.4 Accuracy of Data Obtained

The fourth obstacle scientists' encounter in studying development during the life span is ensuring that the data obtained from the studies will be accurate. Inaccuracies may result when a biased sampling of subjects gives a false picture of the normal developmental pattern at a particular age. This can happen, for example, when institutionalized elderly people are used for the study and the subjects try to present as favorable a picture of them as they can and, either consciously or unconsciously, distort their introspective or retrospective reports. It can also occur when the only method available for studying a certain area of development is less than satisfactory.

In the measurement of intelligence it is still questionable if the results are accurate for the first two years of life. There is even controversy about the accuracy of intelligence tests for older age levels. Observational techniques for the study of behavior during the preschool

years are questioned for accuracy because of the tendency of observers to draw inferences from their study of children's behavior and speech.

Studying well-being, life satisfaction, or happiness is very difficult because only subjective measures can be used. The accuracy of such measures is open to question. In the study of fears by means of oral or written checklists, it was found that subjects often do not identify fear as different from anxiety or worry. Furthermore, when parents report their children's fears, they often describe different fears than their children do. In addition, it is impossible to identify the intensity of fears using only a checklist.

Even though the longitudinal approach has a methodological advantage over the cross-sectional approach, the problem of accuracy is still ever present. Unless such studies are started when the subjects are very young, information about their earlier lives must be supplied by the subjects themselves or by parents, teachers, and peers, who tend to interpret the data they report in terms of their own attitudes and experiences.

1.4.5 Ethical Aspects of Research

The fifth obstacle scientists' encounter in studying development during the life span involves the ethical aspects of research. Today there is a growing trend to take this into account, and it has been a stumbling block to certain kinds of studies, which, in the past, were made without consideration of their fairness to the subjects studied. With the trend now a days toward considering the rights of subjects, emphasis in being placed on asking their consent to participate in experiments, or, for the very young, the consent of their parents or guardians. Such consideration also applies to high school and college students; they no longer are expected to take time from their studies to participate in experiments unless they are paid to, do so. Thus there is a tendency to bias the sampling because only those who need the money or those who feel that the money is worth their while are willing to accommodate the researcher.

Consideration of the rights of subjects is therefore bound to lead to gaps in present-day knowledge of development. Aside from preschool and school age children, no other group of individuals has been taken greater advantage of by scientific researchers' than the institutionalized elderly. Just as preschool and school-age children formerly were not consulted about their willingness to participate in an experiment, so the wishes of the institutionalized elderly were ignored. They were expected to take tests or answer questions, regardless of how they felt about the matter, because they were receiving public assistance. Even in privately supported institutions the inmates were not always consulted.

Such procedures are now regarded as an invasion of privacy and as ethically questionable: As a result, many experimenters are taking into consideration the wishes of those they try to recruit as subjects. They are also taking a new attitude toward institutionalized middle-aged people, recognizing their rights to participate or refuse to participate in any research study. While these new attitudes toward ethical standards have resulted in fairer treatment of institutionalized middle-aged and older people, they have made it more difficult to get subjects for scientific research among the older age groups.

Check Your Progress 3

Write the five most common and most serious obstacles in studying life-span development.
Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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1.5 LET US SUM UP

In this Lesson, we have touched upon the following points:
- i) Early Approaches in studying the life Span
- ii) Meaning of Development changes
- iii) Goal of Life span Changes
- iv) Research on Life span Change
- v) Attitudes toward Life span Changes
- vi) Some aspects that influence attitudes toward Life span changes
- vii) Continuous or Discontinuous Development
- viii) Obstacles in Studying Life-Span Development

1.6 Check Your Progress: Model Answers

1. Your answer may include the description of
   - i) Appearance
   - ii) Behaviour
   - iii) Cultural Stereotypes
   - iv) Cultural Values
   - v) Role Changes
   - vi) Personal Experiences

2. The Basic issues that are to be dealt are:
   - i) Continuous or Discontinuous Development
   - ii) Course of Development
   - iii) Nature or Nurture

3. The five most common and most serious obstacles in studying life-span development could be:
   - i) Representative Samples of Subjects
   - ii) Establishing Rapport with Subjects
   - iii) Methodology
   - iv) Accuracy of Data Obtained
   - v) Ethical Aspects of Research

1.7 Lesson - End Activities

(1) Have a discussion with parents and list down the factors have high influence on development.

(2) Develop miniature life situations tells to find out the continuous and discountinuous development.

1.8 References

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2. Symonds, P., The Dynamics of Human Adjustment, New York: Appleton, 1976.

LESSON – 2
RECENT THEORETICAL PERSPECTIVES – METHODS

Contents

2.0 AIMS AND OBJECTIVES

This lesson will provide a glimpse into the various old and new theories of life span development. It also covers the research methods in studying the developmental aspects of a human being.

After going through this Lesson, you will be able to:

i)   state the twentieth century theories that helped to put a foundation in studying development.

ii)   understand the recent theories of life span development.

iii)   list the research methods most commonly used.

iv)   highlight the general research designs employed in psychology.

v)   explain the special designs for studying development.

2.1 INTRODUCTION

One of our human characteristics is that we seek logical explanations of things that happen. The scientific method involves formulating a problem, developing a hypothesis, testing it, and then drawing conclusions that are stated in the form of a theory. A theory organizes the data, ideas, and hypothesis and states them in coherent, interrelated, general propositions, principles or laws. These propositions, principles or laws are useful in explaining and predicting phenomena, now and in the future. The theories may be arranged into two major categories. They are I. **Mid twentieth century theories** 1. Psychoanalytic 2. Learning 3. Cognitive and II. **Recent Theoretical Perspectives** 4. Information Processing 5. Ethology and Evolutionary Developmental Psychology 6. Vygotsky's Sociocultural Theory 7. Ecological Systems Theory

2.2 MID TWENTIETH CENTURY THEORIES

2.2.1 The Psychoanalytic Perspective

According to the psychoanalytic perspective, people move through a series of stages in which they confront conflicts between biological drives and social expectations. The way these conflicts are resolved determines the individual's ability to learn, to get along with others, and to cope with anxiety.

Freud's Theory. Freud, a Viennese physician, saw patients in his practice with a variety of nervous symptoms, such as hallucinations, fears, and paralyses that appeared to have no physical basis. Seeking a cure for these troubled adults, Freud found that their symptoms could be relieved by having patients talk freely about' painful events of their childhoods. On the basis of adult remembrances, he examined the unconscious motivations of his patients and constructed his psychosexual theory, which emphasized that how parents manage their child's sexual and aggressive drives in the first few years is crucial for healthy personality development.

Three Parts of the Personality. In Freud's theory, three parts of the personality-id, ego, and superego-become integrated during five stages, summarized in Table 1. The *id,* the largest portion of the mind, is the source of basic biological needs and desires. The *ego*-the conscious, rational part of personality-emerges in early infancy to redirect the id's impulses so they are discharged on appropriate objects at acceptable times and places. For example, aided by the ego, the hungry baby of a few months of age stops crying when he sees his mother unfasten her clothing for breast-feeding.

Between 3 and 6 years of age, the *superego,* or conscience, develops from interactions with parents, who insist that children conform to the values of society. Now the ego faces the increasingly complex task of reconciling the demands of the id, the external world, and conscience. For example, when the ego is tempted to gratify an id impulse by hitting a playmate to get an attractive toy, the superego may warn that such behavior is wrong. The ego must decide which of the two forces (id or superego) will win this inner struggle, or it must work out a compromise, such as asking for a turn with the toy. According to Freud, the relations established among the id, ego, and superego during the preschool years determine the individual's basic personality.

Psychosexual Development. Freud believed that during childhood, sexual impulses shift their focus from the oral to the anal to the genital regions of the body. In each stage of development, parents walk a fine line between permitting too much or too little gratification of their child's basic needs. If parents strike an appropriate balance, then children grow into well-adjusted adults with the capacity for mature sexual behavior, investment in family life, and rearing of the next generation. Freud's psychosexual theory highlighted the importance of family relationships for children's development. It was the first theory to stress the role of early experience.

Erikson's Theory. Although Erikson (1950) accepted Freud's basic psychosexual framework, he expanded the picture of development at each stage. In his **psychosocial theory**, Erikson emphasized that the ego does not just mediate between id impulses and superego demands. At each stage, it acquires attitudes and skills that make the individual an active, contributing member of society. A basic psychological conflict, which is resolved along a continuum from positive to negative, determines healthy or maladaptive outcomes at each stage. As Table 2 shows, Erikson's first five stages parallel Freud's stages, but Erikson added three adult stages. Finally, unlike Freud, Erikson pointed out that normal development must be understood in relation to each culture's life situation.

Table 1 **Freud's Psychosexual Stages**		
Psychosexual Stage	**Period of Development**	**Description**
Oral	Birth-1 year	The new ego directs the baby's sucking activities toward breast or bottle. If oral needs are not met appropriately, the individual may develop such habits as thumb sucking, fingernail biting, and pencil chewing in childhood and overeating and smoking in later life.
Anal	1-3 years	Toddlers and preschoolers enjoy holding and releasing urine and feces. Toilet training becomes a major issue between parent and child. If parents insist that children be trained before they are ready or make too few demands, conflicts about anal control may appear in the form of extreme orderliness and cleanliness or messiness and disorder.
Phallic	3-6 years	Id impulses transfer to the genitals, and the child finds pleasure in genital stimulation. Freud's *Oedipus conflict* for boys and *Electra conflict* for girls arise, and young children feel a sexual desire for the other sex parent. To avoid punishment, they give up this desire and, instead, adopt the same-sex parent's characteristics and values. As a result, the superego is formed, and children feel guilty each time they violate its standards. The relations among id, ego, and superego established at this time determine the individual's basic personality.
Latency	6- 11 years	Sexual instincts die down, and the superego develops further. The child acquires new social values from adults outside the family and from play with same-sex peers.
Genital	Adolescence	Puberty causes the sexual impulses of the phallic stage to reappear. If development has been successful during earlier stages, it leads to marriage, mature sexuality, and the birth and rearing of children.

Table 2

Erikson's Psychosocial Stages, with Corresponding Psychosexual Stages		
Psychosocial Stage	**Period of Development**	**Description**
Basic trust versus mistrust (Oral)	Birth-1 year	From warm, responsive care, infants gain a sense of trust, or confidence, that the world is good. Mistrust occurs when infants have to wait too long for comfort and are handled harshly,
Autonomy versus shame and doubt (Anal)	1-3 years	Using new mental and motor skills, children want to choose and decide for themselves. Autonomy is fostered when parents permit reasonable free choice and do not force or shame the child.
Initiative versus guilt (Phallic)	3-6 years	Through make-believe play, children experiment with the kind of person they can become. Initiative-a sense of ambition and responsibility-develops when parents support their child's new sense of purpose. The danger is that parents will demand too much self-control, which leads to over control, meaning too much guilt.
Industry versus diffusion (Latency)	6- 11 years	At school, children develop the capacity to work and cooperate with others. Inferiority develops when negative experiences at home, at school, or with peers lead to feelings of incompetence.
Identity versus identity confusion (Genital)	Adolescence	The adolescent tries to answer the question, Who am I, and what is my place in society? Self-chosen values and vocational goals lead to a lasting personal identity. The negative outcome is confusion about future adult roles.
Intimacy versus isolation	Young adulthood	Young people work on establishing intimate ties to others. Because of earlier disappointments, some individuals cannot form close relationships and remain isolated.
Generativity versus stagnation	Middle adulthood	Generativity means giving to the next generation through child rearing, caring for other people, or productive work. The person who fails in these ways feels an absence of meaningful accomplishment.
Ego integrity versus despair	Old age	In this final stage, individuals reflect on the kind of person they have been. Integrity results from feeling that life was worth living as it happened. Older people who are dissatisfied with their lives fear death.

2.2.2 Behaviorism and Social Learning Theory

According to **behaviorism,** directly observable events stimuli and responses-are the appropriate focus of study.

Traditional Behaviorism. John Watson (1878-1958) Watson was inspired by studies of animal learning carried out by famous Russian physiologist Ivan Pavlov. Pavlov knew that dogs release saliva as an innate reflex when they are given food. But he noticed that his dogs were salivating before they tasted any food-when they saw the trainer who usually fed them. The dogs, Pavlov reasoned, must have learned to associate a neutral stimulus (the trainer) with another stimulus (food) that produces a reflexive response (salivation). As a result of this association, the neutral stimulus could bring about a response resembling the reflex. Eager to test this idea, Pavlov successfully taught dogs to salivate at the sound of a bell by pairing it with the presentation of food. He had discovered *classical conditioning*.

Watson wanted to find out if classical conditioning could be applied to children's behavior. In a historic experiment, he taught Albert, a 11-month-old infant, to fear a neutral stimulus-a soft white rat-by presenting it several times with a sharp, loud sound, which naturally scared the baby. Little Albert, who at first had reached out eagerly to touch the furry rat, began to cry and turn his head away when he caught sight of it. In fact, Albert's fear was so intense that researchers eventually challenged the ethics of studies like this one. Consistent with Locke's tabula rasa, Watson concluded that environment is the supreme force in development. Adults can mold children's behavior, he thought, by carefully controlling stimulus-response associations. And development is a continuous process, consisting of a gradual increase in the number and strength of these associations.

Another form of behaviorism was B. F. Skinner's (19041990) *operant conditioning theory*. According to Skinner, behavior can be increased by following it with a wide variety of *reinforcers,* such as food, praise, or a friendly smile. It can also be decreased through *punishment,* such as disapproval or withdrawal of privileges. As a result of Skinner's work, operant conditioning became a broadly applied learning principle.

Social learning Theory. Albert Bandura, emphasized *modeling,* otherwise known as *imitation* or *observational learning,* as a powerful source of development. Bandura (1977) recognized that children acquire many favorable and unfavorable responses simply by watching and listening to others around them. The baby who claps her hands after her mother does so, the child who angrily hits a playmate in the same way that he has been punished at home, and the teenager who wears the same clothes and hairstyle as her friends at school are all displaying observational learning.

Bandura's recent theory stresses the importance of *cognition,* or thinking. The theory places such strong emphasis on how we think about ourselves and other people that he calls it a *social-cognitive* rather than a social learning approach. According to this view, children gradually become more selective in what they imitate. From watching others engage in self-praise and self-blame and through feedback about the worth of their own actions, children develop *personal standards* for behavior and a *sense of self-efficacy*-the belief that their own abilities and characteristics will help them succeed. These cognitions guide responses in particular situations.

2.2.3 Piaget's Cognitive-Developmental Theory

Piaget's Stages. Piaget's view of development was greatly influenced by his early training in biology. Central to his theory is the biological concept of *adaptation*. Just as the structures of the body are adapted to fit with the environment, so the structures of the mind develop to bet-ter fit with, or represent, the external world. In infancy and early childhood, children's

understanding is different from adults'. As the brain develops and children's experiences expand, they move through four broad stages, each characterized by qualitatively distinct ways of thinking. In the *sensorimotor stage,* cognitive development begins with the baby's use of the senses and movements to explore the world. These action patterns evolve into the symbolic but illogical thinking of the preschooler in the *preoperational stage.* Then cognition is transformed into the more organized reasoning of the school age child in the *concrete operational stage.* Finally, in the *formal operational stage,* thought becomes the complex, abstract reasoning system of the adolescent and adult.

2.3 RECENT THEORETICAL PERSPECTIVES

New ways of understanding the developing person are constantly emerging-questioning, building on, and enhancing the discoveries of earlier theories. Today, a burst of fresh approaches and research emphases is broadening our understanding of the lifespan.

2.3.1 Information Processing

During the 1970s, researchers turned to the field of cognitive psychology for ways to understand the development of thinking. The design of digital computers that use mathe-matically specified steps to solve problems suggested to psychologists that the human mind might also be viewed as a symbol-manipulating system through which information flows-a perspective called information processing. From presentation to the senses at input to behavioral responses at output, information is actively coded, transformed, and organized.

Information-processing researchers often use flowcharts to map the precise series of steps individuals use to solve problems and complete tasks, much like the plans devised by programmers to get computers to perform a series of "mental operations."

Like Piaget's cognitive-developmental theory, information processing regards people as active, sense-making beings. But unlike Piaget's theory, there are no stages of development. Rather, the thought processes studied are -perception, attention, memory, planning strategies, categorization of information, and comprehension of written and spoken prose-are regarded as similar at all ages but present to a lesser or greater extent. Therefore, the view of development is one of continuous change.

2.3.2 Ethology and Evolutionary Developmental Psychology

Ethology is concerned with the adaptive, or survival, value of behavior and its evolutionary history. Its roots can be traced to the work of Darwin. Two European Zoologists, Konrad Lorenz and Niko watching diverse animal species in their natural habitats, observed behavior patterns that promote survival. The best known of these is ***im-printing,*** the early following behavior of certain baby birds, such as geese, that ensures that the young will stay close to the mother and be fed and protected from danger. Imprinting takes place during an early, restricted time period of development. If the mother goose is not present during this time but an object resembling her in important features is, young goslings may imprint on it instead.

Observations of imprinting led to a major concept in human development: the ***critical period.*** It refers to a limited time span during which the individual is biologically prepared to acquire certain adaptive behaviors but needs the support of an appropriately stimulating environment. Many researchers have conducted studies to find out whether complex cognitive and social behaviors must be learned during certain time periods. For example, if children are deprived of adequate food or physical and social stimulation during their early years, will their intelligence be impaired? If language is not mastered; during early childhood, is the capacity to acquire it reduced?

The term ***sensitive period*** applies better to human development than does the strict notion of a critical period. A ***sensitive period*** is a time that is optimal for certain capacities to emerge and in which the individual is especially responsive to environmental influences. However,

its boundaries are less, defined than are those of a critical period. Development may occur later, but it is harder to induce.

British psychoanalyst John Bowlby (1969) argued that infant smiling, babbling, grasping, and crying are built-in social signals that encourage the parent to approach, care for, and interact with the baby. By keeping the mother near, these behaviors help ensure that the infant will be fed, protected from danger, and provided with the stimulation and affection necessary for healthy growth. The development of attachment in humans is a lengthy process involving changes in psychological structures that lead the baby to form a deep affectional tie with the caregiver. Bowlby (1979) believed that this bond has lifelong consequences, affecting relationships "from cradle to grave".

Observations by ethologists have shown that many aspects of social behavior, including emotional expressions, aggression, cooperation, and social play, resemble those of our primate relatives. Recently, researchers have extended this effort in a new area of research called **evolutionary developmental psychology**. It seeks to understand the adaptive value of species-wide cognitive, emotional, and social competencies as those competencies change with age.

Evolutionary psychologists are not just concerned with the biological basis of development. They are also interested in how individuals learn because learning lends flexibility and greater adaptiveness to behavior. The evolutionary selection benefits of behavior are believed to be strongest in the first half of life-to ensure survival, reproduction, and effective parenting. As people age, social and cultural factors become increasingly important in generating and maintaining high levels of functioning. Vygotsky's sociocultural theory, serves as an excellent complement to ethology because it highlights social and cultural contexts for development.

2.3.3 Vygotsky's Sociocultural Theory

Cross-cultural and multicultural research helps us untangle the contributions of biological and environmental factors to the timing, order of appearance, and diversity of children's and adults' behaviors. However, this approach can lead us to conclude incorrectly that one culture is superior in enhancing development, whereas another is deficient. In addition, it does not help us understand the precise experiences that contribute to cultural differences in behavior.

Today, more research is examining the relationship of *culturally specific practices* to development. The contributions of Russian psychologist Lev Vygotsky (1896-1934) have played a major role in this trend. Vygotsky's perspective is called **sociocultural theory**. It focuses on how *culture*-the values, beliefs, customs, and skills of a social group-is transmitted to the next generation. According to Vygotsky, *social interaction*-in particular, cooperative dialogues with more knowledgeable members of society-is necessary for children to acquire the ways of thinking and behaving that make up a community's culture. Vygotsky believed that as adults and more expert peers help children master culturally meaningful activities, the communication between them becomes part of children's thinking. As children internalize the essential features of these dialogues, they can use the language within them to guide their own thought and actions and to acquire new skills.

Vygotsky agreed with Piaget that children are active, constructive beings. But unlike Piaget, who emphasized children's independent efforts to make sense of their world, Vygotsky viewed cognitive development as a *socially mediated process*-as dependent on the support that adults and more mature peers provide as children try new tasks.

In Vygotsky's theory, children undergo certain stage wise changes. For example, when they acquire language, their ability to participate in dialogues with others is greatly enhanced, and mastery of culturally valued competencies surges forward. When children enter school, they spend much time discussing language, literacy, and other academic concepts-

experiences that encourage them to reflect on their own thinking. As a result, they show dramatic gains in reasoning and problem solving.

2.3.4 Ecological Systems Theory

Ecological systems theory views the person as developing within a complex system of relationships affected by multiple levels of the surrounding environment. Since the child's biological dispositions join with environmental forces to mold development, Bronfenbrenner recently characterized his perspective as, *bioecological model.*

Bronfenbrenner envisions the environment as a series of nested structures that includes but extends beyond the home, school, neighborhood, and workplace settings in which people spend their everyday lives. Each layer of the environment is viewed as having a powerful impact on development.

A) The Microsystem. The innermost level of the environment is the microsystem, which consists of activities and interaction patterns in the person's immediate surroundings. Bronfenbrenner emphasizes that to understand development at this level, we must keep in mind that all relationships are *bidirectional*. For example, adults affect children's behavior but children's biologically and socially influenced characteristics - their physical attributes, personalities, and capacities-also affect adults' behavior. When these bidirectional interactions occur often over time, they have an enduring impact on development.

At the same time, other individuals in the microsystem affect the quality of any two-person relationship. If they are supportive, then interaction is enhanced. For example, when parents encourage one another in their child-rearing roles, each engages in more effective parenting. In contrast, marital conflict-is associated with inconsistent discipline and hostile reactions toward children. In response, children typically become hostile, and both parent and child adjustment suffers.

B) The Mesosystem. The second level of Bronfenbrenner's model, the mesosystem, encompasses connections between microsystems. For example, a child's academic progress depends not just on activities that take place in classrooms. It is also promoted by parent involvement in school life and by the extent to which academic learning is carried over into the home. Among adults, how well a person functions as spouse and parent at home is affected by relationships in the workplace, and vice versa.

C) The Exosystem. The exosystem refers to social settings that do not contain the developing person but nevertheless affect experiences in immediate settings. These can be formal organizations, such as the board of directors in the individual's workplace or health and welfare services in the community. For example, flexible work schedules, paid maternity and paternity leave and sick leave for parents whose children are ill are ways that work settings can help parents' rear children and, indirectly, enhance the development of both adult and child. Exosystem supports can also be informal, such as social networks-friends and extended-family members who provide advice, companionship, and even financial assistance. Research confirms the negative impact of a breakdown in exosystem activities.

D) The Macrosystem. The outermost level of Bronfenbrenner's model, the macrosystem, is not a specific context. Instead, it consists of cultural values, laws, customs, and resources. The priority that the macrosystem gives to the needs of children and adults affects the support they receive at inner levels of the environment. For example, in countries that require high-quality standards for child care and workplace benefits for employed parents, children are more likely to have favorable experiences in their immediate settings. And when the government provides a generous pension plan for retirees, it supports the well-being of the elderly.

E) A Dynamic, Ever-Changing System. According to Bronfenbrenner, the environment is not a static force that affects people in a uniform way. Instead, it is dynamic and ever-changing. Whenever individuals add or let go of roles or settings in their lives, the breadth of

their microsystems changes. These shifts in contexts, or ecological transitions, as Bronfenbrenner calls them, take place throughout life and are often important turning points in development. Starting school, entering the workforce, marrying, becoming a parent, getting divorced, moving, and retiring are examples.

Bronfenbrenner refers to the temporal dimension of his model as the chronosystem (the prefix *chrono* means "time"). Changes in life events can be imposed externally. Alternatively, they can arise from within the person, since individuals select, modify, and create many of their own settings and experiences. How they do so depend on their age; their physical, intellectual, and personality characteristics; and their environmental opportunities. Therefore, in ecological systems theory, development is neither controlled by environmental circumstances nor driven by inner dispositions. Instead, people are products and producers of their environments, so both people and their environments form a network of interdependent effects.

Check Your Progress 1
Give an overall picture of the theoretical perspectives involved in life span development.
Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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2.4 METHODS
In every science, theories, like those we have just reviewed, guide the collection of information, its interpretation, and its application to real-life situations. In fact, research usually begins with a prediction about behavior drawn from a theory, or what we call a *hypothesis.* But theories and hypotheses are only the beginning of the many activities that result in sound evidence on human development. Investigators must decide which participants, and how many, to include. Then they must figure out what the participants will be asked to do and when, where, and how many times each will have to be seen. Finally, they must examine and draw conclusions from their data.

The research strategies commonly used to study human development are, the ***research methods***-the specific activities of participants, such as taking tests, answering questionnaires, responding to interviews, or being observed. Then the ***research designs*** overall plans for research studies that permit the best possible test of the investigator's hypothesis. Finally, the ethical issues involved in doing research with human participants.

There are two reasons for doing research. First, each of us must be a wise and critical consumer of knowledge. Knowing the strengths and limitations of various research strategies becomes important in separating dependable information from misleading results. Second, individuals who work directly with children or adults may be in a unique position to build bridges between research and practice by carrying out research, either on their own or in partnership with experienced investigators. Currently, communities and researchers are collaborating in designing, implementing, and evaluating interventions that enhance lifespan development.

2.4.1 Common Research Methods
Common methods include systematic observation, self-reports (such as questionnaires and interviews), clinical or case studies of a single individual, and ethnographies of the life circumstances of a specific group of people.

2.4.1a Systematic Observation. To find out how people actually behave, a researcher may choose systematic observation. Observations can be made in different ways. One approach is to go into the field, or natural environment, and observe the behaviour of interest – a method

called **naturalistic observation**.

Observing 3- and 4-year-olds in child-care centers, the researchers recorded each instance of crying and the reactions of nearby children-whether they ignored, watched curiously, commented on the child's unhappiness, scolded or teased, or shared, helped, or expressed sympathy. Caregiver behaviors, such as explaining why a child was crying, mediating conflict, or offering comfort, can be noted. The great strength of naturalistic observation is that investigators can see directly the everyday behaviors they hope to explain.

Naturalistic observation also has a major limitation: Not all individuals have the same opportunity to display a particular behavior in everyday life. Researchers commonly deal with this difficulty by making structured observations, in which the investigator sets up a laboratory situation that evokes the behaviour of interest so that every participant has an equal opportunity. But its great disadvantage is that people do not necessarily behave in the laboratory as they do in everyday life.

The procedures used to collect systematic observations vary, depending on the nature of the research problem. Some investigators must describe the entire stream of behavior everything said and done over a certain time period. In other studies, only one or a few kinds of behavior are needed, and it is not necessary to preserve the entire behavior stream. In these instances, researchers use more efficient observation procedures in which they record only certain events or mark off behaviors on checklists. Systematic observation provides invaluable information on how children and adults actually behave, but it tells us little about the reasoning behind their responses. For this kind of information, researchers must turn to self-report techniques.

2.4.1b Self-Reports. Self-reports are instruments that ask participants to provide information on their perceptions, thoughts, abilities, feelings, attitudes, beliefs, and past experiences. They range from relatively unstructured interviews to highly structured interviews, questionnaires, and tests.

In a clinical interview, a flexible, conversational style is used to probe for the participant's point of view. Piaget questioned a 5-year-old child about his understanding of dreams:

Where does the dream come from?-I think you sleep so well that you *dream.-Does* it *come from us or from outside?-From* outside.- *What do we dream with?-I* don't know.- *With the hands? .. With nothing?-* Yes, with nothing.- *When you are in bed and you dream, where* is *the dream?-In* my bed, under the blanket. I don't really know. If it was in my stomach, the bones would be in the way and I shouldn't see *it .-Is the dream there when you sleep?-Yes,* it is in the bed beside me.

Notice how Piaget encouraged the child to expand his ideas. Although a researcher conducting clinical interviews with more than one participant would typically ask the same first question to ensure a common task, individualized prompts are given to evoke a fuller picture of each person's reasoning.

The clinical interview has two major strengths. First, it permits people to display their thoughts in terms that are as close as possible to the way they think in everyday life. Second, the clinical interview can provide a large amount of information in a fairly brief period. For example, in an hour-long session, we can obtain a wide range of information on child rearing from a parent or on life circumstances from an elder-much more than we could capture by observing for the same amount of time.

A major limitation of the clinical interview has to do with the accuracy with which people report their thoughts, feelings, and experiences. Some participants, desiring to please the interviewer, may make up answers that do not represent their actual thinking. When asked about past events, they may have trouble recalling exactly what happened. And because the clinical interview depends on verbal ability and expressiveness, it may underestimate the

capacities of individuals who have difficulty putting their thoughts into words.

The clinical interview has also been criticized because of its flexibility. When questions are phrased differently for each participant, responses may be due to the manner of interviewing rather than to real differences in the way people think about a certain topic. Structured interviews, in which each participant is asked the same set of questions in the same way, can eliminate this problem.

2.4.1c The Clinical *or* **Case Study, Method.** An outgrowth of psychoanalytic theory, which stresses the importance of understanding a single life history, the clinical, or case study, method brings together a wide range of information on one person, including interviews, observations, and sometimes test scores. The aim is to obtain as complete a picture as possible of that individual's psychological functioning and the experiences that led up to it.

The clinical method is well suited to studying the development of individuals who are *few* in number and who vary widely in characteristics. For example, the method has been used to find out what contributes to the accomplishments of *prodigies* extremely gifted children who attain adult competence in a field before age 10. Consider Ashok, a boy who read, wrote, and composed musical pieces before he was out of diapers. By age 4, Ashok was deeply involved in mastering human symbol systems-BASIC for the computer, Sanskrit, Hindi, Tamil, Malayalam, English, music, and mathematics. Ashok's parents provided a home rich in stimulation and reared him with affection, firmness, and humor. They searched for schools in which he could both develop his abilities and form rewarding social relationships. He graduated from college at age 18 and continues to pursue musical composition. Ashok would not have realized his abilities without the chance combination of his special gift with nurturing, committed parents.

The clinical method yields richly detailed case narratives that offer valuable insights into the multiplicity of factors that affect development. Nevertheless, like all other methods, it has drawbacks. Information is often collected unsystematically and subjectively, permitting too much leeway for researchers' theoretical preferences to bias their observations and interpretations. In addition, investigators cannot assume that their conclusions apply to anyone other than the person studied. Even when patterns emerge across several cases, it is wise to try to confirm them with other research strategies.

2.4.1d Methods for Studying Culture. A growing interest in the impact of culture has led researchers to adjust the methods just considered as well as tap procedures specially devised for cross-cultural and multicultural research. Which approach investigators choose depends on their research goals.

Sometimes researchers are interested in characteristics that are believed to be universal but that vary in degree from one society to the next. These investigators might ask, do parents make greater maturity demands of children in some cultures than in others? How strong are gender stereotypes in different nations? In each instance, several cultural groups will be compared, and all participants must be questioned or observed in the same way. Therefore, researchers use the self-report and observational procedures, adapting them through translation so they can be understood in each cultural context. For example, to study cultural variation in parenting attitudes, the same questionnaire, asking for ratings on such items as "If my child gets into trouble, I expect him or her to handle the problem mostly by himself or herself;' is given to all participants.

At other times, researchers want to uncover the *cultural meanings* of children's and adults' behaviors by becoming as familiar as possible with their way of life. To achieve this goal, researchers rely on a method borrowed from the field of anthropology-ethnography. Like the clinical method, ethnographic research is largely a descriptive, qualitative technique. But instead of aiming to understand a single individual, it is directed toward understanding a

culture or a distinct social group, achieving its goals t hrough *participant observation*. Typically, the researcher lives with the cultural community for a period of months or years, participating in all aspects of its daily life. Extensive field notes are gathered, consisting of a mix of observations, self-reports from members of the culture, and careful interpretations by the investigator. Later, these notes are put together into a description of the community that tries to capture its unique values and social processes.

Ethnographers strive to minimize their influence on the culture they are studying by becoming part of it. Nevertheless, at times their presence does alter the situation. And as with clinical research, investigators' cultural values and theoretical commitments sometimes lead them to observe selectively or misinterpret what they see. In addition, the findings of ethnographic studies cannot be assumed to apply, or generalize, beyond the people and settings in which the research was conducted.

Check Your Progress 2

State the common research methods.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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2.4.2 General Research Designs

In deciding on a research design, investigators choose a way of setting up a study that permits them to test their hypotheses with the greatest certainty possible. Two main types of designs are used in all research on human behavior: correlational and experimental.

2.4.2a Correlational Design. In a correlational design, researchers gather information on already-existing groups of individuals, generally in natural life circumstances, and make no effort to alter their experiences. Then they look at relationships between participants' characteristics and their behaviour or development. For example, does the arrival of a baby influence a couple's marital satisfaction? Does the death of a spouse in old age affect the surviving partner's physical health and psychological well-being? In these and many other instances, the conditions of interest are difficult or impossible to arrange and control and must be studied as they currently exist.

Correlational studies have one major limitation: We cannot infer cause and effect. For example, if we find that parental interaction is related to children's intelligence, we still do not know whether parents' behavior actually *causes* intellectual differences among children. In fact, the opposite is certainly possible. The behaviors of highly intelligent children may be so attractive that they cause parents to interact more favorably. Or a third variable that we did not even think about studying, such as amount of noise and distraction in the home, may be causing both maternal interaction and children's intelligence to change.

2.4.2b Experimental Design. An experimental design permits inferences about cause and effect because researchers use an evenhanded procedure to assign people to two or more treatment conditions. In an experiment, the events and behaviors of interest are divided into two types: independent and dependent variables. The independent variable is the one the investigator expects to cause changes in another variable. The dependent variable is the one the investigator expects to be influenced by the independent variable. Cause-and-effect relationships can be detected because the researcher directly *controls or manipulates* changes in the independent variable by exposing participants to the treatment conditions. Then the researcher compares their performance on measures of the dependent variable.

In a *laboratory experiment,* investigators can explore the impact of adults' angry interactions on children's adjustment. The hypothesis that, "the angry encounters will have a significant (independent variable) effect on children's emotional reactions (dependent variable)". Four- and 5-year-olds were brought one at a time to a laboratory, accompanied by their mothers. One group was exposed to an unresolved-anger treatment, in which two adult actors entered the room and argued but did not work out their disagreements. The other group witnessed a resolved-anger treatment, in which the adults ended their disputes by apologizing and compromising. During a follow-up adult conflict, children in the resolved-anger treatment showed less distress, as measured by anxious facial expressions, freezing in place, and seeking closeness to their mothers. The experiment revealed that anger resolution can reduce the stressful impact of adult conflict on children.

In experimental studies, investigators must take special precautions to control for participants' characteristics that could reduce the accuracy of their findings. For example, in the study just described, if a greater number of children from homes high in parental conflict ended up in the unresolved anger treatment, we could not tell whether the independent variable or the children's backgrounds produced the results. To protect against this problem, researchers engage in random assignment of participants to treatment conditions. By using an unbiased procedure, such as drawing numbers out of chits or flipping a coin, investigators increase the likelihood that participants' characteristics will be equally distributed across treatment groups.

2.4.2c Modified Experimental Designs: Field and Natural Experiments. Most experiments are conducted in laboratories where researchers can achieve the maximum - possible control over treatment conditions. But, findings obtained in laboratories may not always apply to everyday situations. The ideal solution to this problem is to do experiments in the field as a complement to laboratory investigations. In *field experiments,* investigators capitalize on rare opportunities to assign people randomly to treatment conditions in natural settings. In the laboratory experiment it can be concluded that the emotional climate established by adults affects children's behavior in the laboratory.

Another study the research was carried out in a child-care center. A caregiver deliberately interacted differently with two groups of preschoolers. In one condition (the *nurturant treatment),* she modeled many instances of warmth and helpfulness. In the second condition (the *control,* since it involved no treatment), she behaved as usual, with no special emphasis on concern for others. Two weeks later, the researchers created several situations that called for helpfulness. For example, a visiting mother asked each child to watch her baby for a few moments, but the baby's toys had fallen out of the box. The investigators found that children exposed to the nurturant treatment were much more likely to return toys to the baby than were those in the control condition.

Often researchers cannot randomly assign participants and manipulate conditions in the real world. Sometimes they can compromise by conducting *natural experiments.* Treatments that already exist, such as different child-care centers, schools, workplaces, or retirement homes, are compared. These studies differ from correlational research only in that groups of participants are carefully chosen to ensure that their characteristics are as much alike as possible. In this way, investigators rule out as best they can alternative explanations for their treatment effects. But despite these efforts, natural experiments are unable to achieve the precision and rigor of true experimental research.

2.4.3 Designs for Studying Development

Scientists interested in human development require information about the way research participants change over time. To answer questions about development, they must extend

correlational and experimental approaches to include measurements at different ages. Longitudinal and cross-sectional designs are special *developmental research strategies.* In each, age comparisons form the basis of the research plan.

2.4.3a The Longitudinal Design. In a longitudinal design, a group of participants are studied repeatedly at different ages, and changes are noted as the participants mature. The time spanned may be relatively short (a few months to several years) or very long (a decade or even a lifetime). The longitudinal approach has two major strengths. First, because it tracks the performance of each person over time, researchers can identify common patterns of development as well as individual differences. Second, longitudinal studies permit investigators to examine relationships between early and later events and behaviors.

Researchers want to know whether children who display extreme personality styles-either angry and explosive or shy and withdrawn-retain the same dispositions when they become adults. In addition, the researchers wanted to know what kinds of experiences promote stability or change in personality and what consequences explosiveness and shyness have for long-term adjustment. The researchers searched into the archives of the Guidance Study, a well-known longitudinal investigation initiated in 1928 at the University of California, Berkeley, and continued for several decades.

Results revealed that the two personality styles were only moderately stable. Between ages 8 and 30, a good number of individuals remained the same, whereas others changed substantially. When stability did occur, it appeared to be due to a "snowballing effect;' in which children evoked responses from adults and peers that acted to maintain their dispositions. In other words, explosive youngsters were likely to be treated with anger and hostility (to which they reacted with even greater unruliness), whereas shy children were apt to be ignored.

Persistence of extreme personality styles affected many areas of adult adjustment. For men, the results of early explosiveness were most apparent in their work lives, in the form of conflicts with supervisors, frequent job changes, and unemployment. Since few women in this sample of an earlier generation worked after marriage, their family lives were most affected. Explosive girls grew up to be hotheaded wives and parents who were especially prone to divorce. Sex differences in the long-term consequences of shyness were even greater. Men who had been withdrawn in childhood were delayed in marrying, becoming fathers, and developing stable careers. Because a withdrawn, unassertive style was socially acceptable for females, women who had shy personalities showed no special adjustment problems.

Problems in Conducting Longitudinal Research. Despite their strengths, longitudinal investigations pose a number of problems. For example, participants may move away or drop out of the research for other reasons. This changes the original sample so it no longer represents the population to whom researchers would like to generalize their findings. Also, from repeated study, people may become "test-wise:' Their performance may improve as a result of *practice effects--better* test-taking skills and increased familiarity with the test-not because of factors commonly associated with development.

But the most widely discussed threat to longitudinal findings is **cohort effects**: Individuals born in the same time period are influenced by a particular set of historical and cultural conditions. Results based on one cohort may not apply to people developing in other times. Similarly, a longitudinal study of the lifespan would probably result in quite different findings if it were carried out in the first decade of the twenty-first century, around the time of World War II, or during the Great Depression of the 1930s.

2.4.3b The Cross-Sectional Design. The length of time it takes for many behaviors to change, even in limited longitudinal studies, has led researchers to turn toward a more convenient strategy for studying development. In the cross-sectional design, groups of people differing in age are studied at the same point in time.

A study in which students in standards 3, 6, 9, and 12 filled out a questionnaire about their sibling relationships is a good example. Findings revealed that sibling interaction was characterized by greater equality and less power assertion with age. Also, feelings of sibling companionship declined during adolescence. The researchers thought that several factors contributed to these age differences. As later-born children become more competent and independent, they no longer need, and are probably less willing to accept, direction from older siblings. In addition, as adolescents move from psychological dependence on the family to greater involvement with peers, they may have less time and emotional need to invest in siblings.

2.4.3c Problems in Conducting Cross-Sectional Research. The cross-sectional design is an efficient strategy for describing age-related trends. Because participants are measured only once, researchers need not be concerned about such difficulties as participant dropout or practice effects. But evidence about change at the level at which, it actually occurs-the in-dividual-is not available. For example, in the cross-sectional study of sibling relationships, comparisons are limited to age-group averages. We cannot tell if important individual differences exist. Indeed, longitudinal findings reveal that adolescents vary considerably in the changing quality of their sibling relationships, many becoming more distant but some becoming more supportive and intimate.

Cross-sectional studies--especially those that cover a wide age span-have another problem. Like longitudinal research, they can be threatened by cohort effects. For example, comparisons of 10-year-old cohorts, 20-year-old cohorts, and 30-year-old cohorts-groups born and reared in different years-may not really represent age-related changes. Instead, they may reflect unique experiences associated with the historical period in which each age group grew up.

2.4.3d Improving Developmental Designs. To overcome some of the limitations of longitudinal and cross-sectional research, investigators sometimes combine the two approaches. One way of doing so is the longitudinal-sequential design, in which a sequence of samples (two or more age groups) is followed for a number of years.

The design has two advantages. First, it permits us to find out whether cohort effects are operating by comparing people of the same age who were born in different years. We can compare the three samples at ages 20, 30, and 40. If they do not differ, we can rule out cohort effects. Second, we can make longitudinal and cross-sectional comparisons. If outcomes are similar in both, then we can be especially confident about our findings.

To date, only a handful of longitudinal sequential studies have been conducted. Yet the design permits researchers to profit from the strengths of both longitudinal and cross sectional strategies. And in uncovering cohort effects, it also helps explain diversity in development.

Check Your Progress 3

    A. Bring out the general research designs

    B. State the special designs for studying Life span development.

Notes: a) Write your answer in the space given below.

       b) Check your answer with the one given at the end of this lesson.

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2.5 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   The difference between mid twentieth century theories and Recent Theoretical perspectives

ii)   Since research forms the core of any field is the methods like Common Research Methods, General Research Designs and the special Designs for Studying Development are discussed.

2.6 Check Your Progress: Model Answers

1. The theoretical perspectives involved in life span development using

       i)   The Psychoanalytic Perspective

       ii) Behaviorism and Social Learning Theory

       iii) Piaget's Cognitive-Developmental Theory

       iv) Information Processing

       v) Ethology and Evolutionary Developmental Psychology

       vi) Vygotsky's Sociocultural Theory

       vii) Ecological Systems Theory

2. The Common research methods include

       i)   Systematic observation,

       ii) Self-reports (such as questionnaires and interviews),

       iii) Clinical or case studies of a single individual, and

       iv) Ethnographies of the life circumstances of a specific group of people.

  3. AThe two main types of general designs used in all research on human behavior include

       i)   Correlational and

       ii) Experimental

   C. The extension of Correlational and experimental research are known as special developmental research strategies they include

       i)   Longitudinal and

       ii) Cross-sectional designs.

2.7 Lesson – End Activities

1) State the limitations of longitudinal design in studying development.

2) Explain how the correlation design are more useful in studying development.

2.8 References

1) Wexberg, E., Individual Psychology (Trans. By W.B. Wolf) London: Allen & Unwin, 1987.

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LESSON – 3
GENETIC FOUNDATION - REPRODUCTIVE CHOICES - ENVIRONMENTAL CONTEXTS FOR DEVELOPMENT

Contents

3.0 AIMS AND OBJECTIVES

This lesson provides an over view of genetic foundations for the development of a life and the choices parents have to reproduce a child. It will also focus on significance of the environment influence on development.

After going through this Lesson, you will be able to:
- i)   address the genetic foundation of development
- ii)   mention the chromosomal abnormalities during development
- iii)   state the choices that a parent has in reproducing a child
- iv)   list the role environment in development

3.1 INTRODUCTION

Each and every human being is made up of trillions of separate units called *cells.* Inside every cell is a control center, or nucleus, that contains rod like structures called chromosomes which store and transmit genetic information. Human chromosomes come in

23 matching pairs. Each pair member corresponds to the other in size, shape, and genetic functions. One is inherited from the mother and one from the father.

3.2 THE GENETIC CODE

Chromosomes are made up of a chemical substance called deoxyribonucleic acid, or DNA. DNA is a long, double-stranded molecule that looks like a twisted ladder. Each rung of the ladder consists of specific pair chemical substances called *bases,* joined together between the two sides. It is this sequence of bases that provides genetic instructions. A gene is a segment of DNA along the length of the chromosome. Genes can be of different lengths-perhaps 100 to several thousand ladder rungs long. An estimated 30,000 genes lie along the human chromosomes.

We share some of our genetic makeup with even the simplest organisms, such as bacteria and molds, and most of it with other mammals, especially primates. Between 98 and percent of 99 percent of chimpanzee and human DNA is identical. This means that only a small portion of our heredity is responsible for the traits that make us human, from our upright gait to our extraordinary language and cognitive capacities. And the genetic variation from one human to the next is even less. Individuals around the world are about 99.1 percent genetically identical. Only a tiny quantity of DNA contributes to human variation in traits and capacities.

A unique feature of DNA is that it can duplicate itself through a process caused **mitosis**. This special ability permits the one-celled fertilized ovum to develop into a complex human being composed of a great many cells. During mitosis, the chromosomes copy themselves. As a result, each new body cell contains the same number of chromosomes and identical genetic information.

Genes accomplish their task by sending instructions for making a rich assortment of proteins to the *cytoplasm,* the area surrounding the cell nucleus. Proteins, which trigger chemical reactions throughout the body, are the biological foundation on which our characteristics are built. How do humans, with far fewer genes than scientists once thought (only twice as many as the worm or fly), manage to develop into such complex beings? The answer lies in the proteins our genes make, which break up and reassemble in staggering variety-about 10 to 20 million altogether. In simpler species, the number of proteins is far more limited. Furthermore, the communication system between the cell nucleus and cyto-plasm, which fine-tunes gene activity, is more intricate in humans than in simpler organisms. Within the cell, a wide range of environmental factors modify gene expression. So even at this microscopic level, biological events are the result of *both* genetic and non genetic forces.

3.3 THE SEX CELLS

New individuals are created when two special cells called **gametes**, or sex cells - the sperm and ovum--combine. A gamete contains only 23 chromosomes, half as many as a reg-ular body cell. Gametes are formed through a cell division process called **meiosis**, which ensures that a constant quantity of genetic material is transmitted from one generation to the next. When sperm and ovum unite at conception, the cell that results, called a **zygote**, will again have 46 chromosomes.

In *meiosis,* the chromosomes pair up and exchange segments, so that genes from one are replaced by genes from another. Then chance determines which member of each pair will gather with others and end up in the same gamete. These events make the likelihood of non twin offspring of the same two parents being genetically the same extremely slim-about 1 in 700 trillion. Therefore, meiosis helps us understand why siblings differ from each other, even though they have features in common because their genotypes come from the same pool of parental genes.

3.4 MALE OR FEMALE

Note that 22 of the 23 pairs of chromosomes are matching pairs, called **autsomes**. The twenty-third pair consists of sex chromosomes. In females, this pair is called XX; in males, it is called XY. The X is a relatively long chromosome, whereas the Y is short and carries little genetic material. When gametes are formed in males, the X and Y chromosomes separate into different sperm cells. In females, all gametes carry an X chromosome. Therefore, the sex of the new organism is determined by whether an X-bearing or a Y-bearing sperm fertilizes the ovum.

3.5 MULTIPLE BIRTHS

Unlike most animals, the human baby usually comes into the world alone. Exceptions-multiple births-occur in two different ways.

One mechanism occurs when the woman's body releases two ova within a short time of each other, and both are fertilized. The two babies that are conceived are called *fraternal, two-egg,* **or** *dizygotic twins*. Since they are created by different ova and different sperm cells, they are no more alike in genetic makeup than any other siblings. They may be of the same sex or different sexes.

The other mechanism is the division of a single ovum after fertilization. *Identical, One-egg,* **or** *monozygotic twins,* which results from this cell division, have the same genetic heritage. Any differences they will later show must be due to the influences of environment. They are always of the same sex. Triplets, quadruplets, and other multiple births result from either one of these processes or a combination of both.

Identical twins seem to be the result of an "accident" in prenatal development, unrelated to either genetic or environmental influences. They account for one-fourth to one-third of all twins.

Fraternal twins are more common under some circumstances. More are being born these days because of fertility drugs that stimulate ovulation and often cause the release of more than one Ovum. These twins are more likely to be born to women who have had two or more pregnancies, to older women, in families with a history of fraternal twins, and in various ethnic groups. Fraternal twin births are most common among African Americans (1 in 70 births), East Indians, and northern Europeans, and least common among Asians other than East Indians (1 in 150 births among the Japanese and 1 in 300 among the Chinese). These dif-ferences are probably due to hormonal differences in women. Monozygotic twins seem to be born through an accident of prenatal life and their incidence is about the same in all ethnic groups. They are always of the same sex and have exactly the same genetic heritage: these children look so much alike.

3.6 PATTERNS OF GENETIC INHERITANCE

Patterns of genetic inheritance - the way genes from each parent interact-explains the color of hair, skin etc. Except for the XY pair in males, all chromosomes come in corresponding pairs. Two forms of each gene occur at the same place on the autosomes, one inherited from the mother and one from the father. If the genes from both parents are alike, the child is homozygous and will display the inherited trait. If the genes are different, then the heterozygous, and relationships between the genes determine the trait that will appear.

3.6.1 Dominant-Recessive Inheritance. In many heterozygous pairings, dominant-recessive inheritance occurs: one gene affects the child's characteristics. It is called *dominant;* the second gene, which has no effect, is called *recessive.* Hair color is an example. The gene for dark hair is dominant (we can represent it with a capital *D),* whereas the one for blond hair is recessive (symbolized by a lowercase *b).* A d who inherits a homozygous pair of dominant genes *(DD);* and a child who inherits a heterozygous pair *(Db)* will be d. haired, even though

their genotypes differ. Blond hair can result only from having two recessive genes (bb). Still, heterozygous individuals with just one recessive *(Db)* can pass that trait to their children. Therefore they are called carriers of the trait.

Some human characteristics that follow the rules of dominant-recessive inheritance are given in Table 1 and Table 2. Many disabilities and diseases are the product of recessive genes. One of the most frequently occurring recessive disorders is ***phenylketonuria,*** or *PKU.* It affects the way the body breaks down proteins contained in many foods. Infants born with two recessive genes lack an enzyme that converts one of the basic amino acids that make up proteins (phenylalanine) into a by-product essential for body functioning (tyrosine). Without this enzyme, phenylalanine quickly builds to toxic levels that damage the central nervous system. By 1 year, infants with PKU are permanently retarded.

Only rarely are serious diseases due to dominant genes. Children who inherit the dominant gene always develop the disorder. They seldom live long enough to reproduce, and the harmful dominant gene is eliminated from the family's heredity in a single generation. Some dominant disorders, however, do persist. One of them is ***Huntington disease,*** a condition in which the central nervous system degenerates. Its symptoms usually do not appear until age 35 or later, after the person has passed the dominant gene to his or her children.

Table 1 Examples of Dominant and Recessive Characteristics

Dominant	Recessive
Dark hair Normal hair	Blond hair Pattern baldness
Normal hair	Pattern baldness
Curly hair	Straight hair
Nonred hair	Red hair
Facial dimples	No dimples
Normal hearing	Some forms of deafness
Normal vision	Nearsightedness
Farsightedness	Normal vision
Normal vision	Congenital eye cataracts
Normally pigmented skin	Albinism
Double-jointedness	Normal joints
Type A blood	Type 0 blood
Type B blood	Type 0 blood
Rh-positive blood	Rh-negative blood

Table 2 Examples of Dominant and Recessive Diseases

Disease	Description	Mode of Inheritance	Incidence	Treatment
Autosomal Diseases				
Cooley's anemia	Pale appearance, retarded physical growth, and lethargic behavior begin in infancy.	Recessive	1 in 500 births to parents of Mediter-ranean descent	Frequent blood transfusion; death from complications usually occurs by adolescence.
Cystic fibrosis	Lungs, liver, and pancreas secrete large amounts of thick mucus, leading to breathing and digestive difficulties.	Recessive	1 in 2,000 to 2,500 Caucasian births; 1 in 16,000 births to North Americans of African descent	Bronchial drainage, prompt treatment of respiratory infection, dietary management. Advances in medical care allow survival with good life quality into adulthood.
Phenylketo-nuria (PKU)	Inability to metabolize the amino acid phenylalanine, contained in many proteins,	Recessive	1 in 8,000 births	Placing the child on a special diet results in average intelligence and normal lifespan. Subtle

				causes severe central nervous system damage in the first year of life. difficulties with planning and problem-solving are often present.
Sickle cell anemia	Abnormal sickling of red blood cells causes oxygen deprivation, pain, swelling, and tissue damage. Anemia and susceptibility to infections, especially pneumonia, occur.	Recessive	1 in 500 births to North Americans of African descent	Blood transformations, painkillers, prompt treatment of infection. No known cure; 50 percent die by age:
Tay-Sachs disease	Central nervous system degeneration, with onset at about 6 months, leads to poor muscle tone, blindness, deafness, and convulsions.	Recessive	1 in 3,600 births to Jews of European descent and to French Canadians	None. Death by 3 to 4 years of age.
Huntington disease	Central nervous system degeneration leads to muscular coordination difficulties, mental deterioration, and personality changes. Symptoms usually do not appear until age 35 or later.	Dominant	1 in 18,000 to 25,000 births	None. Death occurs 10 to 20 years after symptom onset.
Marfan syndrome	Tall, slender build; thin, elongated arms and legs. Heart defects and eye abnormalities, especially of the lens. Excessive lengthening of the body results in a variety of skeletal defects.	Dominant	1 in 20,000 births	Correction of heart and eye defects, sometimes possible. Death from heart failure in young adulthood is common..,
X-Linked Diseases				
Duchenne muscular dystrophy	Degenerative muscle disease. Abnormal gait, loss of ability to walk between 7 and 13 years of age.	Recessive	1 in 3,000 to 5,000 male births	None. Death from respiratory infection. or weakening of the heart muscle usually occurs in adolescence.
Hemophilia	Blood fails to clot normally. Can lead to severe internal bleeding and tissue damage.	Recessive	1 in 4,000 to 7,000 male births	Blood transfusions. Safety precautions to prevent injury.
Diabetes insipidus	Insufficient production of the hormone vasopressin results in excessive thirst and urination. Dehydration can cause central nervous system damage.	Recessive	1 in 2,500 male births	Hormone replacement.

3.6.2 Codominance. In some heterozygous circumstances, the dominant-recessive relationship does not hold completely. Instead, we see Codominance, a pattern of inheritance in which both genes influence the person's characteristics.

The *sickle cell trait,* a heterozygous condition present in many black Africans, provides an example. *Sickle cell anemia* (Table 2) occurs in full form when a child inherits two recessive genes. They cause the usually round red blood cells to become sickle (or crescent-moon) shaped, especially under low-oxygen conditions. The sickled cells clog the blood vessels and block the flow of blood. Individuals who have the disorder suffer severe attacks involving intense pain, swelling, and tissue damage. They generally die in the first 20 years of life; few live past age 40. Heterozygous individuals are protected from the disease under most circumstances. However, when they experience oxygen deprivation-for example, at high altitudes or after intense physical exercise-the single recessive gene asserts itself, and a temporary, mild form of the illness occurs.

The sickle cell gene is common among black Africans for a special reason. Carriers of it are more resistant to malaria than are individuals with two genes for normal red blood cells.

In Africa, where malaria is common, these carriers survived and reproduced more frequently than others, leading the gene to be maintained in the black population.

3.6.3 X-Linked Inheritance. Males and females have an equal chance of inheriting recessive disorders carried on the autosomes, such as PKU and sickle cell anemia. But when a harmful recessive gene is carried on the X chromosome, X-linked inheritance applies. Males are more likely to be affected because their sex chromosomes do not match. In females, any recessive gene on one X chromosome has a good chance of being suppressed by a dominant gene on the other X. But the Y chromosome is only about one-third as long and therefore lacks many corresponding genes to override those on the X. A well-known example is *hemophilia,* a disease in which the blood fails to clot normally.

Besides X-linked disorders, many sex differences reveal the male to be at a disadvantage. Rates of miscarriage, infant and childhood deaths, birth defects, learning disabilities, behavior disorders, and mental retardation are greater for boys. It is possible that these sex differences can be traced to the genetic code. The female, with two X chromosomes, benefits from a greater variety of genes. Nature, however, seems to have adjusted for the male's disadvantage. Worldwide, about 106 boys are born for every 100 girls, and judging from miscarriage and abortion statistics, an even greater number of males are conceived.

Nevertheless, in recent decades the proportion of male births has declined in many industrialized countries, including Canada, Denmark, Germany, Finland, the Netherlands, Norway, and the United States. Some researchers blame increased occupational and community exposure to pesticides for a reduction in sperm counts overall, especially Y-bearing sperm. But the precise cause is unknown.

3.6.4 Genetic Imprinting. More than 1,000 human characteristics follow the rules of dominant-recessive and codominant inheritance. In these cases, whichever parent contributes a gene to the new individual, the gene responds in the same way. Geneticists, however, have identified some exceptions. In genetic imprinting, genes are *imprinted,* or chemically marked, in such a way that one member of the pair (either the mother's or the father's) is activated, regardless of its makeup. The imprint is often temporary: It may be erased in the next generation, and it may not occur in all individuals.

Imprinting helps us understand certain puzzling genetic patterns. For example, children are more likely to develop diabetes if their father, rather than their mother, suffers from it. And people with asthma or hay fever tend to have mothers, not fathers, with the illness. Imprinting may also explain why Huntington disease, when inherited from the father, tends to emerge at an earlier age and to progress more rapidly.

Genetic imprinting can also operate on the sex chromosomes, as *fragile* **X** *syndrome* reveals. In this disorder, an abnormal repetition of a sequence of DNA bases occurs on the X chromosome, damaging a particular gene. Fragile X syndrome is the most common inherited cause of mild to moderate mental retardation. It has also been linked to 2 to 3 percent of cases of autism, a serious emotional disorder of early childhood involving bizarre, self-stimulating behavior and delayed or absent language and communication. Research reveals that the defective gene at the fragile site is expressed only when it is passed from mother to child.

3.6.5 Mutation. The harmful genes created by mutation, a sudden but permanent change in a segment of DNA. A mutation may affect only one or two genes, or it may involve many genes, as in the chromosomal disorders. Some mutations occur spontaneously, simply by chance. Others are caused by hazardous environmental agents in our food supply or the air we breathe.

Although nonionizing forms of radiation-electromagnetic waves and microwaves-have no demonstrated impact on DNA, ionizing (high-energy) radiation is an established cause of mutation. Women who receive repeated doses before conception are more likely to miscarry

or give birth to children with hereditary defects. Genetic abnormalities, such as physical malformations and childhood cancer, are also higher when fathers are exposed to radiation in their occupations. However, infrequent and mild exposure to radiation does not cause genetic damage. Instead, high doses over a long period impair DNA.

3.6.6 Polygenic Inheritance. The individual differences are much easier to trace to their genetic origins than are characteristics that vary continuously among people, such as height, weight, intelligence, and personality. These traits are due to **polygenic inheritance,** in which many genes determine the characteristic in question. Polygenic inheritance is complex, and much about it is still unknown.

Check Your Progress 1

Discuss some of the aspects of genetic foundations and its implications on development of a normal child.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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3.7 CHROMOSOMAL ABNORMALITIES

Besides harmful recessive genes, normalities of the chromosomes are a major cause of serious developmental problems. Most chromosomal defects result from mistakes during meiosis, when the ovum and sperm are formed. A chromosome pair does not separate properly or part of a chromosome breaks off. Because these errors involve more DNA than problems due to single genes, usually produce many physical and mental symptoms.

3.7.1 Down Syndrome. The most common chromosomal disorder, occurring in 1 out of every 800 live births, is *Down syndrome.* In 95 percent of cases it results from a failure of the twenty first pair of chromosomes to separate during meiosis, so the new individual inherits three of these chromosomes rather the normal two. In other less frequent forms, an extra broken piece of a twenty first chromosome is present. Or an error occurs during the early stages of mitosis, causing some but not all body cells to have the defective chromosomal makeup (called a *mosaic* pattern). In these instances, because less genetic material is involved, symptoms of the disorder are less extreme.

The consequences of Down syndrome include mental retardation, memory and speech problems, limited vocabulary and slow motor development. Affected individuals also have distinct physical features – a short, stocky build, a flattened face, a protruding tongue, almond-shaped eyes, and an unusual crease running across the palm of the hand. In addition, infants with Down syndrome are often born with eye cataracts and heart and intestinal defects. Three decades ago, most died by early adulthood. Today because of medical advances, many survive into their sixties and beyond.   1

Infants with Down syndrome smile less readily, show poor eye-to-eye contact, and explore objects less persistently. But when parents encourage them to engage with their surroundings, Down syndrome children develop more favorably. They also benefit from infant and preschool intervention programs, although emotional, social, and motor skills improve more than intellectual performance. Thus, environmental factors affect how well children with Down syndrome fare.

The risk of Down syndrome rises with maternal age, from 1 in 1,900 births at age 20, to 1 in 300 at age 35, to 1 in 30 at age 45. Geneticists believe that the ova, present in the woman's body since her own prenatal period, weaken over time. As a result, chromosomes do not

separate properly as they complete the process of meiosis at conception. In about 5 to 10 percent of cases, the extra genetic material originates with the father. However, Down syndrome and other chromosomal abnormalities are not related to advanced paternal age. In these instances, the mutation occurs for other unknown reasons.

3.7.2 Abnormalities of the Sex Chromosomes. Disorders of the autosomes other than Down syndrome usually disrupt development so severely that miscarriage occurs. When such babies are born, they rarely survive beyond early childhood. In contrast, abnormalities of the sex chromosomes usually lead to fewer problems. In fact, sex chromosome disorders often are not recognized until adolescence when, in some of the deviations, puberty is delayed. The most common problems involve the presence of an extra chromosome (either X or Y) or the absence of one X in females.

A variety of myths exist about individuals with sex chromosome disorders. For example, males with *XYY syndrome* are not necessarily more aggressive and antisocial than XY males. And most children with sex chromosome disorders do not suffer from mental retardation. Instead, their intellectual problems are usually very specific. Verbal difficulties-for example, with reading and vocabulary-are common among girls with *triple* X *syndrome (XXX)* and boys with *Klinefelter syndrome (XXY),* both of whom inherit an extra X chromosome. In contrast, girls with *Turner syndrome (XO),* who are missing an X, have trouble with spatial relationships-for example, drawing pictures, telling right from left, following travel directions, and noticing changes in facial expressions.

3.8 REPRODUCTIVE CHOICES

In the past, many couples with genetic disorders in their families chose not to bear a child at all rather than risk the birth of an abnormal baby. Today, genetic counseling and prenatal diagnosis help people make informed decisions about conceiving, carrying a pregnancy to term, or adopting a child.

3.8.1 Genetic Counseling

Genetic counseling is a communication process designed to help couples assess their chances of giving birth to a baby with a hereditary disorder and choose the best course of action in view of risks and family goals. Individuals likely to seek counseling are those who have had difficulties bearing children, such as repeated miscarriages, or who know that genetic problems exist in their families. In addition, women who delay childbearing past age 35 are candidates for genetic counseling. After this time, the overall rate of chromosomal abnormalities rises sharply, from 1 in every 190 to as many as 1 in every 10 pregnancies at age 48.

If a family history of mental retardation, physical defects, or inherited diseases exists, the genetic counselor interviews the couple and prepares a *pedigree,* a picture of the family tree in which affected relatives are identified. The pedigree is used to estimate the likelihood that parents will have an abnormal child, using the genetic principles. In the case of many disorders, blood tests or genetic analyses can reveal whether the parent is a carrier of the harmful gene. Carrier detection is possible for all of the recessive diseases listed in Table 2, as well as others, and for fragile X syndrome.

When all the relevant information is in, the genetic counselor helps people consider appropriate options. These include "taking a chance" and conceiving, choosing from among a variety of reproductive technologies like donor insemination and In vitro fertilization, or adopting a child.

3.8.2 Prenatal Diagnosis and Fetal Medicine

If couples who might bear an abnormal child decide to conceive, several **prenatal diagnostic methods** -medical procedures that permit detection of problems before birth-are

available (Table 3). Women of advanced maternal age are prime candidates for *amniocentesis* or *chorionic villus sampling*. Except for *ultrasound* and *maternal blood analysis,* prenatal diagnostic methods should not be used routinely, as they have some chance of injuring the developing organism.

Table 3

Method	Description
Amniocentesis	The most widely used technique. A hollow needle is inserted through the abdominal wall to obtain a sample of fluid in the uterus. Cells are examined for genetic defects. Can be performed by 11 to 14 weeks after conception but safest after 15 weeks; 1 to 2 more weeks are required for test results. Small risk of miscarriage.
Chorionic villus sampling	A procedure that can be used if results are desired or needed very early in pregnancy. A thin tube is inserted into the uterus through the vagina, or a hollow needle is inserted through the abdominal wall. A small plug of tissue is removed from the end of one or more chorionic villi, the hair l ike projections on the membrane surrounding the developing organism. Cells are examined for genetic defects. Can be performed at 6 to 8 weeks after conception, and results are available within 24 hours. Entails a slightly greater risk of miscarriage than does amniocentesis. Also associated with a small risk of limb deformities, which increases the earlier the procedure is performed.
Fetoscopy	A small tube with a light source at one end is inserted into the uterus to inspect the fetus for defects of the limbs and face. Also allows a sample of fetal blood to be obtained, permitting diagnosis of such disorders as hemophilia and sickle cell anemia as well as neural defects. Usually performed between 15 and 18 weeks after conception, but can be done as early as 5 weeks. Entails some risk of miscarriage.
Ultrasound	High-frequency sound waves are beamed at the uterus; their reflection is translated into a picture on a video screen that reveals the size, shape, and placement of the fetus. By itself, permits assessment of fetal age, detection of multiple pregnancies, and identification of gross physical defects. Also used to guide amniocentesis, chorionic villus sampling, and fetoscopy. When used five or more times, may increase the chances of low birth weight.
Maternal blood analysis	By the second month of pregnancy, some of the developing organism's cells enter the maternal bloodstream. An elevated level of alpha-fetoprotein may indicate kidney disease, abnormal closure of the esophagus, or neural tube defects, such as anencephaly (absence of most of the brain) and spina bifida (bulging of the spinal cord from the spinal column). Isolated cells can be examined for genetic defects, such as Down syndrome.
Preimplantation genetic diagnosis	After in vitro fertilization and duplication of the zygote into a cluster of about eight to ten cells, one or two cells are removed and examined for hereditary defects. Only if that sample is free of detectable genetic disorders is the fertilized ovum implanted in the woman's uterus.

Advances in *genetic engineering* also offer hope for correcting hereditary defects. As part of the Human Genome Project an ambitious, international research program aimed at deci-phering the chemical makeup of human genetic material (genome)-researchers have mapped the sequence of all human DNA base pairs. Using that information, they are "annotating" the genome-identifying all its genes and their functions, including their protein products and what they do. A major goal is to understand the estimated 4,000 human disorders, those due

to single genes and those resulting from a complex interplay of multiple genes and environmental factors.

Already, thousands of genes have been identified, including those involved in hundreds of diseases, such as cystic fibrosis, Huntington disease, Duchenne muscular dystrophy, Marfan syndrome, and some forms of cancer. As a result, new treatments are being explored, such as *gene therapy*-delivering DNA carrying a functional gene to the cells, thereby correcting a genetic abnormality. In recent experiments, gene therapy relieved symptoms in hemophilia patients and patients with severe immune system dysfunction. Another approach is *proteomics,* modifying gene-specified proteins involved in biological aging and disease.

3.8.3 Genetic Testing

For those who harbor genes that might lead to later-emerging disorders, a few predictive tests exist, such as those for breast and colon cancer. Scientists predict that by the year 2010 many more such tests will be available, permitting people to find out about their genetic risks and, hopefully, take steps to reduce them-through medical monitoring, lifestyle changes, or drug therapy.

Although its potential benefits are great, at present genetic testing raises serious social, ethical, and legal concerns. A major controversy involves testing children and adults who are at risk but who do not yet show disease symptoms. Delay between the availability of predictive tests and effective interventions mean that people must live with the knowledge that they might become seriously ill. A related concern is the need for greater knowledge of genetics, by both health professionals and the general public. Without this understanding, doctors and patients may misinterpret genetic risk. For example, genes associated with breast cancer were first identified in families with a high incidence of the disease.

3.8.4 Adoption

Adults who cannot bear children, who are likely to pass along a genetic disorder, or who are older and single but want a family are turning to adoption in increasing numbers. Adoption agencies usually try to find parents of the same ethnic and religious background as the child.. Because the availability of healthy babies has declined (young unwed mothers give up their babies today than in the past), more people are adopting from other countries or taking children who are older or who have developmental problems.

Adopted children and adolescents-whether born in another country or in the country of their adoptive parents-have more learning and emotional difficulties than other children, a difference that increases with the child's age at time of adoption, The biological mother may have been unable to care for the child because of emotional problems believed to be partly genetic, such as alcoholism or severe depression. She may have passed this tendency to her offspring. Or perhaps she experienced stress, poor diet, or inadequate medical care during pregnancy-factors that can affect the child. Furthermore, children adopted after infancy are more likely than their nonadopted peers to have a history of conflict-ridden family relationships, lack of parental affection, and neglect and abuse. Finally, adoptive parents and children, who are genetically unrelated, are less alike in intelligence and personality than biological relatives-differences that may threaten family harmony. But despite these risks, most adopted children fare surprisingly well.

Check Your Progress 2

A. Bring out the disorders that is due to chromosomal abnormalities

B. State the reproductive choices that a parent has in having a child.

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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3.9 ENVIRONMENTAL CONTEXTS OF DEVELOPMENT

Just as complex as the genetic inheritance that sets the stage for development is the surrounding environment-a many-layered set of influences that combine to help or hinder physical and psychological well-being.

The Bronfenbrenner's ecological systems theory emphasizes that the environments extending beyond the *microsystem,* or the immediate settings powerfully affect development. The impact is so pervasive that we seldom stop to think about it in our daily lives. This is the *macrosystem,* or broad social climate of society-its values and programs that support and protect human development. All people need help with the demands of each phase of the lifespan-through well-designed housing, safe neighborhoods, good schools, well-equipped recreational facilities, affordable health services, and high-quality child care and other services that permit them to meet both work and family responsibilities. And some people, because of poverty or special tragedies, need considerably more help than others.

3.9.1 The Family

In power and breadth of influence, no context equals the family. The family creates bonds between people that are unique. Attachments to parents and siblings usually last a lifetime and serve as models for relationships in the wider world of neighborhood, school, and community. Within the family, children learn the language, skills, and social and moral values of their culture. And at all ages, people turn to family members for information, assistance, and interesting and pleasurable interaction. Warm, gratifying family ties predict physical and psychological health throughout development. In contrast, isolation or alienation from the family is often associated with developmental problems.

Contemporary researchers view the family as network interdependent relationships. The ecological systems theory that has *bidirectional influences* exist in which the behaviour of each family member affect those of others. Indeed, the very term *system* implies that the responses of all family members are related. These system influences operate both directly and indirectly.

3.9.1a Direct Influences. When we observe family members interacting, it can be seen that kind, patient communication evokes cooperative, harmonious responses, whereas harshness and impatience engender angry, resistive behavior. Each of these reactions, in turn, forges a new link in the interactive chain. In first instance, a positive message tends to follow; in the second, a negative or avoidant one tends to occur. For example, when parents' requests are accompanied by warmth and affection children tend to cooperate. And when children willingly comply, their parents are likely to be warm and gentle in the future. In contrast, parents who discipline with harshness and impatience have children who refuse and rebel. And because, children's misbehavior is stressful for parents, they may increase their use of punishment, leading to more unruliness by the child.

3.9.1.b Indirect Influences. Bronfenbrenner calls the indirect influences of others as the effect of *third parties*.

Third parties can serve as supports for development. For example, when parents' marital relationship is warm and considerate, mothers and fathers praise and stimulate their children more and nag and scold them less. In contrast, when a marriage is tense and hostile, parents tend to be less responsive to their children's needs and to criticize, express anger, and punish. Similarly, children can affect their parents' relationship in powerful ways. For example, some children show lasting emotional problems when their parents divorce.

When family relationships are strained by third parties, other members like grand parents may help restore effective interaction. They can promote children's development in many ways-both directly, by responding warmly to the child, and indirectly, by providing parents with child-rearing advice, models of child-rearing skill, and even financial assistance. Of course, like any indirect influence, grandparents can sometimes be harmful. When quarrelsome relations exist between grandparents and parents, parent-child communication may suffer.

3.9.1.c Adapting to Change. Bronfenbrenner's theory - chronosystem, the interplay of forces within the family is dynamic and ever-changing. Important events, such as the birth of a baby, a change of jobs, or an elderly parent joining the household due to declining health, create challenges that modify existing relationships. The way such events affect family interaction depends on the support provided by other family members as well as on the developmental status of each participant.

In recent decades, a declining birth rate, a high divorce rate, and expansion of women's roles have led to a smaller family size. This combined with a longer lifespan, means that more generations are alive with fewer members in the youngest ones, leading to a "top-heavy" family structure. Consequently, young people today are more likely to have older relatives than at any time in history-a circumstance that can be enriching as well as a source of tension.

3.9.2 Socioeconomic Status and Family Functioning

Socioeconomic status (SES) combines three interrelated, but not completely overlapping, variables:(l) years of education and (2) the prestige of and skill required by one's job, both of which measure social status, and (3) income, which measures economic status. As socioeconomic status rises and falls, people face changing circumstances that profoundly affect family functioning.

SES affects the timing and duration of phases of the family life cycle. People who work in skilled and semiskilled manual occupations (machinists, truck drivers) tend to marry and have children earlier as well as give birth to more children than people in white-collar and professional occupations. The two groups also differ in values and expectations. For example, when asked about personal qualities they desire for their children, lower-SES parents tend to emphasize external characteristics, such as obedience, politeness, neatness, and cleanliness. In contrast, higher-SES parents emphasize psychological traits, such as curiosity, happiness, self-direction, and cognitive and social maturity. In addition, fathers in higher-SES families tend to be more involved in child rearing and household responsibilities. Lower-SES fathers, partly because of their gender stereotyped beliefs and partly because of economic necessity, focus more on their provider role.

Education also contributes to SES differences in family interaction. Higher-SES parents' interest in providing verbal stimulation and nurturing inner traits is supported by years of

schooling, during which they learned to think about abstract, subjective ideas. Furthermore, the greater economic security of higher-SES families permits them, to devote more time, energy, and material resources to nurturing their children's psychological characteristics.

3.9. 3 The Impact of Poverty

When families slip into poverty, development is seriously threatened. Joblessness, a high divorce rate, a lower remarriage rate among women than men, widowhood, and inadequate government programs to meet family needs is responsible for developmental problems. The child poverty rate is higher than that of any age group. These circumstances are particularly worrisome because the earlier poverty begins, the deeper it and the longer it lasts, the more devastating its effects on physical and mental health and school achievement. The constant stresses that accompany poverty gradually weaken the family system. Poor families have many daily hassles- no food, improper clothing, no shelter etc. When daily crises arise, family members become depressed, irritable, and distracted, and hostile interactions increase. These outcomes are especially severe in families that must live in poor housing and dangerous neighborhoods-conditions that make everyday existence more difficult, while reducing social supports that help people cope with economic hardship.

Most homeless families consist of women with children under age 5. Besides health problems (which affect most homeless people), homeless children suffer from developmental delays and serious emotional stress.

3.9. 4 Cultural Values and Practices.
Cultures shape family interaction and community settings beyond the home-in short, all aspects of daily life. Many of us remain blind to aspects of our own cultural heritage until we see them in relation to the practices of others.

Although many people value independence and privacy, not all citizens share the same values. Some are part of sub cultures-groups of people with beliefs and customs that differ from those of the larger culture. Many minority groups have cooperative family structures, which help protect their members from the harmful effects of poverty. Within the extended family, grandparents play meaningful roles in guiding younger generations; adults with employment, marital, or child-rearing difficulties receive assistance and emotional support; and care giving is enhanced for children and the elderly. Broad dimension on which cultures and subcultures differ are: the extent to which *collectivism versus individualism* is emphasized. In collectivist societies, people define themselves as part of a group and stress group goals over individual goals. In individualistic societies people think of themselves as separate entities and are largely concerned with their own personal needs. Although individualism tends to increase as cultures become more complex, cross-national differences remain. The United States is strongly individualistic, and India is a collectivist.

Check Your Progress 3
State the role of Environment in the development of a child.

Notes: a) Write your answer in the space given below.

     b) Check your answer with the one given at the end of this lesson.

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3.10 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   The Genetic foundations with Code, Sex Cells, Multiple Births and the Patterns of Genetic Inheritance.

ii)   The significant impact of Chromosomal Abnormalities causing Down Syndrome and Abnormalities in the Sex Chromosomes

iii)   Reproductive Choices using Genetic Counseling, Prenatal Diagnosis and Fetal Medicine, Genetic Testing and Adoption are the some of the aspects which enable the parents to have a normal child.

iv)   The Environmental Contexts of Development such as the family, socioeconomic status and family functioning were dealt.

3.11 Check Your Progress: Model Answers

1.   Your answer may include the description of

    i)   The Genetic Code

    ii)   The Sex Cells

    iii)   Male or Female

    iv)   Multiple Births

    v)   Patterns of Genetic Inheritance

    vi)   Dominant-Recessive Inheritance

    vii)   Codominance

    viii) X-Linked Inheritance

    ix)   Genetic Imprinting

    x)   Mutation

    xi)   Polygenic Inheritance

2.   A. The disorders due to Chromosomal Abnormalities include

    i.   Down Syndrome

    ii. Abnormalities of the Sex Chromosomes

    B. Reproductive Choices which a parent in having a child are

    i.   Genetic Counseling

    ii. Prenatal Diagnosis and Fetal Medicine

    iii. Genetic Testing and

    iv. Adoption

3.   The Environmental Contexts in which a child Develops are:

    i.   The Family

    ii.   Socioeconomic Status and Family Functioning

    iii. The Impact of Poverty

    iv. Cultural Values and Practices of the family

3.12 Lesson – End Activities

1. Describe about the genetic influence on development.

2. Explain about the patterns of genetic inheritance.

3.13 References

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LESSON - 4
PRENATAL DEVELOPMENT - CHARACTERISTICS - IMPORTANCE OF CONCEPTION - PRENATAL ENVIRONMENTAL INFLUENCES

Contents

4.0 AIMS AND OBJECTIVES

This lesson will give an overall picture of the Characteristics of prenatal development and the importance of the external environment on the infant.

After going through this Lesson, you will be able to:
i)   Discuss the characteristics of prenatal period
ii) Explain how the heredity, sex and birth position play an important role in the development of child
iii) Understand the influence of the prenatal environment on the child
iv) State the role of father in the development of a child

4.1 INTRODUCTION

There is extensive evidence to show how conditions in the prenatal environment can and do affect development before birth. This has justified beginning the study of development from the moment of conception rather than from the time of birth.

Most of the development that takes place before birth has been investigated by physiologists and members of the medical profession, and the results of these studies have been extensively borrowed by developmental psychologists. Their contributions have, for the most part, been to supplement the physiological and physical data with evidence of the effects of psychological states on the pattern of development and the long-term effects of attitudes of significant people.

The major happenings during the nine months before birth are to be explained, to emphasize the significance of the moment of conception, and to show what environmental and psychological factors affect the course of development.

4.2 CHARACTERISTICS OF THE PRENATAL PERIOD

In spite of the fact that the first developmental period in the life span is next to the shortest of all-the shortest is the period of the newborn or infancy- it is in many respects one of the most, if not the most, important period of all. This period, which begins at conception and ends at birth, is approximately 270 to 280 days in length, or nine calendar months.

Although it is relatively short, the prenatal period has six important characteristics, each of which has a lasting effect on development during the lire span. They are as follows:
1. The hereditary endowment, which serves as the foundation for later development, is fixed, once and for all, at this time. While favorable or unfavorable conditions, both before and after birth may and probably will affect to some extent the physical and psychological traits that make up this hereditary endowment, the changes will be quantitative not qualitative.

2. Favorable conditions in the mother's body can foster the development of hereditary potentials while unfavorable conditions can stunt their development, even to the point of distorting the pattern of future development. At few if any other times in the life span are hereditary potentials so influenced by environmental conditions as they are during the prenatal period.

3. The sex of the newly created individual is fixed at the time of conception and conditions within the mother's body will not affect it, as is true of the hereditary endowment. Except when surgery is used in sex transformation operations, the sex of the individual, determined at the time of conception, will not change. Such operations are rare and only partially successful.

4. Proportionally greater growth and development take place during the prenatal period than at any other time throughout the individual's entire life. During the nine months before birth, the individual grows from a microscopically small cell to an infant who measures approximately twenty inches in length and weights, on the average, 7 pounds. It has been estimated that weight during this time increases eleven million times. Development is like-wise phenomenally rapid. From a cell that is round in shape, all the bodily features, both external and internal, of the human being develop at this time. At birth, the newly born infant can be recognized as human even though many of the external features are proportionally different from those of an older child, an adolescent, or an adult.

5. The prenatal period is a time of many hazards, both physical and psychological. While it cannot be claimed that it is the most hazardous period in the entire life span-many believe that infancy's more hazardous-it certainly is a time when environmental or psychological hazards can have a marked effect on the pattern of later development or may even bring development to an end.

6. The prenatal period is the time when significant people form attitudes toward newly created individuals. These attitudes will have a marked influence on the way these individuals are treated, especially during their early, formative years. If the attitudes are heavily emotionally weighted, they can and often do play havoc with the mother's homeostasis and, by so doing, upset the conditions in the mother's body that are essential to the normal development of the newly created individual.

Check Your Progress 1

Discuss the six characteristics of the prenatal period

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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4.3 IMPORTANCE OF CONCEPTION

At the time of conception, four important conditions are determined that influence the individual's later development. What role each of these conditions plays in the individual's development will explain why the time of conception is probably the most important period in the life span.

4.3.1 Hereditary Endowment

The first important happening at the time of conception is the determination of the newly created individual's hereditary endowment. The contributions to this endowment from both parents and from both maternal and "paternal ancestors. Because the hereditary endowment is determined once and for all at the time of conception, its importance is far greater than it would be if it were subject to later change.

The determination of hereditary endowment affects later development in two ways. First, heredity places limits beyond which individuals cannot go. If prenatal and postnatal conditions are favorable, and if people are strongly motivated, they can develop their inherited physical and mental traits to their maximum potential, but they can go no further. Montagu has stressed, "Where we control the environment, we to some extent control heredity. Heredity, it has been said, determines what we *can* do, and environment what we *do* do".

The second important thing about the hereditary endowment is that it is entirely a matter of chance: there is no known way to control the number of chromosomes from the maternal or paternal side that will be passed on to the child. Scheinfeld has pointed out that the birth of a given individual depends on the union of a particular ovum with a particular sperm.

4.3.2 Sex

Determination of the individual's sex happens during conception. It is known that the sperm cell-that is, the father-determines the sex of a child. At conception, the zygote receives 23 chromosomes from the sperm and 23 from the ovum. (Figure 1 and 2)They align themselves in pairs: 22 pairs are *autsomes,* or nonsex chromosomes; the twenty third pair is *sex chromosomes,* which determine if the new human being will be male or female. In females, this pair is called XX; in males, it is called XY. The X is a relatively long chromosome, whereas the Y is short and carries little genetic material. When gametes are formed in males, the X and Y chromosomes separate into different sperm cells. In females, all gametes carry an X chromosome. Therefore, the sex of the new organism is determined by whether an X-bearing or a Y-bearing sperm fertilizes the ovum.
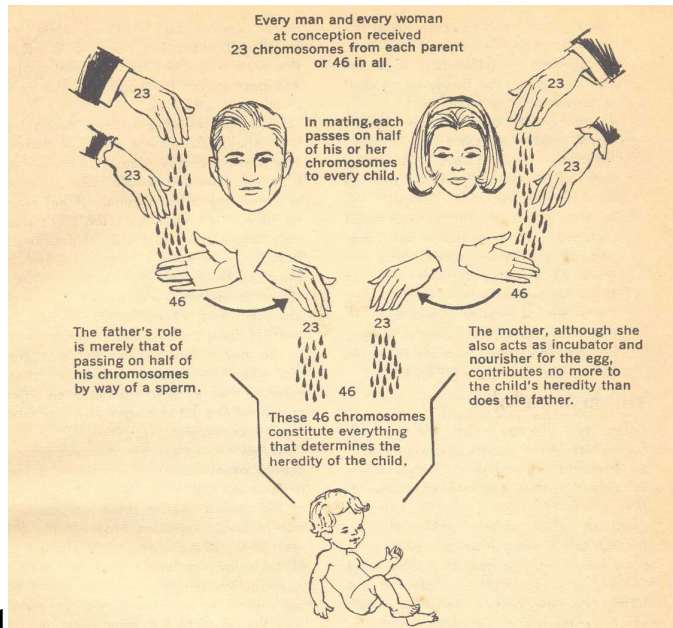
Figure 1

Figure 2
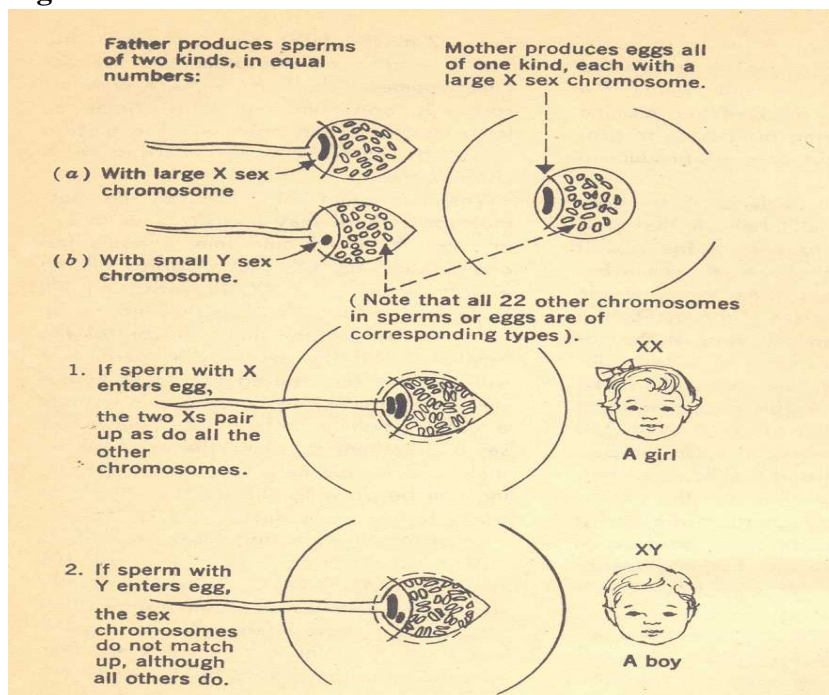
Sex depends on the kind of spermatozoon that unites with the ovum. Once the male and female cells have united, nothing can be done to change the sex of the newly formed individual. Whether this individual is male or female will have a lifelong effect on the individual's patterns of behavior and personality.

There are three reasons why the sex of an individual is important to lifelong development. First, each year children come under increasing cultural pressures from parents, teachers, their peer group, and society at large to develop attitudes and behavior patterns that are considered appropriate for members of their sex. Children who learn to behave in ways that are considered appropriate for their sex are assured of social acceptance. By contrast, children who fail to conform are subjected to criticism and social ostracism.

Second, learning experiences are determined by the individual's sex. In the home, at school, and in play groups, children learn what is considered appropriate for members of their sex. A boy who learns to play girls' games is labeled a "sissy" and girls who prefer boys' games are known as "tomboys."

Third, and perhaps most important of all, is the attitude of parents and other significant family members toward individuals because of their sex. Studies of sex preferences for offspring have revealed that the traditional preference for a boy, especially for the firstborn, still persists. Strong preferences for a child of a given sex have marked influences on parents' attitudes, which in turn affect their behavior toward the child and their relationships with the child.

4.3.3 Number of Offspring

The third important happening at the time of conception or shortly thereafter is the determination of the number of offspring there will be. While most humans are singletons, multiple births also occur. Meredith has reported that lout of 80 births is twins, 1 out of every 9,000 is triplets, and 1 out of every 570,000 is quadruplets. There are more frequent multiple births among blacks and fewer among Chinese, Japanese, and other Mongoloid-race groups than there are among whites.

When a ripe ovum is fertilized by one spermatozoon, the result will be a *singleton,* unless the fertilized ovum *(zygote)* splits into two or more distinct parts during the early stages of cell cleavage. When this happens, the result will be identical (uniovular) twins, triplets, or other multiple births. If two or more ova are released simultaneously and are fertilized by different spermatozoa, the result will be *nonidentical* (also called *biovular* or *fraternal)* twins, triplets, or other multiple births.

Approximately one-third of all twins are identical. Because the chromosomes and genes of the two or more zygotes from which individuals of nonidentical multiple birth develop are not the same, their mental and physical make ups are different. By contrast, those of identical multiple births come from the same zygote, and consequently they have the same assortment of chromosomes and genes. Children of identical multiple births are always of the same sex, while those of nonidentical multiple births may be of the same or opposite sex.

Effects on Development. Most studies of the effects of multiple births on development have been limited to twins for the reason that triplets, quadruplets, and other multiple births occur very infrequently and the mortality rates among them are much higher than among twins, thus making studies of them difficult if not impossible.

However, there is reason to assume that the effects of multiple birth on triplets, quadruplets, and other multiples is much the same as on twins though the former feel these effects to a greater extent. The reason that multiple births affect the pattern of development is not only that there are differences in heredity but that both the prenatal environment and the postnatal environment of singletons are different from those of children of multiple births. This contributes to different patterns of development, different patterns of behavior, and differences in personality.

Before birth, the singleton has the mother's uterus to itself, and thus development is not affected by crowding, a factor in multiple births that will be discussed more fully in the following chapter.

There are also differences in the postnatal environments of singletons and those of multiple births. While the mother can give her undivided attention to the care of a singleton, those of multiple birth must share it. Thus during the early years, when the foundations of the personality pattern are laid, babies of multiple birth receive less mothering than singletons, and consequently they may feel unloved or actually rejected.

4.3.4 Some Common Developmental Characteristics of Twins

Developmental lag: In physical, mental, motor, and speech development, twins tend to lag behind singletons of the same age. Lag in motor and speech development may be due to brain damage or to prematurity but it is more likely to be due to parental over protectiveness.

Physical Development: Twins tend to be smaller, age for age, than singletons. This is generally due to the fact that they are premature. They also suffer from brain damage and other physical defects more often than singletons.

Mental Development: Mental similarities between identical twins are much greater than between nonidentical twins and this persists into old age. Identical twins also show strong similarities in terms of special abilities, such as musical and artistic aptitudes.

Social Development: Twins tend to compete for adult attention, to imitate each other's speech and behavior, and to depend on each other for companionship during the preschool years. As they grow older, sibling rivalry and competition develop. One twin usually takes on the role of leader, forcing the other into the role of follower. This affects their relationships with other family members and with outsiders.

Personality Development: Many twins have difficulty in developing a sense of personal identity. This is especially true of identical twins and of nonidentical twins of the same sex. Others enjoy the close relationship of twinship and the attention they receive as a result of their similarity in appearance. This leads to self-satisfaction and self-confidence.

Behavior Problems: Behavior problems have been reported to be more common among twins than among singletons of the same ages. It is thought that this is a result of the way twins are treated, both at home and outside the home. Behavior problems have also been reported to be more common among nonidentical than among identical twins. It has been suggested that this is because rivalry is stronger between nonidentical than identical twins.

Long-Term Effects of Twinship Those that have been made rarely go beyond the tenth year of the twins' lives, have indicated the following long-term effects. There is a tendency for the developmental lag in physical development to end before children reach puberty and often much earlier. Generally the firstborn twin continues to be larger, brighter, and better adjusted socially throughout the childhood years. The smaller the twins at birth, the longer the developmental lag tends to persist.

The mutual dependency or "twinning relationship" so common among young twins and the one sided dependency of the smaller on the larger twin generally give way to social relationships similar to those of singletons before the twins enter school. Those who attend day-care centers or preschools tend to abandon these patterns of dependency earlier than twins whose environment is limited to the home. Fraternal twins are more vulnerable to external pressures and to have less support from the twinship relationship than do identical twins not only when they are young but also as they grow older.

4.3.5 Ordinal Position

The fourth thing that happens at the time of conception is the establishment of the new child's ordinal position among siblings. While this may change within a year or two after birth, the child's ordinal position remains fairly static from then on. For example, a second-born child may be the "baby of the family" or hold a last-born ordinal position for a year or

more after birth but then be replaced by a newly born sibling. Shifting from the "baby-of-the family" position to a middle-born's position may be upsetting for a short time, but young children or even babies tend to adjust to these changes.

There is evidence to conclude that it is not ordinal position per se that leaves its mark on the individual's personality and patterns of behavior but rather circumstances in life related to this position-such as the role the individual plays in the family and the treatment he or she receives from significant family members and their attitudes. Since roles, attitudes, and treatment are far more likely to persist than to change, the individual constantly receives reinforcements which, in time, result in firmly established habits.

Bigner has described specifically how being a second-born or a firstborn in a family affects the child's development. He contends, "A second-born child plays a 'satellite' role in many of his interactions with the older, since the firstborn may act as the natural leader of the siblings in the family constellation".

How ordinal position will affect the individual will depend on a number of conditions, the two most important of which are the sex of the individual and how individuals feel about the roles they are expected to play.

A firstborn girl, for example, who is expected to help with the housework and with the care of young siblings may resent the fact that the boys in the family have fewer domestic duties and are granted privileges and given opportunities denied to her. A second- or later-born boy may resent being "bossed" by an older female sibling or being treated as the "baby of the family" while his female siblings are given more privileges and freedom than he is given.

Some individuals enjoy the role they are expected to play as a result of their ordinal position while others do not. A firstborn child, for example, may resent the pressures of parents to live up to their expectations or having to act as a model for younger siblings. On the other hand, the firstborn may derive personal satisfaction from serving as a role model for younger siblings.

Long-Term Effects **of** ***Ordinal Position*** Older children, adolescents, and adults of different ordinal positions give clues as to how ordinal position may become a persistent factor in determining the kind of personal and social adjustments the individual will make throughout the life span.

There is evidence that firstborns tend to be brighter and to be higher achievers than their later born siblings. There is little or no evidence, on the other hand, that this is due to hereditary difference but rather to environmental conditions that foster the child's intellectual development. Firstborns are not only given more intellectual stimulation than later-borns but they are also given more opportunities to develop their intellectual abilities in school and college. As Zajonc has pointed out "Parents and psychologists have always regarded firstborn children as different and special and, as a result, have given them greater intellectual stimulation and opportunities to develop their intellectual capacities than their later-born siblings have had".

Because of the greater opportunities they are given and because of the special treatment they receive, firstborns have been found to outnumber later borns in leadership roles as early as elementary school. On the other hand, because of greater over protectiveness and parental concern about their physical welfare, firstborns tend to be more concerned about their health

and to consult doctors more frequently than do later-borns. They also tend to be more cautious and take fewer risks as children and as adults than do siblings of other ordinal positions.

The effects on' marital adjustments of ordinal position in the childhood family have revealed that the best marital adjustments were in families where the husbands were the oldest brothers with younger sisters while the poorest adjustments and the greater number of divorces were in families where the husbands were the younger brothers with older sisters and where the wives had, during childhood, learned to be bossy as a result of playing surrogate-mother roles. By contrast, husbands who, as firstborns in their childhood homes, learned to take responsibility made better adjustments to marriage.

Check Your Progress 2
A. State the four important conditions that determine the influence on the individual's later development during conception.
B. Explain some of the Developmental Characteristics of Twins
Notes: a) Write your answer in the space given below.
        b) Check your answer with the one given at the end of this lesson.
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4.4 CHARACTERISTICS OF PRENATAL ENVIRONMENT
Only recently have we become aware of some of the myriad environmental influences that can affect the developing fetus. The role of the father, for example, used to be almost ignored. Today we know that various environmental factors can affect a man's sperm-and the children he conceives.

While the mother's role has been recognized far longer, we are still discovering many elements that can affect her fetus.

4.4.1 Maternal Factors
Most of our knowledge about prenatal hazards comes from animal research or from studies in which mothers reported on such factors as what they had eaten while pregnant, what drugs they had taken, how much radiation they had been exposed to, and what illnesses they had contracted. Both these methods have limitations: it is not always accurate to apply findings from animals to human beings, and people do not always remember what they did in the past.

Various influences in the prenatal environment affect different fetuses differently. Some environmental factors that are *teratogenic,* or birth defect-producing, in some cases have little or no effect in others. Research suggests that the timing of an environmental event, its intensity, and its interaction with other factors are all relevant.

4.4.2 Prenatal Nourishment
Nutrition: Babies develop best when their mothers eat well. A woman's diet before as well as during pregnancy is crucial to her child's future health. Diet during pregnancy may be even more vital. Pregnant women who gain between 22 and 46 pounds are less likely to miscarry or to bear stillborn or low birth weight babies.

Well-nourished mothers bear healthier babies, while mothers with inadequate diets are more likely to bear premature or low-birth weight infants, babies who are stillborn (born dead) or

die soon after birth, or babies whose brains do not develop normal. In low-income families, other kinds of deprivation may aggravate the effects of poor nutrition.

Malnourished pregnant women who take dietary supplements have bigger, healthier, more active, and more visually alert infants. In addition, better-nourished mothers tend to breastfeed longer, thus benefiting their babies. Furthermore, recent findings point to at reduced risk of neural tube defects in the babies of women who received supplements of folic acid (a vitamin in the B group) even before pregnancy, leading to the recommendation that all women of childbearing age receive this vitamin.

A well-balanced daily diet for pregnant women includes foods from each of the following categories: protein (meat and meat alternatives), dairy products, bread and cereals, fruits and vegetables rich in vitamin C, dark-green vegetables, other fruits and vegetables (including yellow ones rich in vitamin A), and fats and oils. Women need to eat more than usual when pregnant: typically, 300 to 500 more calories a day, including extra protein. Teenagers, women who are ill or undernourished or under stress, and those who took birth control pills until shortly before pregnancy need extra nutrients.

Physical Activity Fortunately, not all things an expectant mother does or is exposed to are harmful to a fetus. She can continue to jog, cycle, swim, play tennis, and so forth, since moderate exercise does not seem to endanger the fetuses of healthy women. Regular exercise prevents constipation and improves respiration, circulation, muscle tone, and skin elasticity, all of which contribute to a more comfortable pregnancy and an easier, safer delivery. However, pregnant women should avoid activities that could cause a high degree of abdominal trauma.

Employment during pregnancy generally entails no special hazards. However, strenuous working conditions, occupational fatigue, and long working hours may be associated that could cause a greater risk of premature birth.

It is recommended that women in low- risk pregnancies be guided by their own abilities and stamina. The safest course seems to be for pregnant women to exercise moderately, not pushing themselves and not raising their heart rate above 150, and, as with any exercise, to taper off at the end of each session rather than stop abruptly.

Drug Intake: Practically everything the mother takes in makes its way to the new life in her uterus. Drugs may cross the placenta, just as oxygen, carbon dioxide, and water do. Each year as many as 375,000 infants may be affected by their mothers' drug abuse during pregnancy. The organism is especially vulnerable in its first few months, when development is most rapid. Thus drugs taken early in pregnancy have the strongest effects.

A number of extremely serious problems have shown up in a mother's-or father's-use of drugs. Some of these problems cart be treated if the presence of a drug in a newborn baby's body can be detected early. But it is often difficult to determine exactly which drugs a person has taken, since doctors usually have to rely on the parents' own, often inaccurate, testimony.

A new test for the presence of drugs in a newborn's system analyzes the baby's meconium, the fetal waste matter that is excreted during the first few days after birth. Babies whose mothers used cocaine during pregnancy begin life with massive problems. Many are preterm and small, many have neurological problems.

Medical Drugs: Drugs known to be harmful include the antibiotics streptomycin and tetracy-cline; the sulfonamides; excessive amounts of vitamins A, B6, C, D, and K; certain barbiturates, opiates, and other central nervous system depressants; several hormones, including birth control pills, progestin, diethylstilbestrol (DES), androgen, and synthetic estrogen; Accutane, a drug often prescribed for severe acne and even aspirin. It is recommended that *no* medication be prescribed for a pregnant or breastfeeding woman unless it is essential for her own or her child's health.

The effects of taking a drug during pregnancy do not always show up immediately. The synthetic hormone diethylstilbestrol (DES) which was widely prescribed (ineffectually, as it turned out) to prevent miscarriage. Years later, when the daughters of women who had taken DES during pregnancy reached puberty, about 1 in 1000 developed a rare form of vaginal or cervical cancer. "DES daughters" also have had more trouble bearing their own children, with higher risks of miscarriage or premature delivery and "DES sons" seem to show a higher rate of infertility and reproductive abnormalities.

Alcohol: There are babies born 'with alcohol-related birth defects. Many babies suffer from *fetal alcohol syndrome (FAS),* a combination of slowed prenatal and postnatal growth, facial and bodily malformations, and disorders of the central nervous system. Central nervous system problems can involve poor sucking response, brain-wave abnormalities, and sleep disturbances in infancy; and, throughout childhood, a short attention span, restlessness, irritability, hyperactivity, learning disabilities, and motor impairments.

Some of the problems of FAS recede after birth; but problems like retardation, learning disabilities and hyperactivity persist into adulthood, and some malformations require surgery.

Even moderate drinking may harm the fetus. Growth retardation increases if the mother has even one or two drinks a day. The effect increased sharply with heavier alcohol intake; taking less than one drink a day had a minimal effect.

Marijuana Evidence is mounting that heavy marijuana use by pregnant women can lead to birth defects. A mother's heavy use affects her infant's nervous system. Transient neuro-logical disturbances, like tremors and startles, and higher rates of premature and small-for-date. There is link between marijuana use just before and during pregnancy and a childhood cancer-acute lymphoblastic leukemia-possibly because of pesticide contamination of the cannabis leaves. In sum, women of childbearing age should not use marijuana.

Nicotine Pregnant smokers are at higher risk than nonsmokers of bearing preterm and small-for-date babies, and of complications ranging from bleeding during pregnancy to death of the fetus or newborn. However, women who reduce smoking during pregnancy tend to have bigger babies than those who continue to smoke at previous levels.

Smoking in pregnancy seems to have some of the same effects on school-age children as drinking in pregnancy: poor attention span, hyperactivity, learning problems, perceptual-motor and linguistic losses, social maladjustment, poor IQ scores, low grade placement, and minimal brain dysfunction.

Those whose mothers smoked at least a pack a day after pregnancy were twice as likely to be anxious, disobedient, or hyperactive or to exhibit some other behavior problem as were children of nonsmokers. The effect was dose-related; that is, it was more pronounced in

children whose mothers smoked more than a pack a day. And the risk was not lessened if the mother had stopped smoking during pregnancy but resumed afterward. It is possible that smoking during pregnancy may alter the child's brain structure or function, with resulting long-term effects on behavior; that passive exposure to cigarette smoke after birth may affect a child's central nervous system; that smoking may alter the mother's behavior, thus affecting her child's; or that mothers who smoke may be less tolerant of their children's behavior.

Opiates: Women addicted to such drugs as morphine, heroin, and codeine are likely to bear premature, addicted babies who show effects until at least age 6. Addicted newborns are restless and irritable and often have tremors, convulsions, fever, vomiting, and breathing difficulties; they are twice as likely to die soon after birth as non addicted babies. As older babies, they cry often and are less alert and less responsive. And in early childhood-from ap-proximately ages 3 to 6-they weigh less, are shorter, are less well adjusted, and score lower on tests of perceptual and learning abilities. Long-term follow-up studies on these children have found that they tend not to do well in school, are unusually anxious in social situations, and have trouble making friends.

*Cocaine: C*ocaine (including crack, its smokable form) is reported to be the number one illicit drug used by pregnant women in the United States, its effects are of grave importance. Although the immediate medical results of a pregnant woman's use of cocaine (such as prematurity, low birth weight, and smaller head circumference) are well known, little is known about later developmental consequences. It seems, though, that organizational and language skills and secure emotional attachment may be affected for the worse.

Although babies whose mothers stopped using cocaine early in pregnancy grew as normally as babies of drug-free mothers, many were less alert and responsive. Cocaine-exposed newborns also showed more stress behaviors, such as tremors, restlessness, irritability, abnormal reflex behaviors, and excessive high-pitched crying.

Caffeine: Can the caffeine that a pregnant woman swallows in coffee, tea, cola, or chocolate cause trouble for her fetus? A recent study suggests that the amount of caffeine in 11/2 to 3 cups of coffee a day may nearly double the risk of miscarriage, and drinking more than 3 cups nearly triples the risk. It is recommended that pregnant women avoid or use sparingly any food, beverages, or drugs that contain caffeine.

4.4.3 Other Maternal Factors
Illness: A number of illnesses can have serious effects on the developing fetus, depending partly on when a pregnant woman gets sick.

Rubella (German measles) before the eleventh week of pregnancy is almost certain to cause deafness and heart defects in the baby; but the chance of these consequences drops to about 1 in 3 between 13 and 16 weeks of pregnancy and is almost nil after 16 weeks. The syndrome can be prevented by immunizing women before pregnancy-ideally, by immunizing girls before puberty.

Diabetes, tuberculosis, and syphilis have also led to problems in fetal development, and both gonorrhea and genital herpes can have harmful effects on the baby at the time of delivery.

Acquired Immune Deficiency Syndrome (AIDS): may be contracted by a fetus if the mother has the disease or even has the human immunodeficiency virus (HIV) in her blood. The contents of the mother's blood are shared with the fetus through the placenta, and blood is a carrier of the virus that causes AIDS. HIV disproportionately affects disadvantaged women and children end is most often contracted by intravenous drug use or by sexual intercourse with a drug user.

Premature babies are more susceptible, perhaps because they miss the protection of antibodies that may not appear until the last 3 months of gestation. Other associations were found with such birth complications as use of forceps and episiotomy. Babies delivered by cesarean surgery were less likely to be affected. Breastfed infants of these mothers are more likely to develop the infection, but, still, in most populations breastfeeding is still to be preferred, unless the prevalence of HIV infection is very high or the difference in death rates between breastfed and bottle-fed babies is very low.

Incompatibility of Blood Types: A problem resulting from the interaction of heredity with the prenatal environment is incompatibility of blood type between mother and baby. When a fetus's blood contains the *Rh factor - a* protein substance-but the mother's blood does not, antibodies in the mother's blood may attack the fetus and possibly bring about spontaneous abortion, stillbirth, jaundice, anemia, heart defects, mental retardation, or death. Usually the first Rh-positive baby is not affected, but with each succeeding pregnancy the risk becomes greater. A vaccine can now be given to an Rh-negative mother; when it is administered within 3 days after childbirth or abortion, it will prevent her body from making antibodies. Babies affected with Rh disease can be treated by repeated blood transfusions, sometimes before birth.

Medical X-rays: It is known for more than 60 years that radiation can cause gene mutations, minor changes that alter a gene to produce a new, often harmful characteristic. Although it is not known what exact dosage of x-rays will harm a fetus, the greatest potential for harm seems to occur early in pregnancy. Radiation exposure should be avoided, especially during the first 3 months. With the availability of medical x-rays are less necessary and less prevalent today than they were in the past.

Maternal Age: What is the best age to have a baby? Complications for teenage mothers and their babies, most of which are social rather than medical. The concerns for mothers past 30, however, have historically been for the physical well-being of mother and child. In recent years, as more women have delayed childbearing until the mid-thirties or even the forties, researchers have focused on the risks involved, and have come up with largely encouraging findings. Well educated nonsmokers who received prenatal care, women over 35 had only a slightly higher risk of bearing unusually small babies and were no more likely to deliver prematurely or to have stillbirths than were younger first-time mothers. However, older mothers were twice as likely to have such complications of pregnancy as diabetes and high blood pressure. Furthermore, as women age, they become less fertile, are more likely to have miscarriages, and are more at risk of having children with birth defects.

Environmental Hazards: Anything that affects a pregnant woman can affect her fetus: chemicals, radiation, extremes of heat and humidity, and other hazards of modern life. For example, babies whose mothers ate fish contaminated with chemicals used in industry had babies weight less at birth, had smaller heads, and showed weaker reflexes and more jerky movements than infants whose mothers did not eat the fish; and they showed poor visual-

recognition memory at 7 months and poor memory for words and numbers at 4 years. At age 4, such children also tended to be less able to discriminate between visual stimuli and to have more problems with short-term memory.

Women who took saunas or soaked in hot tubs early in their pregnancies seem to run a higher risk of bearing babies with neural-tube defects. Infants exposed to high levels of lead prenatally scored lower on intelligence tests than those exposed to low or moderate levels. Children exposed prenatally to heavy metals showed higher rates of childhood illness and lower levels of performance. Women who worked with chemicals widely used in manufacturing semiconductor chips had about double the rate of miscarriages as did women workers who did not handle the chemicals, suggesting a potential health risk.

Radiation is especially dangerous. It affected Japanese infants after the atomic bomb explosions in Hiroshima and Nagasaki and German infants after the spill-out at the nuclear power plant at Chernobyl in the Soviet Union. In utero exposure to radiation has been linked to greater risk of mental retardation, small head size, chromosomal malformations, Down syndrome, seizure, and poor performance on IQ tests and in school. The critical period seems to be 8 through 15 weeks after fertilization.

4.4.4 Paternal Factors: Environmental Influences Transmitted by the Father

The father, too, can transmit environmentally caused defects. Exposure to lead, marijuana and tobacco smoke, large amounts of alcohol and radiation and certain pesticides may result in the production of abnormal sperm. Associations have appeared between nervous system tumors in children and such occupations of their fathers as electrical or electronic worker, auto mechanic, miner, printer, paper or pulp mill worker, and aircraft industry worker. Paternal diet low in vitamin C could cause birth defects and certain types of cancers in the children.

A harmful influence on both mother and baby is nicotine from a father's smoking. Babies of fathers who smoked were lighter at birth by about 4 ounces per pack of cigarettes smoked per day by the father (or the cigar or pipe equivalent). Children of male smokers were twice as likely as other children to contract cancer as adults.

A man's use of cocaine can also cause birth defects in his children, since cocaine seems to attach itself to his sperm. This cocaine-bearing sperm then enters the ovum at the time of conception. Fathers must share the responsibility for such birth defects-not only those caused by cocaine, but also those caused by other toxins, such as lead and mercury, which might also "hitchhike" onto sperm in the same way.

And it now seems that some drug-induced abnormalities may occur much earlier than previously thought, even before the fertilized ovum is implanted in the uterus. One route for the transmission of cocaine from the sperm to the baby may still lie with the mother, however. It is possible that when a cocaine-using woman has sexual intercourse, the man's sperm in her reproductive tract can pick up the drug and carry it to the ovum, where it will do its damage.

A later paternal age (average in the late thirties) is associated with increases in several rare conditions, including one type of dwarfism; Marfan's syndrome (deformities of the head and limbs); and a kind of bone malformation. The father's age may also be a factor in about 5 per-

cent of cases of Down syndrome. More male cells than female ones undergo mutations and mutations may increase with parental age.

Check Your Progress 3
Write about some of the myriad environmental influences that can affect the developing fetus.
Notes: a) Write your answer in the space given below.
      b) Check your answer with the one given at the end of this lesson.
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4.5 LET US SUM UP
In this Lesson, we have touched upon the following points:
i)   Six characteristics of the Prenatal Period and its role in development
ii)   Stated the importance of Conception and the factors contributing to grow a normal child
iii)   Dealt some six common developmental characteristics of twins
iv)   The four prenatal environmental characteristics influencing the fetus

4.6 Check Your Progress: Model Answers
1. The answer may include the following six characteristics
    i) A brief about the foundation laid by the hereditary endowment to be stated.
    ii) Favorable mother's body conditions to foster the development of a child.
    iii) As to how the sex of the newly created individual is fixed at the time of conception.
    iv)Write about growth and development that takes place during the prenatal period.
    v) Hazards, both physical and psychological during the prenatal period
    vi) Effect of the significant people's attitudes toward newly created individuals.

2.A. The following four factors can be explained
    i) Hereditary Endowment
    ii)Sex
    iii) Number of Offspring
    iv) Ordinal Position

    B.The six developmental characteristics of twins are to be explained briefly
    i)Developmental lag
    ii)Physical Development
    iii)Mental Development
    iv) Social Development
    v)Personality Development
    vi)Behavior Problems

3. The environmental influence on the fetus could through the following four sources
    i)Maternal Factors
    ii)Prenatal Nourishment
    iii)Other Maternal Factors
    iv) Paternal Factors

4.7 Lesson – End Activities

1) Mention few important characteristics of Prenatal environment.

2) Briefly describe the maternal factors influencing development.

4.8 References

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LESSON – 5
ATTITUDES OF SIGNIFICANT PEOPLE - MEDICAL INTERVENTIONS - HAZARD DURING THE PRENATAL PERIOD

Contents

5.0 AIMS AND OBJECTIVES

This Lesson will help understand the role of people in the development of a fetus.

After going through this Lesson, you will be able to:

i) Mention the effect of attitudes of significant people on child as such

ii) State the significance of natural birth

iii) Examine the various kinds of medical interventions that aid in the birth of a child

iv) Discuss the physical and psychological hazards during the prenatal period

v) List the common unfavorable attitudes toward an unborn child

5.1 INTRODUCTION

Until the early 1940s, psychological interest in the prenatal period was concentrated on the physical conditions in the mother's body that might affect development and on the persistence of these effects into postnatal life. The work of Sontag and his associates, for example, called attention to the fact that the mother's emotional state can affect the development of the unborn child.

However, psychologists are interested in finding out what is responsible for maternal and other family-member attitudes toward the developing child; how persistent these attitudes are; and what effects they have on the relationships of different family members with children during their postnatal lives, especially during the early formative years when the significant people in their world are members of their families. While relatively recent in origin, these studies have revealed the important information summarized below.

5.2 ATTITUDES OF SIGNIFICANT PEOPLE - ORIGIN OF ATTITUDES

Attitudes toward children and parenthood are usually formed early in life, though they may crystallize when the individual knows that he or she will soon become a parent.

Many factors influence the formation of attitudes toward children. First, young people's earlier experience with children have a marked effect on how they feel about them in general and about their own impending roles as parents. A woman, for example, who had to help care for younger brothers and sisters may have an unfavorable attitude toward children, or a woman who grew up as an only child may want many children to make up for the loneliness she felt when she was young.

Second, the experiences of friends, either in the past or at present, color the individuals attitudes. For example, a young man who hears his friends complain about the financial burdens of parenthood may decide that he would rather not have children.

Third, parent or grandparent who loves children and who pities people who are childless can influence a person's attitudes favorably. Fourth, a person's attitude toward the sex of the unborn child can be influenced by stereotyped ideas-that boys are "a handful," for example.

Fifth, the mass media tend to glamorize family and the parental role. The attitudes of an adult whose own experiences with children have been limited may be profoundly influenced by "family shows" on television.

5.2.1 Conditions Influencing Attitudes

Many conditions affect the attitudes-both favorably and unfavorably-of parents, siblings, and grandparents toward a child. The most commonly reported of these are summarized in Table 1.

A careful study of the conditions listed in this table will show that different conditions affect the attitudes of different significant people. For example, the attitudes of siblings are affected by conditions that are different from those of the mother or of the father or of the grandparents-just as the mother's attitudes are affected by conditions different from those of the father, of the siblings, or of the grandparents.

Table 1

CONDITIONS AFFECTING ATTITUDES OF SIGNIFICANT PEOPLE
Mother's Attitude . Love of children . Desire for companionship . Desire to please her husband or improve a poor marital relationship . Desire to be like her friends who have children. . Feelings of inadequacy for the parental role . Resentment at having to give up a career . Fear of childbirth or of having a defective child . Resentment at the physical discomforts and weight gain associated with pregnancy . Resentment at being overworked or tied down
Father's Attitude . Desire for a son to carryon the family name or be associated with him in business . A need to prove his virility to himself and others. . Feelings of inadequacy for the parental role. Resentment at interference with educational or vocational plans . Worry about the financial burdens of raising a child . Resentment at being tied down
Siblings' Attitudes . Desire for a playmate . Desire to have as many siblings as their friends . Fear of losing parental affection and attention. . Fear of having to share a room or toys with the new sibling or having to help care for it . Desire for sympathy from friends who com plain about their own siblings
Grandparents' Attitudes . Desire for a grandchild to carryon the family name . Love of children . Desire to feel useful by helping care for the grandchild . Fear of being imposed on for financial or other help

5.2.2 Persistence of Attitudes

Likes, dislikes, prejudices, and attitudes, once formed, tend to persist, though slight changes are possible. The changes that do occur are usually in the form of modifications of existing attitudes; these attitudes become less or more favorable than they originally were. Thus changes in attitudes are *quantitative* rather than *qualitative.* For example, a teenage boy's hero worship of a well-known football player may diminish when he discovers that his idol has faults not readily apparent at first. Similarly, a person's dislike for someone of a different race, religion, or socioeconomic background may mellow somewhat with personal contacts. Such changes are modifications of already-existing attitudes.

There are two reasons for persistence of attitudes. First, attitudes tend to persist because they are based on beliefs the individual considers to be valid and justified. After all, the hero-worshiping teenager contends, his idol certainly must be someone special if he has become a hero to others too.

Siblings and other significant people in the life of the unborn child have reasons for wanting or not wanting the child, and they consider these reasons valid. Hence their attitudes, like those of parents, tend to persist, though they too may be modified.

The second reason for the persistence of attitudes toward a child, formed before the child's birth, is that they are usually highly emotionally toned. And, like all emotional attitudes, they are difficult if not impossible to change. A woman, for example, who as a girl resented having to give up some of the time she wanted to spend with her friends to help with the care of younger siblings, is likely to resent being tied down again with the care of a child, even if it is her own.

A man, for example, who is upset and resentful at the privations fatherhood brings, may and often will tell others that he is delighted at the prospects of having a child. At home, he may accuse his wife of "being careless" and allowing herself to become pregnant, but, to those outside the home, the camouflage of his true feelings will usually be adequate to make others believe that he is delighted at the prospect of becoming a father and, later, in his role of father.

5.2.3 Effects of Attitudes on Children

The mother's attitude can have an effect on her unborn baby-not through the umbilical cord, which is' the only direct connection between the two-but as a result of endocrine changes which can and do occur if the mother-to-be is subjected to severe and prolonged stress which normally accompanies persistently unfavorable attitudes. Favorable attitudes, by contrast, will lead to good body homeostasis and this will *favor* normal development during the prenatal period.

After birth, the mother's attitudes, most of which were formed before the baby's birth, have an influence because they are reflected in the way the child is treated. For example, a mother who wanted a boy will have a less favorable attitude toward a daughter. If she is disappointed in having a daughter, she may feel guilty and compensate for this by being overprotective and overindulgent of the child. If a later child should be the hoped-for son, either consciously or unconsciously she may show favoritism toward him, and her treatment of her daughter will be colored by rejection.

The attitudes of other family members--the father, siblings, and grandparents-can also affect the child. Before the child's birth they may affect it indirectly through the mother, for example, if family members let her know that they do not welcome the idea of its birth and thus cause her to become nervous and upset. By contrast, favorable attitudes on the part of other family members reinforce the mother's favorable attitudes or lessen any emotional stress she may be under if her own attitude is not favorable.

Like maternal attitudes, the attitudes of other family members tend to persist though they may change slightly, depending partly on whether the child conforms to their expectations and partly on how he or she treats them. Grandparents, for example, may have favorable attitudes toward very young children but may feel differently about them if, as the children grow older, they treat their grandparents with less respect and less affection.

5.2.4 Effects of Attitudes on Family Relationships

The attitudes of different family members-the foundations of which have generally been laid before a child is born-have a profound influence not only on the child but also on family relationships. This influence may be favorable or unfavorable, depending not on the attitude of one family member but on the attitudes of all family members.

If favorable attitudes toward a new baby could be counted on to persist and if unfavorable attitudes could be counted on to become less unfavorable or even favorable, they would not represent a threat to family relationships. Unfortunately, favorable attitudes often become less favorable after the child's birth, and unfavorable attitudes tend to persist, even though they may be so cloaked that they appear to have changed for the better.   .

Sooner or later children become aware of the way different family members feel about them, and this influences their attitudes toward family members and toward themselves as well. Feeling loved and wanted will motivate a child to behave in a way that will intensify favorable family attitudes and relationships. If, on the other hand, children sense, suspect, or know that they are disappointments to their fathers, a burden to their already overworked mothers, and a nuisance to their siblings, they will show their resentment by behaving in ways that will intensify their unfavorable attitudes and worsen family relationships. This often is the starting point of personality maladjustments and problem behavior that can plague children for years-often throughout life.

Check Your Progress 1

Bring out attitudes toward children and parenthood which are usually formed early in life.
Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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5.3 NATURAL AND PREPARED CHILDBIRTH

In 1914 a British physician, Dr. Grantly Dick-Read, claiming that fear causes most of the pain in childbirth, put forth the theory of *natural childbirth.* This method aims to eliminate fear by educating women in the physiology of reproduction and delivery and training them in breathing, relaxation, and physical fitness. Dr. Fernand Lamaze was using the psycho prophylactic *method-prepared* childbirth,-substituting new breathing and muscular responses to the sensations of uterine contractions for the old responses of fear and pain.

The Lamaze method of prepared childbirth instructs women in anatomy to remove fear of the unknown and trains them to vary their patterns of breathing to match the strength of contractions and to concentrate on sensations other than the contractions. The mother learns to relax her muscles as a conditioned response to the voice of her "coach" (usually the father or a friend). Social support is also a factor: The coach attends classes with the expectant mother, takes part in the delivery, and helps with the exercises-enhancing her sense of self-worth and reducing her fear of being alone at the time of birth.

5.4 MEDICAL INTERVENTIONS

If a two-year-old child walks with a halting, lumbering gait and has difficulty keeping her balance. She has *cerebral palsy,* a general term for a variety of impairments in muscle coordination that result from brain damage before, during, or just after birth.

Like 10 percent of youngsters with cerebral palsy, this child's brain damage could be caused by **anoxia**, or inadequate oxygen supply, during labor and delivery. Her mother got pregnant accidentally, was frightened and alone, and arrived at the hospital at the last minute. The girl was in **breech position**, turned so that the buttocks or feet would be delivered first, and the umbilical cord was wrapped around her neck. Had her mother come to the hospital earlier, doctors could have monitored the girls condition and delivered her surgically as soon as squeezing of the umbilical cord led to distress, reducing the damage or preventing it entirely. In cases like this, medical interventions during childbirth are clearly justified. But in others, they can interfere with delivery and even pose new risks. In the following sections, we examine some commonly used medical techniques.

5.4.1 Fetal Monitoring

Fetal monitors are electronic instruments that track the baby's heart rate during labor. An abnormal heartbeat may indicate that the baby is in distress due to anoxia and needs to be delivered immediately. Most hospitals require continuous fetal monitoring; it is used in over 80 percent of births. In some countries, continuous monitoring is usually reserved for babies at risk for birth complications. The most popular type of monitor is strapped across the mother's abdomen throughout labor. A second, more accurate method involves threading a recording device through the cervix and placing it directly under the baby's scalp.

Fetal monitoring is a safe medical procedure that has saved the lives of many babies in high-risk situations. Nevertheless, the practice is controversial. In healthy pregnancies, it does not reduce the rate of infant brain damage or death. Critics also worry that fetal monitors identify many babies as in danger that, in fact, are not. Monitoring is linked to an increased rate of cesarean (surgical) deliveries. In addition, some women complain that the devices are uncomfortable, prevent them from moving easily, and interfere with the normal course of labor.

Still, it is likely that fetal monitors will continue to be used routinely in the hospitals, even though they are not necessary in most cases. Today, doctors can be sued for malpractice if an infant dies or is born with problems and they cannot show that they did everything possible to protect the baby.

5.4.2 Labor and Delivery Medication

Some form of medication is used in 80 to 95 percent of births. *Analgesics,* drugs used to relieve pain, may be given in mild doses during labor to help a mother relax. *Anesthetics* are a stronger type of painkiller that blocks sensation. A regional anesthetic may be injected into the spinal column to numb the lower half of the body.

Although pain-relieving drugs enable doctors to perform essential life-saving medical interventions, they can cause problems when used routinely. Anesthesia weakens uterine contractions during the first stage of labor and interferes with the mother's ability to feel contractions and push during the second stage. As a result, labor is prolonged. In addition, since labor and delivery medication rapidly crosses the placenta, the newborn baby may be sleepy and withdrawn, suck poorly during feedings, and be irritable when awake.

Some researcher's claims that use of medication during childbirth have a lasting impact on physical and mental development. Anesthesia may be related to other risk factors that could account for long-term consequences in some studies, but more research is needed to sort out these effects.

5.4.3 Cesarean Delivery

A cesarean delivery is a surgical birth; the doctor makes an incision in the mother's abdomen and lifts the baby out of the uterus. Thirty years ago, cesarean delivery was rare. Since then, the cesarean rate has climbed.

Cesareans have always been warranted by medical emergencies, such as Rh incompatibility, premature separation of the placenta from the uterus, or serious maternal illness or infection (for example, the herpes simplex 2 virus, which can infect the baby during a vaginal delivery). However, surgical delivery is not always needed in other instances. For example, although the most common reason for a cesarean is a previous cesarean, the technique used today-a small horizontal cut in the lower part of the uterus-makes vaginal birth safe in later pregnancies. Cesareans are often justified in breech births, in which the baby risks head injury or anoxia. But the infant's exact position makes a difference. Certain breech babies fare just as well with a normal delivery as with a cesarean. Sometimes the doctor can gently turn the baby into a head-down position during the early part of labor.

When a cesarean delivery does occur, both mother and baby need extra support. Although the operation is quite safe, it requires more time for recovery. Because anesthetic may have crossed the placenta, newborns are more likely to be sleepy and unresponsive and to have breathing difficulties.

Check Your Progress 2

Explain how medical interventions during childbirth are clearly justified.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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5.5 HAZARDS DURING THE PRENATAL PERIOD

At no other time during the life span are there more serious hazards to development-or hazards" of a more serious nature-than during the relatively short period before birth. These may be physical or psychological. Physical hazards have received more scientific attention because they are more easily recognized.

However, psychological hazards are sometimes as serious as physical hazards since they affect the attitudes of significant people toward the developing child. Furthermore, they often intensify physical hazards.

5.5.1 Physical Hazards

Each of the three major subdivisions of the prenatal period involves particular physical hazards. While these do not affect all individuals by any means, they do occur with some frequency and can be serious enough to affect the development of the individual throughout life. Davis and

5.5.1.a Common Physical Hazards during the Prenatal Period
Period of the Zygote

Starvation: The zygote will die of starvation if it has too little yolk to keep it alive until it can lodge itself in the uterine wall or if it remains too long in the tube.

Lack of Uterine Preparation: Implantation cannot occur if, as a result of glandular imbalance, the uterine walls are not prepared in time to receive the zygote.

Implantation in the Wrong Place: If the zygote becomes attached to a small fibroid tissue in the uterine wall or to the wall of the Fallopian tube, it cannot get nourishment and will die.

Period of the Embryo

Miscarriages: Falls, emotional shocks, malnutrition, glandular disturbances, vitamin deficiency, and serious diseases, such as pneumonia and diabetes, can cause the embryo to become dislodged from its place in the uterine wall, resulting in a miscarriage. Miscarriages that are due to unfavorable conditions in the prenatal environment are likely to occur between the tenth and eleventh weeks after conception.

Developmental Irregularities: Maternal malnutrition; vitamin and glandular deficiencies; excessive use of drugs, alcohol, and tobacco; and diseases, such as diabetes and German measles, interfere with normal development, especially that of the embryonic brain.

Period of the Fetus

Miscarriages: Miscarriages are always possible up to the fifth month of pregnancy; the most vulnerable time is when the woman's menstrual period would normally occur.

Prematurity: Fetuses who weigh less than 2 pounds 3 ounces have less chance of surviving than heavier fetuses and a greater chance of developing malformations.

Complications of Delivery: Maternal stress affects uterine contractions and is likely to lead to complications during birth.

Developmental Irregularities: Any of the unfavorable environmental conditions present during the period of the embryo will also affect the development of fetal features and retard the whole pattern of fetal development.

Conditions Influencing Physical Hazards: Certain conditions have been found to increase the likelihood that physical hazards will occur or accentuate them. The first of these conditions is the timing of their appearance. It has been recognized by doctors for many years that if the mother-to-be contracts rubella during the first trimester of pregnancy the chances of developmental irregularities in her unborn child, especially in the form of eye or   or a malformation of the heart, will occur.

Female hormones, such as estrogen and progestin, when taken in the early stages of pregnancy may disturb the normal cardiovascular development of the fetus and cause congenital heart diseases. It is reported that the second and third lunar months, when the heart is developing rapidly, are the most serious times. This is not true if these hormones are taken after the fourth lunar month.

The second condition that increases the likelihood of physical hazards is if the condition is intense or greater than is normal. Some conditions that are known to affect the developing child during the prenatal period are described below; others are suspected of affecting development.

Maternal malnutrition can play havoc with normal development, especially the development of the fetal brain. Excessive smoking and drinking are detrimental to normal development, especially during the periods of the embryo and fetus. This is true also of taking drugs.

Maternal age has been reported to be a condition that intensifies the possibility of physical hazards during the prenatal period. The reason for this is that as women approach the menopause, they frequently have endocrine disorders which slow down the development of the embryo and fetus, causing such developmental irregularities as cretinism, Down's syndrome, heart malformations and hydrocephalus all of which involve physical and mental defects. The incidence of Down's syndrome increases as age advances in women. Older women also tend to have smaller babies and to have more complications at birth than do younger women. While paternal age may likewise cause developmental irregularities or stillbirths, this is likely to happen only when paternal age is over sixty years.

Certain kinds of *work* are more likely to disturb the prenatal development than others.

Chemicals and other hazards faced by women working in such places as hospitals, beauty parlors, and factories may be responsible for the increasing number of birth defects and miscarriages during recent years.

Multiple births are more hazardous than single births. Fetuses of multiple births are crowded during the prenatal period, and this inhibits the normal fetal activity essential for development. *Prematurity* is also more likely in the case of multiple births, as is the possibility of developmental irregularities. Because multiple births are more common among blacks than among whites, this may account in part for the higher infant mortality rate and the greater incidence of developmental irregularities among blacks than among whites.

Long-Term Effects: If developmental irregularities are serious and if the embryo or fetus does not miscarry or die at birth or shortly afterward, the individual will be deformed in some way. One of the serious aspects of *developmental irregularities* is that they are sometimes not diagnosed as such until months or even years after birth. Epilepsy, cerebral palsy, and mental deficiency, for example may not show up until babyhood or even early in childhood.

Parents who believe that their baby is normal at birth find it difficult to accept a defective child and often blame themselves for having caused the defect. This leads to strong feelings of guilt and a tendency to overprotect defective children or to refuse to accept the fact that they are, as defective as they are.

It is now known that *malnutrition* during pregnancy may damage the developing fetal brain, causing learning difficulties in school, especially reading disabilities. Damage to the fetal brain, whatever the cause, will have effects on the individual's behavior that become more and more apparent as children grow older and are compared with other children of the same age.

A *chromosomal abnormality,* especially in an X chromosome, has been found to lead to physical abnormalities that can predispose the individual to abnormal behavior if they make it difficult for him or her to adjust to social expectations.

5.5.2 Psychological Hazards

The psychological hazards can have persistent effects on the individual's development and can influence the postnatal environment and the treatment the child receives from significant people during the early, formative years. The three most important psychological hazards are traditional beliefs about prenatal development, maternal stress during the prenatal period and unfavorable attitudes toward the unborn child on the part of people who will play significant roles in the child's life.

Traditional Beliefs: Perhaps there are more traditional, and more damaging, beliefs about the prenatal developmental period than about any other period in the life span. Such beliefs can and do affect parents' treatment of their children and often have an effect on their attitudes toward each other.

In spite of scientific evidence to the contrary, many people, for example, still believe that it is within their power to control the sex of their offspring. They believe they can do this by intercourse at certain periods during the menstrual cycle, by producing an acid environment in the woman's reproductive organs if a girl is desired and an alkaline environment for a boy or by artificial insemination after chemically abstracting sperm cells that would produce a child of the desired sex and then implanting them in the woman's reproductive organs.

The effects of such a belief are more serious than most people realize. When parents are convinced that they can produce an offspring of the sex they want, they are generally bitterly disappointed when the child turns out to be of the opposite sex. This disappointment may wane and disappear in time, but it frequently leaves its imprint upon the parents' attitudes toward the child. Furthermore, many men feel that it is the woman who has the power to

control the sex of the child, and if she does not produce an offspring of the sex her husband wants, his attitude toward her may be seriously affected. To date, the only known way to predict with high accuracy the sex of an unborn child is by amniocentesis.

There are also traditional beliefs about the causes of developmental irregularities. Some of these emphasize heredity, but most stress the role played by maternal impressions. There are two lines of medical evidence to disprove these beliefs about maternal impressions. First, there is evidence that the same types of abnormalities found in humans are also found in the lower animals whose low level of mental development would make them incapable of maternal impressions. Second, there is no direct nervous connection between the mother and the embryo. There are no nerves in the umbilical cord, and thus the mother's thoughts, feelings, and emotions could have no direct influence on the embryo.

In the past, *twins* were believed to be caused by evil sprits and thus were feared and rejected by the social group. Today, only the most uncivilized cultures hold such beliefs, although many people still think that it is "animal-like" to have twins and that twins are less desirable and less acceptable than singletons.

Maternal Stress: The second important psychological hazard associated with the prenatal period is maternal stress - heightened general emotionality over a prolonged period of time. Stress can be the result of fear, anger, grief, jealousy, or envy.

There are many causes of maternal stress during pregnancy, the most common of which are the following: not wanting a child because of marital or economic difficulties or because having a child will interfere with educational or vocational plans; physical discomforts that are severe and frequent enough to make the mother to be nervous, irritable, and generally emotionally disturbed; feelings of inadequacy for the parental role; and fears that the child will be physically deformed or mentally deficient-fears that are often heightened by mass media reports of the frequency of birth defects and of specific causes of birth defects, such as rubella and thalidomide. Some women have fantasies and dreams about giving birth to deformed babies which intensify such fears.

Prolonged and extreme maternal stress during the period of the fetus frequently causes more illness during the first three years of the child's life than is experienced by children who had a more favorable fetal environment. Children whose mothers were under great stress during pregnancy also show more "free-floating anxiety"; although they can still perform their daily routines, such anxiety has an adverse effect on their ability to learn, to remember, and to reason to their full capacities. As a result, they seem to be less bright than they actually are.

Unquestionably one of the most serious effects of maternal stress during pregnancy is on children's postnatal adjustments to family members. Because of their hyperactivity, excessive crying, and other indications of poor adjustment to postnatal life, they are regarded as "difficult" babies. Attitudes of family members toward them are then far less favorable than they would have been had they made better adjustments to postnatal life.

As they grow older, children sense these unfavorable attitudes on the part of family members and later, on the part of peers, teachers, and other outsiders. Feeling unloved and rejected, they often show below average physical development, hyperactivity, lags in developing motor skills and speech, and learning problems. All these lead to poor personal and social adjustments.

Unfavorable Attitudes on the Part **of** *Significant People:* The third common psychological hazard during the prenatal period is unfavorable attitudes on the part of significant people in the child's life. This is, in many respects, the most serious and far-reaching in its influence because once attitudes are developed they tend to persist with little if any real change or

modification. There is evidence that many unfavorable attitudes toward children begin to develop when their potential arrival becomes known to parents, siblings, relatives, and neighbors. The most common and most serious of these attitudes are listed below.

5.5.3 Some Common Unfavorable Attitudes toward an Unborn Child

Not Wanting the Child: The mother may not want the child because it is illegitimate, because it will interfere with her career, because it will tie her down, or because she is already overworked caring for other children. The father may not want the child because he does not want to be forced to marry the mother, because of the financial burden the child will represent, because he does not want to be tied down, or because he does not want his wife to be preoccupied with child care and neglect him. Siblings may not want the child because they resent the restrictions a baby will place on their activities or because they do not want to share their possessions or their mother's time and attention with the new baby.

Not Wanting the Child at This Time: The parents may not want the child now because it will interfere with their educational and vocational plans, because they feel they are too young and inexperienced to care for a child, because they cannot afford it, or because they do not want to assume parental responsibilities so soon. Grandparents may feel that the young couple cannot afford the baby and may fear that they will have to provide financial and other help.

Preference for a Child of a Particular Sex: The father and the grandparents usually want the firstborn to be a boy; if there are already boys in the family, they may want a girl. The mother may want a boy to please her husband, or she may prefer a girl, who she feels will be more of a companion to her. Siblings generally prefer a child of their own sex, whom they regard as more likely to be a playmate.

Dream-Child Concept: All family members have a dream-child concept that colors their attitudes toward the unborn baby. Parents and grandparents want the baby to be perfect mentally, emotionally, and physically - bright, obedient, beautiful- and siblings want an ideal playmate, one who will do whatever they want to do and who will never rival or outstrip them.

Not Wanting Children of Multiple Birth: Many adults, even today, regard multiple births as animal-like or accept the traditional belief that children of multiple birth are doomed to be physical and mental weaklings. Others believe that multiple-birth children make too much work for all family members and dread the added expense for hospital care which is inevitable if they are premature. These unfavorable attitudes are intensified if conditions after birth are similar to those they dreaded before birth.

Wanting to Have a Miscarriage or an Abortion: When a baby is unwanted, regardless of the reason, some women hope they will have a miscarriage or they plan an abortion. If the developing baby's life is ended, either by miscarriage or abortion, women often feel guilty and this unfavorable attitude carries over to any children they may have in the future. Should they decide against an abortion or should there be no miscarriage, they may feel guilty and express their guilt in over protectiveness and overindulgence of the child they had hoped not to have.

Scorn for the Child: Relatives, friends of the family, and neighbors may have an unfavorable attitude toward the child-to be because it is illegitimate, because of some stigma in the lives of one or both parents, or because it is the child of an interracial or inter religious marriage. As a result, the parents may become defensive and treat the child in an overprotective or overindulgent way to compensate for these unfavorable attitudes or they may reject the child because they feel embarrassed and ashamed.

Unfavorable attitudes toward children of multiple births are often stronger and more persistent than those toward singletons. These attitudes are intensified when multiple births come unexpectedly and parents have not had time to adjust to them. Even when parents welcome the idea of a multiple birth, their attitudes may become unfavorable when they are faced with the realities of the babies' care and the expense involved.

Check Your Progress 3
   A. Explain some of the Physical and psychological hazards during prenatal period.
   B. Discuss some common unfavorable attitudes toward an unborn child
Notes: a) Write your answer in the space given below.
      b) Check your answer with the one given at the end of this lesson.
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5.6 LET US SUM UP
In this Lesson, we have touched upon the following points:
   i)   Origin of Attitudes
   ii)   Natural and Prepared Childbirth
   iii)   Medical Interventions
   iv)   Hazards during the Prenatal Period
   v)   Some Common Unfavorable Attitudes toward an Unborn Child

5.7 Check Your Progress: Model Answers
1. Many factors influence the formation of attitudes toward children, some of them are:
      i.) Conditions Influencing Attitudes
      ii) Persistence of Attitudes
      iii) Effects of Attitudes on Children
      iv) Effects of Attitudes on Family Relationships
2. The use of the following methods as medical interventions can be discussed with
   justifications
      i) Fetal Monitoring
      ii) Labor and Delivery Medication
      iii) Cesarean Delivery
3. A   Physical hazards
      i) Lack of Uterine Preparation
      ii) Implantation in the Wrong Place
      iii) Miscarriages
      iv) Complications of Delivery
      Psychological hazards
      i)Traditional Beliefs
      ii) Maternal Stress
      iii) Unfavorable Attitudes on the Part of Significant People
   B.   Common unfavorable attitudes towards prenatal period
      i) Not Wanting the Child
      ii) Not Wanting the Child at This Time
      iii) Preference for a Child of a Particular Sex
      iv) Dream-Child Concept
      v) Not Wanting Children of Multiple Birth
      vi) Wanting to Have a Miscarriage or an Abortion
      vi)   Scorn for the Child

5.7 Lesson – End Activities

1. Briefly describe how emotional shocks affect the embryo development.
2. Mention about the effect of multiple birth.

5.8 References

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UNIT II
LESSON – 6
INFANCY AND TODDLERHOOD -CHARACTERISTICS - ADJUSTMENTS - LEARNING CAPACITIES

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6.0 AIMS AND OBJECTIVES

This Lesson will help understand the Characteristics of Infancy and Toddlerhood their adjustments patterns and learning capacities.

After going through this Lesson, you will be able to:

i)   describe the various characteristics of infancy period

ii)   state the adjustments made during infancy

ii)   list the conditions influencing adjustment to postnatal life

iii)   mention the characteristics of toddlerhood

iv)   obstacles in studying life span development

6.1 INTRODUCTION

Infancy, or the period of the newborn, is, according to standard dictionaries, the beginning or the early period of existence as an individual rather than as a parasite in the mother's body. Dictionaries also define an infant as a child in the first period of life. According to legal standards, an infant is an individual who is a minor until reaching the age of legal maturity, which, in America today, is eighteen years. According to medical terminology, an infant is a young child, but no specific age limits are placed on when the individual ceases to be an infant and becomes a child.

Many psychologists use the word *infant* in much the same way as members of the medical profession do and, like them, fail to set an age limit on infancy. This gives the period an ambiguous status in the life span. The word *infant* suggests extreme helplessness, and it will be limited to the first few weeks of life. During this period, the newborn's complete helplessness gradually gives way to increasing independence.

Further toddlerhood occupies the first two years of life following the brief two-week period of infancy. During the toddlerhood months, there is a gradual but pronounced decrease in helplessness. This does not mean that helplessness quickly disappears and is replaced by independence. Instead, it means that every day, week, and month the individual becomes more independent so that, when toddlerhood ends with the second birthday, the individual is a quite different person than when toddlerhood began.

Because "baby" suggests too many people a helpless individual, it is becoming increasingly common to apply the label *toddler* to the individual during the second year of toddlerhood. A toddler is a baby who has achieved enough body control to be relatively independent.

6.2 CHARACTERISTICS OF INFANCY

Each period in the life span is characterized by certain developmental phenomena that distinguish it from the periods that precede and follow it. While some of these phenomena may be associated with other periods, they appear in a distinctive form during infancy. Following are the five most important characteristics of this period.

6.2.1 Infancy Is the Shortest of All Developmental Periods

Infancy begins with birth and ends when the infant is approximately two weeks old, by far the shortest of all developmental periods. It is the time when the fetus must adjust to life outside the uterine walls of the mother where it has lived for approximately nine months. According to medical criteria, the adjustment is completed with the fall of the umbilical cord from the navel; according to physiological criteria, it is completed when the infant has regained the weight lost after birth; and according to psychological criteria, it is completed when the infant begins to show signs of developmental progress in behavior. Although most infants complete this adjustment in two weeks or slightly less, those whose birth has been difficult or premature require more time.

In spite of its shortness, infancy is generally subdivided into two periods: the period of the Partunate and the period of the neonate.

Period of the Partunate (from birth to fifteen to thirty minutes after birth): This period begins when the fetal body has emerged from the mother's body and lasts until the umbilical cord has been cut and tied. Until this is done, the infant continues to be a parasite and makes no adjustments to the postnatal environment the environment outside the mother's body.

Period of the Neonate (from the cutting and tying of the umbilical cord to approximately the end of the second week of postnatal life): The infant is now a separate, independent individual and is no longer a parasite. During this period, the infant must make adjustments to the new environment outside the mother's body. Even in difficult births, it seldom takes more than forty-eight hours for the fetus to emerge from the mother's body. By contrast, it requires approximately two weeks adjusting to the new environment outside the mother's body.

6.2.2 Infancy Is a Time of Radical Adjustments

Although the human life span legally begins at the moment of birth, birth is merely an interruption of the developmental pattern that started at the moment of conception. It is the graduation from an internal to an external environment. Like all graduations, it requires adjustments on the individual's part. It may be easy for some infants to make these adjustments but so difficult for others that they will fail to do so. Miller has commented, "In all the rest of his life, there will never be such a sudden and complete change of locale".

6.2.3 Infancy Is a Plateau in Development

The rapid growth and development which took place during the prenatal period suddenly come to a stop with birth. In fact, there is often a slight regression, such as loss of weight and a tendency to be less strong and healthy than at birth. Normally this slight regression lasts for several days to a week, after which the infant begins to improve. By the end of the infancy period, the infant's state of development is usually back to where it was at the time of birth.

The halt in growth and development, characteristic of this plateau, is due to the necessity for making radical adjustments to the postnatal environment. Once these adjustments have been made, infants resume their growth and development.

While a plateau in development during infancy is normal, many parents, especially those of firstborn children, become concerned about it and fear that something is wrong with their child. Consequently, the infancy plateau may become a psychological hazard, just as it is a potential physical hazard.

6.2.4 Infancy Is a Preview of Later Development

It is not possible to predict with even reasonable accuracy what the individual's future development will be on the basis of the development apparent at birth. However, the newborn's development provides a clue as to what to expect later on.

6.2.5 Infancy Is a Hazardous Period

Infancy is a hazardous period, both physically and psychologically. Physically, it is hazardous because of the difficulties of making the necessary radical adjustments to the totally new and different environment. The high infant mortality rate is evidence of this.

Psychologically, infancy is hazardous because it is the time when the attitudes of significant people toward the infant are crystallized. Many of these attitudes were established during the prenatal period and may change radically after the infant is born, but some remain relatively unchanged or are strengthened, depending on conditions at birth and on the ease or difficulty with which the infant and the parents adjust.

Check Your Progress 1

Bring out the general characteristics of infancy

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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6.3 ADJUSTMENTS OF INFANCY

Infants must make four major adjustments before they can resume their developmental progress. If they do not make them quickly, their lives will be threatened. While these adjustments are being made, there is no developmental progress. Instead, the infant remains on a plateau or may even regress to a lower stage of development. These adjustments are:

1. Temperature Changes: There is a constant temperature of 100°F in the uterine sac, while temperatures in the hospital or home may vary from 60 to 70°F.

2. Breathing: When the umbilical cord is cut, infants must begin to breathe on their own.

3. Sucking and Swallowing: The infant must now get nourishment by sucking and swallowing, instead of receiving it through the umbilical cord. These reflexes are imperfectly developed at birth, and the infant often gets less nourishment than is needed and thus loses weight.

4. Elimination: The infant's organs of elimination begin to work soon after birth; formerly, waste products were eliminated through the umbilical cord.

Every newborn infant finds adjustment to postnatal life difficult at first. Some have trouble adjusting to temperature changes and develop colds, which may turn into pneumonia. Others find breathing difficult and must be given oxygen. Most choke when they attempt to suck and swallow, and many regurgitate more than they are able to retain, in which case they get less nourishment than they need to grow or even to retain their birth weight. Few have any real trouble eliminating urine, but many have difficulties with fecal elimination.

6.4 Conditions Influencing Adjustment to Postnatal Life

Many conditions influence the success with which infants make the necessary adjustments to postnatal life. The most important of these, are the kind of prenatal environment, the type of birth and experiences associated with it, the length of the gestation period, parental attitudes, and postnatal care.

6.4.1 Prenatal Environment

The first condition that influences the kind of adjustment infants make to postnatal life is the kind of prenatal environment they had. A healthy prenatal environment will contribute to good adjustments to postnatal life.

On the other hand, there are many kinds of intrauterine disturbance that can and often do cause an infant to be born, as Schwartz has pointed out, "with severe injuries and then be subject to a miserable life". Inadequate prenatal care of the mother, as a result of either poverty or neglect, is often responsible for the development of unfavorable conditions in the intrauterine environment which affect the developing child and lead to complications during childbirth, both of which affect the kind of adjustment the infant makes.

Unquestionably one of the most important conditions that contribute to difficulties in postnatal adjustment is a prenatal environment characterized by prolonged and intense maternal stress. As was mentioned earlier, this leads to complications during pregnancy and childbirth. Maternal stress also causes the fetus to become hyperactive during the last months of pregnancy, and this condition tends to persist after birth, manifesting itself in feeding difficulties, failure to gain weight, sleep problems, general irritability, distractibility, and a host of other conditions that make adjustment to postnatal life difficult.

6.4.2 Kind of Birth

The second condition that influences the kind of adjustment that will be made to postnatal life is the kind of birth the infant experiences. Many traditional beliefs about birth and how it affects the individual's adjustments to life persist even today. For example, there are many beliefs about auspicious and inauspicious times to be born. There is also the belief that the ease or difficulty of birth affects postnatal adjustments and the belief that a premature baby will never be as strong as one born at full term or make as successful an adjustment to life.

Even with our modern medical techniques, birth is a hazardous experience. Jeffcoate has pointed out that the "most hazardous journey made by any individual is through the four inches of the birth canal". Schwartz further emphasized the hazardous nature of birth when he said, "Birth is almost without exception a brutal process which endangers the life and health of the child".

There are five kinds of birth they are:

Natural, or Spontaneous, Birth: In a natural birth, the position of the fetus and its size in relation to the mother's reproductive organs allow it to emerge in the normal, headfirst

position.

Breech Birth: In a breech birth, the buttocks appear first, followed by the legs and finally the head.

Transverse Birth: In a transverse presentation, the fetus is positioned crosswise in the mother's uterus. Instruments must be used for delivery unless the position can be changed before the birth process begins.

Instrument Birth: When the fetus is too large to emerge spontaneously or when its position makes normal birth impossible, instruments must be used to aid in delivery.

Caesarean Section: If x-rays taken during the latter part of pregnancy indicate that complications may result if the infant emerges through the birth canal, the baby is brought into the world through a slit made surgically in the mother's abdominal wall.

The infant who has been born spontaneously usually adjusts more quickly and more successfully to the postnatal environment than one whose birth has been difficult enough to require use of instruments or caesarean section.

More hazards are associated with instrument births and caesarean sections than with spontaneous births. The more difficult the birth, the greater the chance of damage and the more severe the damage. Babies born by caesarean section are the quietest, crying less than those born spontaneously or with the aid of instruments and showing greater lethargy and decreased reactivity. As a result, they normally make better adjustments to their postnatal environment-unless they have had difficulty establishing respiration, which may cause temporary or permanent brain damage.

6.4.3 Experiences Associated with Birth

The third conditions that influence the kind of adjustments infants make to postnatal life are experiences associated with birth. Regardless of the kind of birth, two birth experiences have a major effect on postnatal adjustments. They are the extent to which the mother is medicated during the birth process and the ease or difficulty with which the infant establishes respiration.

Infants whose mothers are heavily *medicated* during labor show drowsiness and disorganized behavior for three or more days after birth, as compared with one or two days for those whose mothers are lightly medicated or receive no medication at all. Furthermore, infants whose mothers are heavily medicated lose more weight and take longer to regain their lost weight than infants whose mothers have less medication, Federman and Yang, for example, have reported that the effects on the infant's adjustment to postnatal life may persist during the first month after birth.

The ease or difficulty with which infants start to *breathe* after birth likewise affects their postnatal adjustments. When there is interruption of the oxygen supply to the brain before or during birth-*anoxia* the infant may die. Infants who live may be temporarily or permanently brain damaged, although this may not be apparent for months or even years after birth,

While anoxia may occur in any birth, it is especially likely to occur in *precipitate labor*-labor lasting less than two hours. When this occurs, the infant is introduced to oxygen too suddenly and is not yet ready to start to breathe. How much brain damage there will be and how permanent its effects will be depend largely on how quickly the infant can establish respiration.

6.4.4 Length of Gestation Period

The fourth condition that influences infants' adjustments to postnatal life is the length of the gestation period. Very few infants are born exactly 280 days after conception. Those who arrive ahead of time are known as *prematures* -often referred to in hospitals as "preemies"-while those who arrive late are known as *postmatures,* or *postterm* babies.

Postmaturity occurs less often than in the past because it is now possible to induce labor

when x-rays/scanning show that the fetus is large enough and well-enough developed to adjust successfully to postnatal life. Induced labor is also used as a means of preventing possible birth complications and birth injuries, especially brain damage, which can result if the fetal head is allowed to grow too large.

It is now recognized that birth weight alone is not enough to determine prematurity. Instead, gestation age, body length, bone ossification, head circumference, irritability, reflex, nutritional state, and neurological assessment are also used.

When infants are 20 or more inches long and weigh 8 or more pounds, they are considered postmature. It they are less than 19 inches long and weigh 5 pounds 8 ounces or less, they are regarded as premature. The more they deviate from the norm for their sex and racial group on the minus side, the more premature they are considered to be. On the other hand, the more they deviate on the plus side, the more postmature they are considered to be.

Unless damaged at birth, the postmature infant usually adjusts more quickly and more successfully to the postnatal environment than the infant born at full term. However, because the chances of birth damage increase as Postmaturity increases, the advantages that come from the speed and ease of adjustment are far outweighed by the possibilities of birth damage.

Prematurely born babies usually experience complications in adjusting to the postnatal environment, and these may have a serious effect on future adjustment. Furthermore, every difficulty that the normal, full-term infant faces in adjusting to the new environment is magnified in the case of the premature baby.

6.4.5 Parental Attitudes

How quickly and how successfully newborn infants will adjust to postnatal life is greatly influenced by parental attitudes. This is the fifth condition that influences the kind of adjustments infants make to postnatal life.

When parental attitudes are unfavorable, for whatever the reason, they are reflected in treatment of the infant that militates against successful adjustments to postnatal life. By contrast, parents whose attitudes are favorable treat the infant in ways that encourage good adjustment. Parent-infant interactions are not characterized by the emotional tension and nervousness that are normally present when parental attitudes are unfavorable. A relaxed mother, for example, usually produces more milk than one who is tense and nervous, and this helps the infant adjust to a new method of taking nourishment.

While maternal attitudes are, unquestionably, more important than paternal attitudes in determining the newborn infant's adjustment to postnatal life, paternal attitudes cannot be disregarded. Indirectly, they are important because of the effect they have on maternal attitudes. Directly, they are important because of the effect they have on the way fathers handle their newborn infants and on the way they assist in their care after they are brought home from the hospital. Fathers who are present during delivery usually have more favorable attitudes toward their children than do those who do not share the childbirth experience with their partners.

Parental attitudes toward the newborn infant are influenced by attitudes developed during the prenatal period, by conditions associated with birth, and by the care given the infant after leaving the hospital. Some conditions have a greater effect on maternal attitudes while others have a greater impact on paternal attitudes.

6.4.6 Postnatal Care

The sixth influential condition is the kind of postnatal care the newborn receives during the infancy period. For the most part, care during the first three or four days after birth will be by hospital personnel. After that, care will be in the home, usually given by the mother with some assistance from the father, relatives, or paid domestic help brought into the home for a

week or more after the mother leaves the hospital.

While the overall quality of the postnatal care is important in determining the kind of adjustments the infant will make to postnatal life, three aspects of this care are especially important. They are the amount of attention infants receive to ensure that their needs will be met satisfactorily and relatively promptly, the amount of stimulation they receive from the time of birth, and the degree of confidence their parents, especially their mothers, have in meeting their needs.

First, newborn infants, accustomed to a stable environment before birth in which their bodily needs were automatically met with no effort on their part, must now depend on the people in their new environment to meet these needs for them. Because of their neurophysiological immaturity, these needs will not necessarily arise at given times. Furthermore, newborns cannot tell those around them what they want or need. All they can do is cry. While most normal, full-term infants suffer no serious or lasting effects as a result of this impersonal care, there is evidence that it delays their adjustment to postnatal life.

The second aspect of postnatal care that influences the infant's adjustments to postnatal life is the type and amount of stimulation given. Because of the little time nurses can devote to each newborn in the hospital nursery, most infants receive minimal stimulation during the, first few days of their lives. Also, because many parents, especially parents of firstborns, are afraid that handling them will damage them in some way, infants are often deprived at home of the stimulation they formerly had in the uterus from the constant movements of the fetal body. Unfortunately, they are usually handled, rocked, talked to, and in other ways stimulated as little as possible.

When, on the other hand, newborn infants are stimulated, they regain their lost birth weight earlier, they overcome the dazed state characteristic of the first days of postnatal life sooner, and they are more alert and responsive to their new environment. This is true of prematures just as it is of full-term infants. As Marcus has explained, "The warmth and affection a mother shows when cuddling her baby apparently does more than demonstrate her love; it may actually stimulate the infant's neurological development. Lack of loving stimulation could contribute to the disabilities often suffered by premature babies".

The third condition associated with postnatal care is the degree of confidence parents, especially mothers; have in performing their parental tasks satisfactorily. Many parents lack confidence in their abilities to take care of their infants once they are released from the hospital. This is especially true of firstborns or infants who are premature or suffer from some physical defect.

Recognizing that a mother's self-confidence aids her infant's adjustments to postnatal life, some hospitals are giving the new mother an opportunity to share in the care of her infant through the "rooming-in plan," One of the most difficult problems mothers face, especially in the care of a firstborn, is to know what the infant's different cries mean. The greater the mother's confidence in this ability, the better she can care for her infant and the better the infant's postnatal adjustments will be.

Check Your Progress 2

State the conditions influencing adjustment to postnatal life.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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6.5 CHARACTERISTICS OF TODDLERHOOD

Certain characteristics of toddlerhood, while similar to characteristics of other periods in the life span, are of particular importance during the toddlerhood years. They distinguish

toddlerhood from the periods preceding it and those that follow it. Following are the most important characteristics.

6.5.1 Toddlerhood is the True Foundation Age

While the whole of childhood, but especially the early years, are generally regarded as the foundation age, toddlerhood is the true foundation period of life because, at this time, many behavior patterns, many attitudes, and many patterns of emotional expression are being established.

Early scientific interest in the importance of these foundations came from the work of Freud, who maintained that personality maladjustments in adulthood had their origins in unfavorable childhood experiences. Erikson also contended that "childhood is the scene of man's beginning as man, the place where our particular virtues and vices slowly but clearly develop and make themselves felt." According to Erickson, how babies are treated will determine whether they will develop "basic trust" or "basic distrust"- viewing the world as safe, reliable, and nurturing or as full of threat, unpredictability, and treachery. The first two years are critical in setting the pattern for personal and social adjustments. "Providing a rich social life for a twelve- to fifteen-month-old child is the best thing you can do to guarantee a good mind".

There are four reasons why foundations laid during the toddlerhood years are important. First, contrary to tradition, children do not outgrow undesirable traits as they grow older. Instead, patterns established early in life persist regardless of whether they are good or bad, harmful or beneficial. Second, if an undesirable pattern of behavior or unfavorable beliefs and attitudes have started to develop, the sooner they can be corrected the easier it will be for the child. Third, because early foundations quickly develop into habits through repetition, they will have a lifelong influence on a child's personal and social adjustments. And, fourth, because learning and experience play dominant roles in development, they can be directed and controlled so that the development will be along lines that will make good personal and social adjustments possible.

6.5.2 Toddlerhood Is an Age of Rapid Growth and Change

Babies grow rapidly, both physically and psychologically. With this rapid growth comes a change not only in appearance but also in capacities. Babies gradually become less top-heavy than they were at birth and their limbs develop in better proportion to the large head. Changes in body proportions are accompanied by growth in height and weight. While growth is rapid during the entire toddlerhood period, it is especially so during the first year of toddlerhood.

Intellectual growth and change parallel physical growth and change. Perhaps in no area is change more apparent than in the baby's ability to recognize and respond to people and objects in the environment. Before toddlerhood has come to an end, babies are able to understand many things and can communicate their needs and wants in ways that others can understand.

6.5.3 Toddlerhood Is an Age of Decreasing Dependency

The decrease in dependency on others results from the rapid development of body control which enables babies to sit, stand, and walk and to manipulate objects. The random, mass movements of the infant give way to coordinated movements, which make it possible for babies to do things for themselves which formerly they had to rely upon others to do for them. Independence also increases as babies become able to communicate their needs to others.

With decreased dependency comes a rebellion against being "babied." No longer are babies willing to let others do things for them that they can or believe they can do for themselves. If they are not permitted to try to be independent when they want to be, they

protest. This protest takes the form of angry outbursts and crying and soon develops into *negativism* -one of the outstanding characteristics of the closing months of toddlerhood.

6.5.4 Toddlerhood Is the Age of Increased Individuality

Perhaps the most significant thing about increased independence is that it permits babies to develop along lines suited to their interests and abilities. As a result, the individuality apparent at birth increases as toddlerhood draws to a close. Individuality is shown in appearance and in patterns of behavior. Even identical multiple births show individuality.

As individuality increases so does the necessity for treating each baby as an individual. No longer can all babies be expected to thrive on the same food or the same schedules for eating and sleeping. Nor can the same child-training techniques be expected to work equally well for all babies. Most parents discover, even before babies reach the first birthday, that they are individuals and must be treated as such.

6.5.5 Toddlerhood Is the Beginning of Socialization

The egocentrism, characteristic of the very young baby, quickly gives way to a desire to become a part of the social group. Babies show their desire to become a part of the social group by putting up protests when they are left alone for any length of time and by trying to win the attention of others in any way they can.

One of the ways in which babies show their interest in becoming a part of the social group is by *attachment behavior*. Because they can count on the attention and affection of their mothers or mother substitutes more than on other family members or outsiders, they develop strong emotional ties with their mothers long before toddlerhood comes to a close. It is from the satisfaction of this attachment behavior that the desire to establish warm and lasting relationships with others develops.

6.5.6 Toddlerhood Is the Beginning of Sex-Role Typing

Almost from the moment of birth, boys are treated as boys and girls as girls. Boys, for example, are dressed in blue clothes, covered with blue blankets, and live in a room that lacks the frills and ruffles of a girl's room. Toys are selected that are appropriate for boys, and they are told stories about boys and their activities. The same sex-identifying traditions apply to girls.

But while sex-role typing is part of a girl's early training, the pressures on her to be sex-appropriate even as a baby are not as strong as they are on a boy. However, indirectly girls are sex-role typed in toddlerhood by being permitted to cry and show other signs of "female weakness" which are discouraged in boy babies.

6.5.7 Toddlerhood Is an Appealing Age

Even though all babies are disproportionate, according to adult standards, they are appealing because of their big heads, protruding abdomens, small, thin limbs, and tiny hands and feet. When they are dressed in baby clothes and wrapped in baby blankets, they become even more appealing.

Older children as well as adults find small babies appealing because of their helplessness and dependency. Gradually, as babies' dependency is replaced by their ability to do things for themselves, and their appearance becomes less appealing as it changes from the small, doll-like body covered with baby garments to a larger, lankier body covered with sturdier, plainer clothes, they become less easy to manage and more resistant to help from others.

6.5.8 Toddlerhood Is the Beginning of Creativity

Because of their lack of muscle coordination and their inability to control their environment, babies are incapable of doing anything that can be regarded as original or creative. They are learning, however, in these early months of life to develop interests and

attitudes that will lay the foundations for later creativity or for conformity to patterns set by others. And this will be largely determined by the treatment they receive from others, especially their parents.

6.5.9 Toddlerhood Is a Hazardous Age

While there are hazards at every age during the life span, certain hazards are more common during toddlerhood than at other ages. Some of these are physical and some psychological.

Among the physical hazards, illnesses and accidents are the most serious because they often lead to permanent disabilities or to death. Since behavior patterns, interests, and attitudes are established during toddlerhood, serious psychological hazards can result if poor foundations are laid at this time.

6.6 LEARNING CAPACITIES

Learning refers to changes in behavior as the result of experience. Babies come into the world with built-in learning capacities that permit them to profit from experience immediately. Infants are capable of two basic forms of learning,: classical and operant conditioning. They also learn through their natural preference for novel stimulation. Finally, shortly after birth, babies learn by observing others; they can soon imitate the facial expressions and gestures of adults.

6.6.1 Classical Conditioning

Newborn reflexes, make classical conditioning possible in the young infant. In this form of learning, a new stimulus is paired with a stimulus that leads to a reflexive response. Once the baby's nervous system makes the connection between the two stimuli, the new stimulus produces the behavior by itself.

Classical conditioning is of great value to infants because it helps them recognize which events usually occur together in the everyday world. As a result, they can anticipate what is about to happen next, and the environment becomes more orderly and predictable. Let's take a closer look at the steps of classical conditioning.

As Rekha settled down in the rocking chair to nurse her baby Mala, she often stroked the babies' forehead. Soon Rekha noticed that each time the babies' forehead was stroked, the baby Mala made sucking movements. The baby had been classically conditioned. Here is how it happened:

1. Before learning takes place, an **unconditioned stimulus (UCS)** must consistently produce a reflexive, or **unconditioned, response (UCR).** In Mala's case, sweet breast milk (UCS) resulted in sucking (UCR).

2. To produce learning, a *neutral stimulus* that does not lead to the reflex is presented just before, or at about the same time as, the UCS. Rekha stroked Mala's forehead as each nursing period began. The stroking (neutral stimulus) was paired with the taste of milk (UCS).

3. If learning has occurred, the neutral stimulus by itself produces a response similar to the reflexive response. The neutral stimulus is then called a **conditioned stimulus (CS)**, and the response it elicits is called a **conditioned response (CR).** We know that Mala has been classically conditioned because stroking her forehead outside the feeding situation (CS) results in sucking (CR).

If the CS is presented alone enough times, without being paired with the UCS, the CR will no longer occur. In other words, if Rekha strokes Mala's forehead again and again without feeding her, Mala will gradually stop sucking in response to stroking. This is referred to as *extinction*.

Young infants can be classically conditioned most easily when the association between two stimuli has survival value. Mala learned quickly in the feeding situation, since learning the

stimuli that accompany feeding improves the infant's ability to get food and survive. In contrast, some responses are very difficult to classically condition in young babies. Fear is one of them. Until infants have the motor skills to escape from unpleasant events, they do not have a biological need to form these associations. But after 6 months of age, fear is easy to condition.

6.6.2 Operant Conditioning

In classical conditioning, babies build expectations about stimulus events in the environment, but they do not influence the stimuli that occur. In operant conditioning, infants act (or operate) on the environment, and stimuli that follow their behaviour change the probability that the behavior will occur again. A stimulus that increases the occurrence of a response of a response is called a **reinforcer**. For example, sweet liquid *reinforces* the sucking response in newborn babies. Removing a desirable stimulus or presenting an unpleasant one to decrease the occurrence of a response is called **punishment**. A sour-tasting fluid *punishes* newborn babies' sucking response. It causes them to purse their lips and stop sucking entirely.

Because the young infant can control only a few behaviors, successful operant conditioning in the early weeks of life is limited to sucking and head-turning responses. However, many stimuli besides food can serve as reinforcers. For example, researchers have created special laboratory conditions in which the baby's rate of sucking on a nipple produces a variety of interesting sights and sounds. Newborns will suck faster to see visual designs or hear music and human voices. As these findings suggest, operant conditioning has become a powerful tool for finding out what stimuli babies can perceive and which ones they prefer.

Operant conditioning soon modifies parents' and babies' reactions to each other. As the infant gazes into the adult's eyes, the adult looks and smiles back, and then the infant looks and smiles again. The behavior of each partner reinforces the other, and as a result, both parent and baby continue their pleasurable interaction.

6.6.3 Habituation

At birth, the human brain is set up to be attracted to novelty. Infants tend to respond more strongly to a new element that has entered their environment. **Habituation** refers to a gradual reduction in the strength of a response due to repetitive stimulation. Looking, heart rate, and respiration rate may all decline, indicating a loss of interest. Once this has occurred, a new stimulus-some kind of change in the environment--causes responsiveness to return to a high level, an increase called **recovery**. For example, when you walk through a familiar space, you notice things that are new and different, such as a recently purchased picture on the wall or a piece of furniture that has been moved. Habituation and recovery enable us to focus our attention on those aspects of the environment we know the least about. As a result, learning is more efficient.

By studying infants' habituation and recovery, we can explore their understanding of the world. For example, a baby who first *habituates* to a visual pattern (a photo of a baby) and then *recovers* to a new one (a photo of a bald ma) appears to remember the first stimulus and perceive the second one as new and different from it. This method of studying infant perception and cognition can be used with newborn babies, including those who are preterm. It has even been used to study the fetus's sensitivity to external stimuli-for example, by measuring changes in fetal heart rate when various repeated sounds are presented. The capacity to habituate and recover is evident in the third trimester of pregnancy.

6.6.4 Imitation

Newborn babies come into the world with a primitive ability to learn through imitation-by copying the behavior of another person. The newborn's capacity to imitate extends to certain gestures, such as head movements, and has been demonstrated in many ethnic groups and

cultures.

Some regard the capacity as little more than an automatic response, much like a reflex. Others claim that newborns imitate many facial expressions even after short delays-when the adult is no longer demonstrating the behavior. These observations suggest that the capacity is flexible and voluntary.

Infants' capacity to imitate improves greatly over the first 2 years. But however limited it is at birth, imitation is a powerful means of learning. Using imitation, young infants explore their social world, getting to know people by matching their behavioral states. In the process, babies notice similarities between their own actions and those of others and start to find out about themselves. Furthermore, by tapping into infants' ability to imitate, adults can get infants to express desirable behaviors, and once they do, adults can encourage these further. Finally, caregivers take great pleasure in a baby who imitates their facial gestures and actions. Imitation seems to be one of those capacities that help get the infant's relationship with parents off to a good start.

Check Your Progress 3

    A. Explain the significant characteristics of Toddlerhood

    B. Mention the learning capacities of toddler hood.

    Notes: a) Write your answer in the space given below.

        b) Check your answer with the one given at the end of this lesson.

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6.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

    i)   Characteristics of Infancy

    ii)   Adjustments of Infancy

    iii)   Conditions Influencing Adjustment to Postnatal Life

    iv)   Characteristics of Toddlerhood

    v)   Learning Capacities of toddler hood

6.8 Check Your Progress: Model Answers

1. Your answer may include the description of the characteristics of infancy

    i)   it is the shortest of all developmental periods

    ii)   it is a time of radical adjustments

    iii)   it has a plateau in development

    iv)   it is a preview of later development

    v)   it is a hazardous period

2. The conditions that could influence adjustment to postnatal life are:

    i)   Prenatal Environment

    ii)   Kind of Birth

    iii)   Experiences Associated with Birth

    iv)   Length of Gestation Period

    v)   Parental Attitudes

    vi)   Postnatal Care

6.9 Lesson – End Activities

1. A. The characteristics of toddlerhood are:

    i)   the True Foundation Age

    ii)   an Age of Rapid Growth and Change

    iii)   an Age of Decreasing Dependency

    iv)   the Age of Increased Individuality
    v)   the Beginning of Socialization
    vi)   the Beginning of Sex-Role Typing
    vii)   an Appealing Age
    viii)   the Beginning of Creativity
    ix)   a Hazardous Age
    B.   Learning capacities of toddler hood can be explained with reference to:
    i)   Classical Conditioning
    ii)   Operant Conditioning
    iii)   Habituation
    iv)   Imitation

6.10 References

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UNIT II

LESSON – 7
PIAGET'S COGNITIVE DEVELOPMENTAL THEORY- INFORMATION PROCESSING - INDIVIDUAL DIFFERENCES IN EARLY MENTAL DEVELOPMENT

Contents

7.0 AIMS AND OBJECTIVES

This Lesson will help you understand Piaget's stages of cognitive development, the information processing process and the individual differences in early mental development of infants

After going through this Lesson, you will be able to:
v) Mention the stages of cognitive development through life span
vi) State the Piaget's ideas about cognitive change
vii) Explain the structure of the information-processing system
viii) Describe the use of infant intelligence tests
ix) Bring out the relationship of environmental factors to infant and toddler mental test scores
x) Spell out the intervention for at-risk infants and toddlers

7.1 INTRODUCTION

Swiss theorist Jean Piaget inspired a vision of children as busy, motivated explorers whose thinking develops as they act directly on the environment. Influenced by his background in biology, he believed that the child's mind forms and modifies psychological structures so they achieve a better fit with external reality. Piaget's theory focuses on four stages(Table 1) of cognitive development, which is stated below. This will be dealt individually in the subsequent lessons.

Table 1 Piaget's Stages of Cognitive Development

Stage	Period of Development	Description
Sensorimotor	Birth-2 years	Infants "think" by acting on the world with their eyes, ears, hands, and mouth. As a result, they invent ways of solving sensorimotor problems, such as pulling a lever to hear the sound of a music box, finding hidden toys, and putting objects in and taking them out of containers.
Preoperational	2-7 years	Preschool children use symbols to represent their earlier sensorimotor discoveries. Development of language and make-believe play takes place. However, thinking lacks the logical qualities of the two remaining stages.
Concrete operational	7-11 years	Children's reasoning becomes logical. School-age children understand that certain amount of lemonade or play dough remains the same even after its appearance changes. They also organize objects into hierarchies of classes and subclasses. However, thinking falls short of adult intelligence. It is not yet abstract.
Formal operational	11 years on	The capacity for abstraction permits adolescents to reason with symbols that do not refer to objects in the real world, as in advanced mathematics. They can also think of all possible outcomes in a scientific problem, not just the most obvious ones.

Children move through four stages between infancy and adolescence. During those stages, all as, cognition develops in an integrated fashion, changing in similar way at about the same time. The first stage is the sensorimotor stage, which spans the first 2 years of life.

As the name of this stage implies, Piaget believed infants and toddlers "think" with their eyes, ears, hands and other sensorimotor equipment. They cannot yet, carry out many activities inside their heads. But by the end of to toddlerhood, children can solve practical, everyday problems and represent their experiences in speech, gesture, and play. To appreciate Piaget's view of how these vast changes take let's consider some important concepts.

7.1.1 Piaget's Ideas about Cognitive Change

According to Piaget, specific psychological structures - organized ways of making sense of experience called **schemes**-change with age. At first, schemes are sensorimotor action patterns. For example, at 6 months, a child dropped objects in a fairly rigid way, simply by letting go of a rattle and watching with interest. By age 18 months his "dropping scheme" had become much more deliberate and creative. He tossed all sorts of objects down the basement stairs, throwing some up in the air, bouncing others off walls, releasing some gently and others forcefully. Soon his schemes will move from an *action-based level* to a *mental level.* Instead of just acting on objects, he will show evidence of thinking before he acts. This change marks the transition from sensorimotor to preoperational thought.

In Piaget's theory, two processes account for changes in schemes: *adaptation* and *organization.*

- **Adaptation** It involves building schemes through direct interaction with the environment. It consists of two complementary activities: *assimilation* and *accommodation*. During assimilation, we use our current schemes to interpret the external world. For example, when the child dropped objects were assimilating them all into his sensorimotor "dropping scheme." In accommodation, we create new schemes or adjust old ones after noticing that our current ways of thinking do not fit the environment completely. When the child dropped objects in different ways, he modified his dropping scheme to take account of the varied

properties of objects.

According to Piaget, the balance between assimilation and accommodation varies over time. When children are not changing much, they assimilate more than they accommodate. Piaget called this a state of cognitive *equilibrium,* implying a steady comfortable condition. During rapid cognitive change, however, children are in a state of *disequilibrium,* or cognitive discomfort. They realize that new information does not match their current schemes, so they shift away from assimilation toward accommodation. Once they modify their schemes, they move back toward assimilation, exercising their newly changed structures until they are ready to be modified again.

Each time this back-and-forth movement between equilibrium and disequilibrium occurs, more effective schemes are produced. Because the times of greatest accommodation are earliest ones, the sensorimotor stage is Piaget's most complex period of development.

- **Organization** Schemes also change through *organization*, a process that takes place internally, apart from direct contact with the environment. Once children form new schemes, they rearrange them, linking them with other schemes to create a strongly interconnected cognitive system. For example, eventually a child will relate "dropping" to "throwing" and to his developing understanding of "nearness" and "farness:' According to Piaget, schemes reach a true state of equilibrium when they become part of a broad network of structures that can be jointly applied to the surrounding world.

7.1.2 The Sensorimotor Stage

The difference between the newborn baby and the 2-yearold child is so vast that the sensorimotor stage is divided into six substages (Table 2). According to Piaget, at birth infants know so little about the world that they cannot purposefully explore their surroundings. The circular reaction provides a special means of adapting first schemes. It involves stumbling onto a new experience caused by the baby's own motor activity. The reaction is "circular" because the infant tries to repeat the event again and again. As a result, a sensorimotor response that first occurred by chance becomes strengthened into a new scheme.

Table 2- Piaget's Sensorimotor Substages	
Sensorimotor Substage	**Adaptive Behaviors**
1. Reflexive schemes (birth to 1 month)	Newborn reflexes
2. Primary circular reactions (1-4 months)	Simple motor habits centered around the infant's own body; limited anticipation of events
3. Secondary circular reactions (4-8 months)	Actions aimed at repeating interesting effects in the surrounding world; imitation of familiar; behaviors
4. Coordination of secondary Circular reactions (8-12 months)	Intentional, or goal-directed, behavior; ability to find a hidden object in the first location in which it is hidden (object permanence); improved anticipation of events; imitation of behaviors slightly different from those the infant usually performs
5. Tertiary circular reactions (12-18 months)	Exploration of the properties of objects by acting on them in novel ways; imitation of unfamiliar behaviors; ability to search in several locations for a hidden object (accurate A-B search)
6. Mental representation (18 months-2 years)	Internal depictions of objects and events, as indicated by sudden solutions to problems, ability to find an object that has been moved while out of sight (invisible displacement), deferred imitation, and make-believe play

During the first 2 years, the circular reaction changes in several ways. At first it centers around the infant's own body. Later, it turns outward, toward manipulation of objects. Finally, it becomes experimental and creative, aimed at producing novel effects in the environment. Young children's difficulty inhibiting new and interesting behaviors may underlie the circular reaction. But this immaturity in inhibition seems to be adaptive! It helps ensure that new skills will not be interrupted before they consolidate. Piaget considered revisions in the circular reaction so important that he named the sensorimotor substages after them.

- **Repeating Chance Behaviors** According to Piaget, newborn reflexes are the building blocks of sensorimotor intelligence. At first, in Substage 1, babies suck, grasp, and look in much the same way, no matter what experiences they encounter.

Around 1 month, as babies enter Substage 2, they start to gain voluntary control over their actions through the *primary circular reaction,* by repeating chance behaviors largely moti-vated by basic needs. This leads to some simple motor habits, such as sucking their fists or thumbs. Babies of this substage also begin to vary their behavior in response to environmental demands. For example, they open their mouths differently for a nipple than for a spoon. Young infants also start to anticipate events. For example, at 3 months, when Gautham awoke from his nap, he cried out with hunger. But as soon as Ganga entered the room, his crying stopped. He knew that feeding time was near.

During Substage 3, which lasts from 4 to 8 months, infants sit up and reach for and manipulate objects? These motor achievements play a major role in turning their attention outward toward the environment. Using the *secondary circular reaction,* they try to repeat interesting events caused by their own actions. For example, 4-month-old Manthra accidentally knocked a toy hung in front of her, producing a fascinating swinging motion. Over the next 3 days, Manthra tried to repeat this effect, at first by grasping and then by waving her arms. Finally she succeeded in hitting the toy and gleefully repeated the motion. She had built the sensorimotor scheme of "hitting." Improved control over their own behavior permits infants to imitate the behavior of others more effectively. However, 4- to 8 month-olds cannot adapt flexibly and quickly enough to imitate novel behaviors. Therefore, although they enjoy watching an adult demonstrate a game they are not yet able to participate.

- **Intentional Behavior** In Substage 4, 8- to 12-montb olds combine schemes into new, more complex action sequences. As a result, actions that lead to new schemes no longer have a random, hit-or-miss quality-*accidentally,* bringing the thumb to the mouth or *happening* to hit the toy. Instead, 8- to 12-month-olds can engage in intentional, or goal-directed, behavior, coordinating schemes deliberately to solve simple problems. The clearest example is provided by Piaget's famous object-hiding task, in which he shows the baby an attractive toy and then hides it behind his hand or under a cover. Infants of this substage can find the object. In doing so, they coordinate two schemes-"pushing" aside the obstacle and "grasping" the toy. Piaget regarded these action sequences as the foundation for all problem solving.

Retrieving hidden objects reveals that infants have begun to master **object permanence**, the understanding that objects continue to exist when out of sight. But awareness of object permanence is not yet complete. If the baby reaches several times for an object at a first hiding place (A) and sees it moved to a second (B), she will still search for it in the first hiding place (A). Because babies make this *A-not-B search error,* Piaget concluded that they do not have a clear image of the object as persisting when hidden from view.

Substage 4 brings additional advances. First, infants can better anticipate events, so they sometimes use their capacity for intentional behavior to try to change those events. At 10 months, Kaushik crawled after Ganga when she put on her chappals, whimpering to keep her from leaving. Second, babies can imitate behaviors slightly different from those they usually perform. After watching someone else, they try to stir with spoon, push a toy car, or drop raisins in a cup. Once again they draw on intentional behavior, purposefully modifying

schemes to fit an observed action.

In Substage 5, which lasts from 12 to 18 months, the *territory circular reaction* emerges. Toddlers repeat behaviors with variation, provoking new results. Kaushik when he drops an object over the basement steps, trying this, then that, and then another action. Because they approach the world in this deliberately exploratory way, 12- to 18-month-olds are far better sensorimotor problem solvers than they were before. For example Kathambari figured out how to fit a shape through a hole in a container by turning and twisting it until it fell through, and she discovered how to use a stick to get toys that were out of reach. According to Piaget, this capacity to experiment leads to a more advanced understanding of object permanence. Toddlers look several locations to find a hidden toy, displaying an accurate A-B search. Their more flexible action patterns also permit them to imitate many more behaviors, such as stacking blocks, scribbling on paper, and making funny faces.

• **Mental Representation.** Substage 6 culminates with the ability to create mental representations-internal depictions of information that the mind can manipulate. Our most powerful mental representations are of two kinds: (1) *images,* or mental pictures of objects, people, and spaces, and (2) *concepts,* or categories in which similar objects or events are grouped together. Using a mental image, we can retrace our steps when we've misplaced something. Or we can imitate another's behavior long after we've observed it. And by thinking in concepts and labeling them (for example, *ball* for all rounded, movable objects used in play), we become more efficient thinkers, organizing our diverse experiences into meaningful, manageable, and memorable units.

Piaget noted that in arriving at solutions suddenly rather than through trial-and-error behavior, 18- to 24-month-olds seem to experiment with actions inside their heads-evidence that they can mentally represent their experiences. For example, at 19 months Kathambari received a new push toy. As she played with it for the first time, she rolled it over the carpet and ran into the sofa. She paused for a moment, as if to "think," and then immediately turned the toy in a new direction. Representation results in several other capacities. First, it enables older toddlers to solve advanced object permanence problems involving *invisible displacement*-finding a toy moved while out of sight, such as into a small box while under a cover. Second, it permits **deferred imitation**-the ability to remember and copy the behavior of models who are not present. Finally, it makes possible **make-believe play**, in which children act out everyday and imaginary activities. Like Kathambari's pretending to go to sleep, the toddler's make-believe is very simple. Make-believe expands greatly in early childhood and is so important for psychological development that we will return to it again. In sum, as the sensorimotor stage draws to a close, mental symbols have become major instruments of thinking.

Check Your Progress 1

Describe the Piaget's cognitive developmental theory with special reference to Sensorimotor Stage

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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7.2 Information Processing

Information-processing theorists agree with Piaget that children are active, inquiring beings, but they do not provide a single, unified theory of cognitive development. Instead, they focus on many aspects of thinking, from attention, memory, and categorization skills to complex problem solving.

The information-processing approach frequently relies on computer like flowcharts to

describe the human cognitive system. The computer model of h uman thinking is attractive because it is explicit and precise. Information-processing theorists are not satisfied with general concepts, such as assimilation and accommodation, to describe how children think. Instead, they want to know-exactly what individuals of different ages do when faced with a task or problem.

7.2.1 Structure of the Information-Processing System

Most information-processing researchers assume that we hold information in three parts of the mental system for processing: *the sensory register; working,* or *short-term, memory;* and *long-term memory.* As information flows through each, we can operate on and transform it using **mental strategies**, increasing the chances that we will retain information and use it efficiently. To understand this more clearly, let's look at each aspect of the mental system.
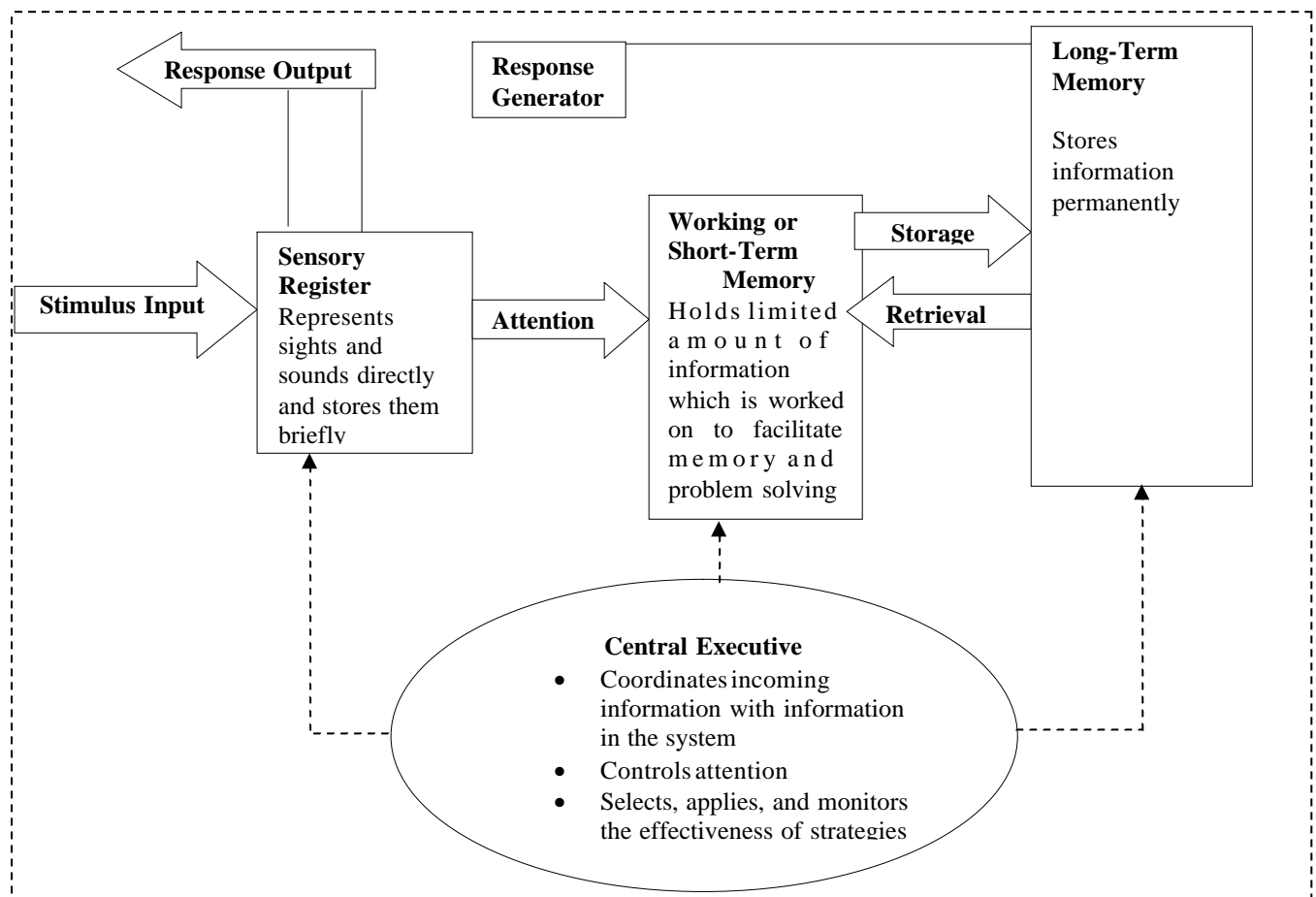
FIGURE 1 Store model of the human information-processing system.

First, information enters the **sensory register.** Here**,** sights and sounds are represented directly and stored briefly. Look around you, and then dose your eyes. An image you saw persists for a few seconds, but then it decays, or disappears, unless you use mental strategies to preserve it. For example, you can *attend to* some information more carefully than to other information, increasing the chances that it will transfer to the next step of the information-processing system.

The second part of the mind is **working, or short-term**, **memory,** where we actively "work" on a limited amount of information, applying mental strategies. For example, if you are studying this book effectively, you are taking notes, repeating information to yourself, or grouping pieces of information together. Think, for a moment, about why you apply these strategies. The sensory register, although limited, can take in a wide panorama of information. The capacity of working memory is more restricted. But by meaningfully

connecting pieces of information into a single representation, we reduce the number of pieces we must attend to, thereby making room in working memory for more. Also, the more thoroughly we learn information, the more *automatically* we use it. Automatic cognitive processing expands working memory by permitting us to us to focus on other information simultaneously.

To manage its complex activities, a special part of working memory called the **central executive** directs the flow of information with information already in the system, and selects, applies, and monitors strategies. The central executive is the conscious, reflective part of our mental system.

The longer we hold information in working memory, the greater the likelihood that it will transfer to the third, and largest storage area - **long – term memory**, o ur permanent knowledge base, which is limitless. In fact, we store so much in long-term memory that we sometimes have problems with *retrieval,* or getting information back from the system. To aid retrieval, we apply strategies, just as we do in working memory. Information in long-term memory is *categorized* according to a master plan based on contents, much like a library shelving system. As a result, we can retrieve it easily by following the same network of associations used to store it in the first place.

Information processing researchers believe that the basic structure of the mental system is similar throughout life. However, the *capacity* of the system-the amount of information that can be retained and processed at once and the speed with which it can be processed-increases, making possible more complex forms of thinking with age. Gains in information-processing capacity are partly due to brain development and partly due to improvements in strategies, such as attending to information and categorizing it effectively. The development of these strategies is already under way in the first 2 years of life.

7.2.2 Attention

Attention develops in early infancy between 1 and 2 months of age, infants shift from attending to a single high-contrast feature of their visual world to exploring objects and patterns more thoroughly. Besides attending to more aspects of the environment, infants gradually become more efficient at managing their attention, taking in information more quickly with age. Habituation research reveals that preterm and newborn babies require a long time to habituate and recover to novel visual stimuli-about 3 or 4 minutes. But by 4 or 5 months, infants require as little as 5 to 10 seconds to take in a complex visual stimulus and recognize that it differs from a previous one.

One reason that very young babies' habituation times are so long is that they have difficulty disengaging their attention from interesting stimuli. Once, Ambika held a doll dressed in red-and-white checked overalls in front of 2-month-old Manthra, who stared intently until, unable to break her gaze, she burst into tears. Just as important as attending to a stimulus is the ability to shift attention from one stimulus to another. By 4 to 6 months, infants' attention becomes more flexible.

During the first year, infants attend to novel and eye-catching events. With the transition to toddlerhood, children become increasingly capable of intentional behavior. Consequently, attraction to novelty declines (but does not disappear) and *sustained attention* improves, especially when children play with toys. When a toddler engages in goal-directed behavior even in a limited way, such as stacking blocks or putting them in a container, attention must be maintained to reach the goal. As and activities become more complex, so does the duration of attention.

7.2.3 Memory

Habituation research provides a window into infant memory. Studies show that infants gradually make finer distinction among visual stimuli and remember them longer-at 3

months, for about 24 hours; by the end of the first year, for several days and, in the case of some stimuli (such as a photo oft human face), even weeks. Yet recall that what babies know about the stimuli to which they habituate and recover is not always clear. Some researchers argue that infants' understanding is best revealed through their active efforts to master their environment. Consistent with this view, habituation research greatly underestimates infants' memory when compared with methods that rely on their active exploration of objects.

So far, we have discussed only recognition – noticing when a stimulus is identical or similar to one previously experienced. This is the simplest form of memory because all babies have to do is indicate (by looking or kicking) that a new stimulus is identical or similar to a previous one. Recall is more challenging because it involves remembering something in the absence of perceptual support. To recall, you must generate a mental image of the past experience. By the end of the first year infants can engage in recall. We know because they find hidden objects and imitate the actions of others hours or days after they observed the behavior.

7.2.4 Categorization

As infants gradually remember more information, they store it in a remarkably orderly fashion. In fact, young babies categorize stimuli on the basis of shape, size, and other physical properties at such an early age that categorization is among the strongest evidence that babies' brains are set up from the start to represent and organize experience in adult like ways.

Habituation/recovery has also been used to study infant categorization. Researchers show babies a series of stimuli belonging to one category and then see whether they recover to (look longer at) a picture that is not a member of the category. Findings reveal that 7- to 12-month-olds structure objects into an impressive array of meaningful categories-food items, furniture, birds, animals, vehicles, kitchen utensils, plants, and. Besides organizing the physical world, infants of this age categorize their emotional and social worlds. They sort people and their voices by gender and age, have begun to distinguish emotional expressions, and can separate the natural movements of people from other motions.

The earliest categories are *perceptual*-based on similar overall appearance or prominent object part, such as legs for animals and wheels for vehicles. But by the end of the first year, more categories are *conceptual*-based on common function and behavior. For example, l-year-olds group together kitchen utensils because each is used to prepare food for eating.

In the second year, children become active categorizers. Around 12 months, they touch objects that go together, without grouping them. Sixteen-month-olds can group objects into a single category. For example, when given four balls and four boxes, they put all the balls together but not the boxes. Around 18 months, they sort objects into two classes. Compared with habituation/recovery, touching, sorting, and other play behaviors better reveal the meanings that toddlers attach to categories because they are applying to those meanings in their everyday activities. For example, after having watched an adult give a toy dog a drink from a cup, 14-month-olds shown a rabbit and a motorcycle usually offer the drink only to the rabbit. Their behavior reveals a clear understanding that certain actions are appropriate for some categories of items (animals) and not others (vehicles).

Check Your Progress 2

Explain the information processing approach to problem solving

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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7.3 Individual Differences in Early Mental Development

The testing approach is very different from the cognitive theories, which try to explain the *process* of development-how children's thinking changes over time. In contrast, designers of mental tests focus on cognitive *products.* They seek to measure behaviors that reflect mental development and to arrive at scores that predict future performance, such as later intelligence, school achievement, and adult vocational success. This concern with prediction arose nearly a century ago, when French psychologist Alfred Binet designed the first successful intelligence test, which predicted school achievement. It inspired the design of many new tests, including ones that measure intelligence at very early ages.

7.3.1 Infant Intelligence Tests

Accurately measuring the intelligence of infants is a challenge because they cannot answer questions or follow directions. All we can do is present them with stimuli, coax them to respond, and observe their behavior. As a result, most infant tests emphasize perceptual and motor responses, along with a few tasks that tap early language and cognition. For example, the *Bayley Scales of Infant Development,* a commonly used test for children between 1 month and 31/2 years, consists of two parts: (1) the Mental Scale, which includes such items as turning to a sound, looking for a fallen object, building a tower of cubes, and naming pictures; and (2) the Motor Scale, which assesses gross and fine motor skills, such as grasping, sitting, drinking from a cup, and jumping.

Predicting Later Performance from Infant Tests. Many people assume, incorrectly, that IQ is a measure of inborn ability that does not change with age. Despite careful construction, most infant tests predict later intelligence poorly. Longitudinal research reveals that the majority of children show substantial fluctuations in IQ between toddlerhood and adolescence- 10 to 20 points in most cases and sometimes much more.

Because infants and toddlers are especially likely to become distracted, fatigued, or bored during testing, their scores often do not reflect their true abilities. In addition, the perceptual and motor items on infant tests differ from the tasks given to older children, which emphasize verbal, conceptual and problem-solving skills. Because of concerns that infant test scores do not tap the same dimensions of intelligence measured at older ages, they are conservatively labeled developmental quotients, or DQs, rather than IQs.

7.3.2 Early Environment and Mental Development

Intelligence is a complex blend of hereditary and environmental influences. There is a relationship of environmental factors to infant and toddler mental test scores.

Home Environment. The Home Observation for Measurement of the Environment (HOME) is a checklist for gathering information about the quality of children's home lives through observation and interviews with parents. The Caregiving Concerns Table3 below lists factors measured by HOME during the first 3 years. Each is positively related to toddlers' mental test performance. Regardless of SES and ethnicity, an organized, stimulating physical setting and parental encouragement, involvement, and affection repeatedly predict infant and early childhood IQ. The extent to which parents talk to infants and toddlers is particularly important. Heredity does not account for all of the correlation between home environment and mental test scores. Family living conditions continue to predict children's IQ beyond the contribution of parental IQ and it was found that infants and children growing up in less crowded homes had parents who were far more verbally responsive to them-a major contributor to language, intellectual, and academic progress.

Table 3

The Home Observation for Measurement of the Environment (HOME): Infancy and Toddler Subscales	
SUBSCALE	**SAMPLE ITEM**
Emotional and verbal responsiveness of the	Parent caresses or kisses child at least once during observer's visit.

parent Acceptance of the Child	Parent does not interfere with child's actions or restrict child's movements more than three times during observer's visit.
	Child's play environment appears safe and free of hazards.
Organization of the physical environment	Parent provides toys or interesting activities for child during observer's visit.
Provision of appropriate play materials	
Parental involvement with the child	Parent tends to keep child within visual range and to look at child often during observer's visit.
Variety in daily situation	Child eats at least one meal per day with mother or father, according to parental report.

Infant and Toddler Child Care. Home environments are not the only influential settings in which young children spend their days. Today, more than 60 percent of mothers with a child under age 2 are employed in cities. Child care for infants and toddlers has become common, and its quality has a major impact on mental development. Research consistently shows that infants and young children exposed to poor-quality child care, regardless of whether they come from middle- or low-SES homes, score lower on measures of cognitive and social skills.

In contrast, good child care can reduce the negative impact of a stressed, poverty-stricken home life, and it sustains the benefits of growing up in an economically advantaged family. Entering high-quality child care in infancy and toddlerhood was associated with cognitive, emotional, and social competence in middle childhood and adolescence.

7.3.3 Early Intervention for At-Risk Infants and Toddlers

Children living in poverty are likely to show gradual declines in intelligence test scores and to achieve poorly when they reach school age. These problems are largely due to stressful home environments that undermine children's ability to learn and increase the chances that they will remain poor throughout their lives. A variety of intervention programs have been developed to break this tragic cycle of poverty. Although most begin during the preschool years, a few start during infancy and continue through early childhood.

Some interventions are center-based; children attend an organized child-care or preschool program where they receive educational, nutritional, and health services, and child-rearing and other social-service supports are provided to parents as well. Other interventions are home-based. A skilled adult visits the home and works with parents, teaching them how to stimulate a very young child's development. In most programs, participating children score higher on mental tests by age 2 than do untreated controls. These gains persist as long as the program lasts and occasionally longer. The more intense the intervention, (full-day, year-round high-quality child care plus support services for parents) the greater children's cognitive, and academic performance throughout childhood and adolescence.

Without some form of early intervention, many children born into economically disadvantaged families will not reach their potential. Recognition of this reality led to provide limited funding for intervention services directed at infants and toddlers who already have serious developmental problems or who are at risk for problems because of poverty. At present, available programs are not nearly enough to meet the need. Nevertheless, those that exist are a promising beginning.

Check Your Progress 3

Explain the testing approach to assess the individual differences in early mental development
Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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7.4 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Piaget's Ideas about Cognitive Change
ii)   Piaget's Sensorimotor Stage
iii)   Structure of the Information-Processing System
iv)   Individual Differences in Early Mental Development
v)   Infant Intelligence Tests
vi)   Early Environment and Mental Development
vii)   Early Intervention for At-Risk Infants and Toddlers

7.5 Check Your Progress: Model Answers

1. Your answer may include :
   i)   Piaget's Stages of Cognitive Development
   ii)   Piaget's Ideas about Cognitive Change
   iii)   The Sensorimotor Stage
   iv)   Repeating Chance Behaviors
   v)   Intentional Behavior
   vi)   Mental Representation

2. The focus of information processing approach includes:
   i)   structure of the information-processing system
   ii)   aspects of thinking, attention, memory, and
   iii)   categorization skills to complex problem solving

3. Assessing early mental development and include the:
   i)   Infant Intelligence Tests
   ii)   Early Environment and Mental Development
   iii)   Early Intervention for At-Risk Infants and Toddlers

7.6 Lesson – End Activities

1. Critically evaluate Piaget's theory.
2. Discuss the major cognitive change during concrete operational stage".

7.7 References

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LESSON – 8

LANGUAGE DEVELOPMENT - DEVELOPMENTAL TASKS

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8.0 AIMS AND OBJECTIVES

This Lesson will help you understand language development and developmental tasks of infancy period.

After going through this Lesson, you will be able to:
      i)   State the three theories of language development
      ii)   Mention the progress of talking by toddler hood
      iii)   List the developmental tasks of toddlerhood in the various areas

8.1 INTRODUCTION

As perception and cognition improve during infancy, they pave the way for an extraordinary human achievement- language. On average, children say their first word at 12 months of age, with a range of about 8 to 18 months. Once words appear, language develops rapidly. Sometime between 1 1/2 and 2 years, toddlers combine two words. By age 6, they have a vocabulary of about 10,000 words, speak in elaborate sentences, and are skilled conversationalists.

8.2 THREE THEORIES OF LANGUAGE DEVELOPMENT

In the 1950s, researchers did not take seriously the idea that very young children might be able to figure out important properties of the language they hear. As a result, the two theories of how children acquire language were extreme views. One *behaviorism,* regards language development as entirely due to environmental influences. The second, *nativism* assumes that children are "prewired" to master the intricate rules of their language.

8.2.1 The Behaviorist Perspective

Behaviorist B. F. Skinner (1957) proposed that language, like any other behavior, is acquired through *operant conditioning.* As the baby makes sounds, parents reinforce those that are most like words with smiles, hugs, and speech in return. For example, at 12 months, when a child makes a sound, and if the parent utters a word about the article pointed, the child would repeat the same word.

Some behaviorists say children rely on *imitation* to rapidly acquire complex utterances, such as whole phrases and sentences. And imitation can combine with reinforcement to promote language, as when a parent coaxes.

8.2.2 The Nativist Perspective

Linguist Noam Chomsky (1957) proposed a nativist theory that regards the young, child's amazing language skill as etched into the structure of the human brain. Focusing on grammar, Chomsky reasoned that the rules of sentence organization are much too complex to be directly taught to or discovered by a young child. Instead, he argued, all children are born with a **language acquisition device (LAD)**, an innate system that contains a set of rules common to all languages. It permits children, no matter which they hear, to understand and speak in a rule-oriented fashion as soon as they pick up enough words.

Newborn babies are remarkably sensitive to speech sounds and prefer to listen to the human voice. In addition, children the world over reach major language mile stones in a similar sequence. Isolated and abused children who experienced little contact in childhood reveal lasting deficits in language, especially grammar and communication skills--evidence indicating that childhood is a *sensitive period* for language learning, although the precise boundary of that period is unclear. This is what Chomsky's idea of a biologically based language program.

8.2.3 The Interactionist Perspective

In recent years, new ideas about language development have arisen, emphasizing *interactions* between inner capacities and environmental influences. Although several interactionist theories exist, all stress the social context of language learning. An active child, well en-dowed for acquiring language, observes and participates in social exchanges. From these experiences, children gradually discover the functions and regularities of language. According to the interactionist position, native capacity, a strong desire to interact with others, and a rich language and social environment combine to help children build a communicative system. And because genetic and environmental contributions vary across children, the interactionist perspective predicts individual differences in language learning.

Even among interactionists, debate continues over the precise nature of innate language abilities. Some theorists accept a modified view of Chomsky's position. They believe that children are primed to acquire language but that they form and refine hypotheses about its structure on the basis of experiences with language. Others believe that children make sense of their complex language environments by applying powerful cognitive strategies rather than strategies specifically tuned to language.

The course of early language growth supports the interactionist position. But none of these theories has yet been fully tested. In reality, biology, cognition, and social experience may operate in different balances with respect to various aspects of language: pronunciation, vocabulary, grammar, and communication skills. Table 1 provides an overview of early language milestones.

Table 1

Milestones of Language Development During the First Two Years	
Approximate Age	**Milestone**
2 months	Infants coo, making pleasant vowel sounds.
4 months on	Infants babble, adding consonants to their cooing sounds and repeating syllables. By 7 months, babbling of hearing infants starts to include many sounds of mature spoken languages.
	Infants and parents establish joint attention, and parents often verbally label what the baby is looking at.
	Interaction between parents and baby includes turn-taking games, such as pat-a-cake and peek-a-boo. By 12 months, babies participate actively.
8-12 months	Babbling contains consonant-vowel and intonation patterns of the infant's language community. Infants begin using preverbal gestures, such as showing and pointing, to influence the behavior of others. Word comprehension first appears.
12 months	Toddlers say their first recognizable word.
18-24 months	Vocabulary expands from about 50 to 200 words.
20-26 months	Toddlers combine two words.

8.2.4 Getting Ready to Talk

Before babies say their first word, they are preparing for language in many ways. They listen attentively to human speech and make speech like sounds. And as adults, we can hardly help but respond.

Cooing and Babbling: Around 2 months, babies begin to make vowel-like noises, called **cooing** because of their pleasant "00" quality. Gradually, consonants are added, and around 4 months, **babbling** appears, in which infants repeat consonant-vowel combinations in long strings, such as "babababababa" or "nanananana."

The timing of early babbling seems to be due to maturation because babies everywhere start babbling at about the same age and produce a similar range of early sounds. But for babbling to develop further, infants must be able to hear human speech. If a baby's hearing is impaired, these speech like sounds are greatly delayed or, in the case of deaf infants, totally absent.

As infants listen to spoken language, babbling expands to include a broader range of sounds. At around 7 months, it starts to include many sounds of mature spoken languages. And by 1 year, it contains the consonant-vowel and intonation patterns of the infant's language community. Deaf infants exposed to sign language from birth babble with their hands in much the same way hearing infants do through speech. Furthermore, hearing babies of deaf, signing parents produce babble like hand motions with the rhythmic patterns of natural language. Infants' sensitivity to language rhythm, evident in both spoken and signed babbling, may help them discover and produce meaningful language units. And through babbling, babies seem to experiment with a great many sounds that can be blended into their first words.

Becoming a Communicator: Besides responding to cooing and babbling, adults interact with infants in many other situations. Around 4 months, infants start to gaze in the same direction adults are looking, a skill that becomes more accurate between 12 and 15 months of age. Adults also follow the baby's line of vision and comment on what the infant sees, labeling the environment for the baby. Infants and toddlers who often experience this *joint attention* comprehend more language, produce meaningful gestures and words earlier, and show faster vocabulary development.

Around 4 to 6 months, interaction between parent and baby begins to include *give-and-take,* as in turn-taking games, such as pat-a-cake and peek-a-boo. At first, the parent starts the game and the baby is an amused observer. Nevertheless, 4-month-olds are sensitive to the structure and timing of these interactions, smiling more to an organized than a disorganized peek-a-boo exchange. By 12 months, babies participate actively, trading roles with the parent. As they do so, they practice the turn-taking pattern of human conversation, a vital context for acquiring language and communication skills. Infants' play maturity and vocalizations during games predict advanced language progress between and 2 years of age.

At the end of the first year, as infants become capable of intentional behavior, they use *preverbal gestures* to influence the behavior of others. For example, Deepa held up a toy to show it and pointed to cupboard when she wanted a cookie. Mother responded to her gestures and also labeled them {"Oh, you want a chocolate"). In this way, toddlers learn that using language leads desired results. Soon they utter words along with their reaching and pointing gestures, the gestures recede, and spoken language is under way.

8.2.5 First Words

In the middle of the first year, infants begin to understand word meanings. When 6-month-olds listened to the words "mommy" and "daddy" while looking at side-by-side videos of their parents, they looked longer at the video of the named parent. First spoken words, around 1 year, build on the sensorimotor foundations Piaget described on categories children form during their first 2 years. Usually they refer to important people ("Mama;' "Dada"), objects that move ("car;' "ball;' "cat"), familiar actions ("bye-bye; "up," "more"), or outcomes of familiar actions ("dirty," "wet;' hot"). In their first 50 words, toddlers rarely name things that just *sit there,* like "table" or "vase".

Besides cognition, emotion influences early word learning. At first, when acquiring a new word for an object, person, or event, 1 1/2-year-olds say it neutrally; they need to listen carefully to learn, and strong emotion diverts their attention. As words become better learned, toddlers integrate talking and expressing feelings. "Shoe!" said one enthusiastic 22-month-old as her mother tied her shoelaces before an outing. At the end of the second year, children begin to label their emotions with words like "happy;' "mad;' and "sad".

When young children first learn words, they sometimes apply them too narrowly, an error called **underextension**. For example, at 16 months, Deepa used "bear" to refer only to the worn and tattered bear that she carried around much the day. A more common error is **overextension**-applying a word to a wider collection of objects and events than is appropriate. For example, Geetha used "car" for buses, trains, trucks, and fire engines. Toddlers' overextensions reflect their sensitivity to categories. They apply a new word to a group of similar experiences, such as "car" to wheeled objects and "open" to opening a door, peeling fruit, and undoing shoelaces. This suggests that children sometimes overextend deliberately because they have difficulty recalling or have not acquired a suitable word. As their vocabularies enlarge, overextensions disappear.

Overextensions illustrate another important feature of language development: the distinction between language *production* (the words children use) and language *comprehension* (the words children understand). Children overextend many more words in production than they do in comprehension. That is, a 2-year-old may refer to trucks, trains,

and bikes as "car" but look at or point to these objects correctly when given their names. At all ages, comprehension develops ahead of production. This tells us that failure to say a word does not mean that toddlers do not understand it. If we rely only on what children say, we will underestimate their knowledge of language.

8.2.6 The Two-Word Utterance Phase

At first, toddlers add to their vocabularies slowly, at a rate of 1 to 3 words a month. Between 18 and 24 months, a spurt in vocabulary growth often takes place. As speed of identifying words in spoken sentences and memory and categorization improve, many children add 10 to 20 new words a week. When vocabulary approaches 200 words, toddlers start to combine two words, saying, for example, "Mommy shoe;' "go car;' and "more chocolates:' These two-word utterances are called **telegraphic speech** because, like a telegram, they leave out smaller and less important words. Children, the world over use them to express an impressive variety of meanings.

Two-word speech is largely made up of simple formulas, such as "want + X" and "more + X;' with many different words inserted in the X position. Although toddlers rarely make gross grammatical errors (such as saying "chair my" instead of "my chair"), they can be heard violating the rules. For example, at 20 months, Geetha said "more hot" and "more read;' combinations that are not acceptable in English grammar. The word-order regularities in toddlers' two-word utterances are usually copies of adult word pairings, as when the parent says, "That's my *book,"* or "How about *more sandwich?"*. But it does not take long for children to figure out grammatical rules. The beginnings of grammar are in place by age 21/2.

8.2.7 Individual and Cultural Differences

Each child's progress in acquiring language results from a complex blend of biological and environmental influences. The most common biological explanation is girls' faster rate of physical maturation, believed to promote earlier development of the left cerebral hemisphere, where language is housed. But perhaps because of girls' slight language advantage, mothers also talk more to toddler-age girls than boys, so girls add vocabulary more quickly for both genetic and environmental reasons.

Besides the child's sex, personality makes a difference. Reserved, cautious toddlers often wait until they understand a great deal before trying to speak. When they finally do speak, their vocabularies grow rapidly. In the week after her adoption, 16-month-old Gomathi spoke only a single Tamil word. For the next 2 months, Gomathi listened to English conversation without speaking-a "silent period" typical of children beginning to acquire a second language. Around 18 months, words came quickly-first "Eli:' then "doggie;' "kitty;' "Mama:' "Dada;' "book;' "ball;' "car:' "cup;' "clock;' and "chicken:' all within a single week.

Young children have unique styles of early language learning. Geetha and Gomathi, like most toddlers, used a **referential style**; their early vocabularies consisted mainly of words that referred to objects. A smaller number of toddlers use an **expressive style**; compared with referential children, they produce many more pronouns and social formulas, such as "stop it:' "thank you;' and "I want it.' These styles reflect early ideas about the functions of language. Gomathi, for example, thought words were for naming things. In contrast, expressive-style children believe words are for talking about people's feelings and needs. The vocabularies of referential-style children grow faster because all languages contain many more object labels than social phrases. Expressive-style children tend to be highly sociable, and parents more often use verbal routines ("How are you?" "Its no trouble") that support social relationships.

8.2.8 Supporting Early Language Development

There is little doubt that children are specially prepared for acquiring language, since no other species can develop as flexible and creative a capacity for communication as we can. Yet consistent with the interactionist view, a rich social environment builds on young

children's natural readiness to speak their native tongue.

Adults in many cultures speak to young children in **child directed speech** (CDS), a form of communication made up short sentences with high-pitched, exaggerated expression, clear pronunciation, distinct pauses between speech segments, and repetition of new words in a variety of contexts ("See the ball.' "The ball bounced!"). Deaf parents use a similar style of communication when signing their deaf babies. CDS builds on several communicative strategies we have already considered: joint attention, turn-taking, and caregivers' sensitivity to children's preverbal gestures.

From birth on, children prefer to listen to CDS over other kinds of adult talk, and by 5 months they are more emotionally responsive to it. And parents constantly fine-tune it, adjusting the length and content of their utterances to fit their children's needs-adjustments that promote language comprehension and also permit toddlers to join in conversation.

Conversational give-and-take between parent and toddler is one of the best predictors of early language development and academic competence during the school years. Impatience with and rejection of children's efforts to talk lead them to stop trying and result in immature language skills.

Check Your Progress 1

A. Explain the three significant theories of language development

B. Discuss the how babies gradually get ready to talk fluently?

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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8.3 DEVELOPMENTAL TASKS OF TODDLERHOOD

As the pattern of development is predictable even though different babies reach important landmarks in this pattern at slightly different ages, it is possible to set up standards of social expectations in the form of developmental tasks. All babies, for example, are expected to learn to walk, to take solid foods, to have their organs of elimination under partial control, to achieve reasonable physiological stability (especially in hunger rhythm and sleep), to learn the foundations of speech, and to relate emotionally to their parents and siblings to some extent instead of being completely self-bound, as they were at birth. Most of these developmental tasks will not, of course, be completely mastered when toddlerhood draws to a close, but the foundations for them should be laid.

When toddlerhood ends, all normal babies have learned to walk, though with varying degrees of proficiency. They have also learned to take solid foods and they have achieved a reasonable degree of physiological stability. The major tasks involving the elimination of body wastes are well under control and will be completely mastered within another year or two.

While most babies have built up a useful vocabulary, can pronounce the words they use reasonably correctly, can comprehend the meaning of simple statements and commands, and can put together several words into meaningful sentences, their ability to communicate with others and to comprehend what others say to them is still on a low level. Much remains to be mastered before they enter school.

The rapid development of the nervous system, the ossification of the bones, and the strengthening of the muscles make it possible for babies to master the developmental tasks of toddlerhood. However, their success in this regard depends to a large extent upon the opportunities they are given to master them and the help and guidance they receive.

Babies who lag behind their age-mates in mastering the developmental tasks of toddlerhood will be handicapped when they reach the early childhood years and are expected

to master the developmental tasks for these years. A poor foundation in motor skills or in speech, for example, will make it difficult for young children to master the skills in these areas of development. Good mastery of these developmental tasks, by contrast, gives babies the foundations needed for successful mastery of speech, motor skills, and other forms of body control that are essential to becoming a part of the peer group-one of the important developmental tasks of the early childhood years.

8.3.1 Physical Development

Toddlerhood is one of the two periods of rapid growth during the life span; the other comes at puberty. During the first six months of life, growth continues at the rapid rate characteristic of the prenatal period and then begins to slow down. In the second year, the rate of growth decelerates rapidly. During the first year of life, the increase in weight is proportionally greater than the increase in height; during the second year, the reverse is true.

If the rapid growth characteristic of the prenatal and early postnatal periods did not decelerate soon after birth, the child would grow into a giant. It has been estimated that if weight increased at the same rate it did during the first year of life, a child who weighed seven pounds at birth would weigh 230,029 pounds at eleven years of age.

While the general pattern of growth and development is similar for all babies, there are variations in height, weight, sensory capacities, and other areas of physical development. Some babies start life smaller and less well developed than the norm. This may be due to prematurity or to a poor physical condition resulting from maternal malnutrition, stress, or some other unfavorable condition during the prenatal period. As a result, such babies tend to fall behind their age-mates during the toddlerhood years.

The pattern of physical growth in toddlerhood is much the same for boys and girls. However, within the sex groups there are marked variations. Throughout the first year of life, there is little difference in height and weight between black and white babies of comparable economic levels. Differences begin to appear in the second year however, because black children are, typically, of a more slender build than white children.

There are also variations in body size of babies of different socioeconomic levels. Babies whose parents are of the lower socioeconomic levels tend to be smaller, in both weight and height, than those whose parents come from the higher socioeconomic levels. Body build, which begins to be apparent during the second year of life, also contributes to variations in height and weight.

Throughout the toddlerhood period variations not only continue but become more pronounced. At all times variations in weight are greater than variations in height. This is because variations in weight are dependent partly on body build and partly on eating habits and diets. However, in spite of variations in physical growth and development, it is possible to get a general picture of the pattern of growth and development during the toddlerhood years.

8.3.2 Pattern of Physical Development during Toddlerhood

Weight: At the age of four months, the baby's weight has normally doubled. At one year, babies weigh, on the average, three times as much as they did at birth, or approximately 21 pounds. At the age of two, the typical baby weighs 25 pounds. Increase in weight during toddlerhood comes mainly from an increase in fat tissue.

Height: At four months, the baby measures between 23 and 24 inches; at one year, between 28 and 30 inches; and at two years, between 32 and 34 inches.

Physical Proportions: Head growth slows down in toddlerhood, while trunk and limb growth increases. Thus the baby gradually becomes less top-heavy and appears more slender and less chunky by the end of toddlerhood.

Bones: The number of bones increases during toddlerhood. Ossification begins in the early

part of the first year, but is not completed until puberty. The fontanel, or soft spot on the skull, has closed in approximately 50 percent of all babies by the age of eighteen months, and in almost all babies by the age of two years.

Muscles and Fat: Muscle fibers are present at birth but in very undeveloped forms. They grow slowly during toddlerhood and are weak. By contrast, fat tissue develops rapidly during toddlerhood, due partly to the high fat content of milk, the main ingredient in a baby's diet.

Body Builds: During the second year of life, as body proportions change, babies begin to show tendencies toward characteristic body builds. The three most common forms of body build are *ectomorphic,* which tends to be long and slender, *endomorphic,* which tends to be round and fat, and *mesomorphic* which tends to be heavy, hard, and rectangular.

Teeth: The average baby has four to six of the twenty temporary teeth by the age of one and sixteen by the age of two. The first teeth to cut through are those in the front, the last to appear are the molars. The last four of the temporary teeth usually erupt during the first year of early childhood.

Nervous System: At birth, brain weight is one-eighth of the baby's total weight. Gain in brain weight is greatest during the first two years of life, thus accounting for the baby's top-heavy appearance. The cerebellum, which plays an important role in body balance and postural control, triples in weight during the first year of postnatal life. This is true also for the cerebrum. Immature cells, present -at birth, continue to develop after birth but relatively few new cells are formed.

Sense Organ Development: By the age of three months, the eye muscles are well-enough coordinated to enable babies to see things clearly and distinctly and the cones are well-enough developed to enable them to see colors. Hearing develops rapidly during this time. Smell and taste, which are well developed at birth, continue to improve during toddlerhood. Babies are highly responsive to all skin stimuli because of the thin texture of their skin and because all sense organs relating to touch, pressure, pain, and temperature are present in well-developed forms.

8.3.3 Physiological Functions

Toddlerhood is the time when the fundamental physiological patterns of eating, sleeping, and elimination should be established, even though the habit formation may not be completed when toddlerhood ends.

Sleep Patterns: During the first year of toddlerhood, the mean duration of night sleep increases from 8 1/2 *hours* at three weeks to 10 hours at twelve weeks and then remains constant during the rest of that year. During the first three months, the decline in day sleep is balanced by an increase in night sleep. Throughout the first year, wakefulness-sleep cycles of approximately one hour in length occur in both day and night sleeps, with deep sleep lasting only about twenty-three minutes.

Eating Patterns: From birth until four or five months of age, all eating is in the infantile form of sucking and swallowing. Food, as a result, must be in a liquid form. Chewing generally appears in the developmental pattern a month later than biting. But, like biting, it is in an infantile form and requires much practice before it becomes serviceable.

Food dislikes, which begin to develop during the second year, are frequently the result of the prolongation of infantile eating patterns. After being accustomed to food in liquid form, it is difficult for babies to adjust to a semisolid form. This adds to their revolt against the food, even though they may like its taste.

Patterns **of** *Elimination:* Bowel control begins, on the average, at six months, and bladder control begins between the ages of fifteen and sixteen months. In the case of the former, habits of control are established by the end of toddlerhood, though temporary lapses may be

expected when the baby is tired, ill, or emotionally excited. Bladder control, on the other hand, is in a rudimentary state at the close of toddlerhood. Dryness during the daytime can be expected for a major part of the time except when deviations from the scheduled routine of the day, illness, fatigue, or emotional tension interfere. Dryness at night cannot be achieved in the average child until several years later.

8.3.4 Muscle Control

At first, the baby's body is in more or less constant motion similar to the mass activity of the newborn infant. This is true even during sleep. Gradually this random, meaningless movement becomes more coordinated, thus making control of the muscles possible.

Maturation and learning work together in the development of muscle control. As a result of the maturation of the muscles, bones, and nerve structures, and because of the change that takes place in body proportions, babies are able to use their bodies in a coordinated manner. They must, however, be given an opportunity to learn how to do so. Until this state of readiness is present, teaching will be of little or no value.

Development of control over the muscles follows a definite and predictable pattern governed by the *laws* of developmental *direction.* According to these laws, muscle control sweeps over the body from head to foot and from trunk to extremities. This means that the muscles in the head region come under voluntary control first, and those in the leg region last.

Babies who sit early walk earlier than babies who start to sit later. It is possible to predict with a fair degree of accuracy when babies will start to walk if one knows what their rate of development is in other motor coordinations. A fairly accurate way to predict the age at which babies will start to walk alone is to multiply the age at which they begin to creep by 1 1/2 or the age at which they sit alone by 2.

8.3.5 Toddlerhood Skills

On the foundations laid through maturation of muscle coordinations, babies begin, before the end of the first year of life, to develop skills-fine coordinations in which the smaller muscles play a major role. To develop skills, however, there are three essentials: an opportunity for practice, an incentive to learn, and a good model to copy with guidance to ensure that the copying will be correct. How important imitating a model is has been shown by the fact that, in babies blind from birth, there is a delay in their gross motor development and in the acquisition of skills.

Before toddlerhood is over, babies acquire many skills that are useful to them in their daily activities. At first, they are unable to integrate the different parts of a skill, with the result that the skill is of little value to them. With practice integration takes place. None of these skills will be well learned in the relatively short span of toddlerhood, but they serve as the foundation of skills that will be refined and more completely learned as babies emerge into the childhood years. The skills that all babies can be expected to learn are usually divided into two major categories hand skills and leg skills.

Because there is a rapid increase in the use of the hands during the early weeks of life, hand coordinations develop rapidly. As each new hand skill develops, it absorbs babies' interests and activities, and they devote much of their waking time to the use of their hands. This further increases their control over them. By contrast, because the major part of toddlerhood is devoted to developing the ability to walk, leg skills are only in a rudimentary state of development by the end of this period. The new leg skills acquired during toddlerhood are learned mainly during the last part of the second year.

8.3.6 Beginning of Handedness

Learning to use one hand in preference to the other-handedness -is an important aspect of the development of hand skills during toddlerhood. During the early months of life, a baby is *ambidextrous,* with no preference for either hand. By the time they are eight months

old, babies who are above average in mental and motor development show a greater degree of hand preference than those who are less well advanced, and this preference is usually for the right hand. However, most babies shift from the use of one hand to the other, depending largely on the position of the person or object they want to reach. If the object is closer to the right hand, that is the hand the baby will use.

Shifting likewise occurs during the second year but not as frequently as during the first. Thus, during toddlerhood, babies are neither dominantly left- nor dominantly right-handed, though they show, especially in the second year, a tendency to use one hand more than the other.

8.3.7 Developments in Socialization

Early social experiences play a dominant role in determining the baby's future social relationships and patterns of behavior toward others. And because the baby's life is centered around the home, it is here that the foundations for later social behavior and attitudes are laid. There is little evidence that people are inherently social or antisocial. Instead, whether they become outer- or inner-bound-extroverted or introverted-depends mainly on their early social experiences.

Studies of the social adjustments of older children and even adolescents show the importance of the social foundations laid in toddlerhood. There are two reasons for the importance of these early foundations. First, the type of behavior babies show in social situations affects their personal and social adjustments. A smiling child is much more likely to provoke intensive maternal feelings and to become a good partner in the relation between him and his mother or other care takers and to draw more attention of the adult than others who smile less. The two- to three-year-olds might establish an attachment for some object-a favorite toy or a blanket, for example-these '"attachment objects, whether animate or inanimate, may serve as anxiety reducers. When a preschooler is accompanied by an attachment object, it reduces anxiety in a novel situation and facilitates adjustment to this situation".

The second reason why early social foundations are important is that, once established, they tend to be persistent as children grow older. Children who cried excessively as babies tend to be aggressive and to show other attention-getting behavior. By contrast, friendly, happier babies usually become socially better adjusted as they grow older.

8.3.8 Pattern of Development of Social Behavior

Early social behavior follows a fairly predictable pattern, though variations can and do occur as a result of health or emotional states or because of environmental conditions. At birth, infants are non gregarious in the sense that it makes no difference to them who attends to their physical needs. In fact, young babies can be soothed as well by a hot-water bottle or a soft pillow as by human caresses. But at around the age of six weeks, a true social smile-or a smile in response to a person rather than to a tactile stimulus applied to the lips, which produces a reflex smile-appears, and this is regarded as the beginning of socialization.

The pattern of social responses to adults differs from that of social responses to other babies. The first social responses are to adults, while those to other babies appear slightly later. During the first year of toddlerhood, babies are in a state of equilibrium which makes them friendly, easy to handle, and pleasant to be with. Around the middle of the second year, equilibrium gives way to disequi1ibrium, and babies then become fussy, uncooperative, and difficult to handle. Before toddlerhood is over, however, equilibrium is restored and babies again exhibit pleasant and social behavior.

8.3.9 Beginnings of Interest in Play

There are certain characteristics of toddlerhood play which are distinctive and which make it different from the play of young children and certainly from the play of older

children and adolescents. First, in toddlerhood play there are no rules or regulations. Consequently, it may be regarded as free, spontaneous play. Babies play how and when they wish without any preparation for or restrictions on, the way they play.

Second, throughout toddlerhood, play is more often solitary than social. Even when playing with the mother, the baby is "often a plaything, while the mothering one is the player. In time, both the child and the mothering one are mutually players and playthings". When babies are with other babies or with children, there is little interaction or cooperation. Instead, play is "onlooker play" in which babies watch what the others are doing, or "parallel play" in which they play in their own way without regard to what the other is doing. When there is any interaction, it consists mainly of grabbing or snatching toys from another baby. There is little or no social give-and-take.

Third, because play is dependent on physical, motor, and intellectual development, the kinds of play depend on the babies' patterns of development in these areas. As these patterns unfold, play becomes more varied and complex.

Fourth, toys and other play equipment per se are less important now than they will be later. This means that babies' play can be carried out with any object that stimulates curiosity and exploration: regular toys are not needed at this period.

And, fifth, babies' play is characterized by much repetition and little variation. The reason for this is that babies lack the skills which make the wider play repertoire of preschoolers and older children possible.

8.3.10 Play Development Follows a Pattern

Play during the toddlerhood years is greatly influenced by the baby's physical, motor, and mental development. And because these patterns of development are similar for all babies, the pattern of play is similar and predictable.

For example, at six months babies play with one object at a time. By the time they are nine months, they combine or relate two separate objects in their play and show an interest in similarities among objects. By the time they are two years old, they show evidence of pretending in their play.

Different play patterns likewise follow predictable patterns. This is true of manipulative play and play with toys. In playing with toys, babies first explore them and later use them to make things or to supplement their make-believe play. Regardless of environment and of individual differences, certain patterns of play are found more or less universally.

8.3.11 Value of Play in Toddlerhood

During toddlerhood, play is for pleasure and "not for any end result, it makes important contributions to .the baby's development. As Bruner has said, "Play is serious business." He further explains that it provides opportunities for many forms of learning, two of which are especially important-problem solving and creativity. Without play, the foundations for creativity as well as the foundations for problem solving would not be laid before children developed habits of dealing with their environments in noncreative, stereotyped ways.

Play gives to information babies about their environments and the people and things in their environments. It is through exploration that the infant learns about the world of people as well as of things. Unquestionably, this learning would ultimately take place without play but play hastens the learning and adds to its enjoyment.

Play is the enjoyment babies derive from it. Were it not for opportunities for play, equipment to stimulate it, and guidance in how to use the equipment, babies would become bored and spend their time crying for attention. The self-confidence that comes with self-sufficiency helps children to cope with the various problems that face them as they grow older.

Creativity is only in its most rudimentary forms during toddlerhood, the satisfaction the

individual derives from opportunities and encouragement to do things in a creative way provides an incentive to further creativity as the child emerges from the restricted environment of toddlerhood and has more opportunities to do things in an original way.

Much play in toddlerhood is solitary; some of it is carried out with others, mainly members of the family-siblings, parents, or grandparents. Learning to play with others encourages babies to be cooperative instead of self-bound, an essential to good social relationships when toddlerhood comes to a close. Like other foundations, if foundations in cooperation are properly laid in toddlerhood, adjustment to the demands of childhood will be easier to meet successfully.

8.3.12 Development of Understanding

All babies begin life with no comprehension of the meaning of the things they come in contact with in their environment, they must acquire, through maturation and learning, an understanding of what they observe. What meanings babies acquire depends partly on the level of their intelligence and partly on their previous experiences. As new meanings are acquired, babies interpret new experiences in terms of their memories of previous ones. The association of meanings with objects, people, and situations results in the development of *concepts*.

Normal babies show, that concepts develop rapidly. Babies show recognition of familiar people and objects in their environment through pleasurable responses, just as they regard strange people and objects with fear. Conditioning of the emotions is so easy and so common during toddlerhood. Watson conditioned a baby to fear a rabbit by associating a loud, harsh noise with the rabbit. Later, Watson reported that the baby showed fear of white stuffed animals, a white muff, and even a person in a Santa Claus costume with a flowing white beard.

Check Your Progress 2

Explain the significant developmental tasks of toddlerhood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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8.4 LET US SUM UP

In this Lesson, we have touched upon the following points:

vi)   The three theories of achievement-language
vii)   As to how toddlers get ready to talk
viii)   Tasks that toddlers had to overcome
ix)   The significance of socialization and play in development

8.5 Check Your Progress: Model Answers

1. A. Your answer may include the following three theories
  i)   The Behaviorist Perspective
  ii)   The Nativist Perspective
  iii)   The Interactionist Perspective
 A. The steps babies take to talk fluently are:
  i)   Getting Ready to Talk
  ii)   First Words
  iii)   The Two-Word Utterance Phase
2. The developmental tasks could include
  i)   Pattern of Physical Development
  ii)   Physiological Functions
  iii)   Muscle Control

iv)   Toddlerhood Skills
v)   Beginning of Handedness
vi)   Developments in Socialization
vii)   Pattern of Development of Social Behavior
viii)   Beginnings of Interest in Play

8.6 Lesson – End Activities
1. Discuss the pattern of physical development during Toddlerhood.
2. Briefly explain Toddlerhood skills.

8.7 References

1. Erickson, E., Childhood and Society, New York: Norton, 1968, P. 263.
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LESSON - 9
ERIKSON'S THEORY OF INFANT AND TODDLER PERSONALITY -
EMOTIONAL DEVELOPMENT - TEMPERAMENT AND DEVELOPMENT -
DEVELOPMENT OF ATTACHMENT

Contents

9.0 AIMS AND OBJECTIVES

This Lesson will help understand the toddler personality, emotional, temperamental and attachment development.

After going through this Lesson, you will be able to:
xi)   State the Erikson's theory of infant and toddler personality
xii)   Mention the emotional development in infant and toddlers
xiii) Discuss the temperament development
xiv) Development of Attachment in infant and toddlers

9.1 INTRODUCTION

Erikson divided human development into eight stages (Discussed in Unit I - Lesson 2) and said that the individual has a psychosocial task to master during each stage. The confrontation with each task during each stage is mastered, a positive quality is built into the personality and further development takes place. If the task is not mastered, and the conflict is unsatisfactorily resolved, the ego is damaged because a negative quality is incorporated in it. The overall task of the individual is to acquire a positive identity as he or she moves from one stage to the next. The following are with regard to the Infancy (Basic trust Vs Mistrust) and Toddlerhood (Autonomy versus Shame and Doubt).

9.1.1 Basic Trust versus Mistrust

Freud called the first year the *oral stage* and regarded gratification of the infant's need for food and oral stimulation vital. Erikson accepted Freud's emphasis on feeding; but he expanded and enriched Freud's view. A healthy outcome during infancy, Erikson believed, does not depend on the amount of food or oral stimulation offered but rather on the *quality* of the caregiver's behavior. A mother who supports her baby's development relieves discomfort promptly and sensitively. For example, she holds the infant gently during feedings, patiently waits until the baby has had enough milk, and weans when infant shows less interest in the breast or bottle.

Erikson recognized that no parent can be perfectly in tune with the baby's needs. Many factors affect her responsiveness - feelings of personal happiness, current life conditions (for example, additional young children in the family), and culturally valued child-rearing practices. But when the *balance of care* is sympathetic and loving, the psychological conflict of the year- **basic trust versus mistrust**-is resolved on the positive side. The trusting infant expects the world to be good and gratifying, so he feels confident about venturing out and exploring it. The mistrustful baby cannot count on the kindness and compassion of others, so she protects herself by withdrawing from people and things around her.

9.1.2 Autonomy versus Shame and Doubt

In the second year, during Freud's *anal stage,* instinctual energies shift to the anal region of the body. Freud viewed toilet training, in which children must bring their anal impulses in line with social requirements, as crucial for personality development. Erikson agreed that the parent's manner of toilet training is essential for psychological health. But he viewed it as only one of many important experiences for newly walking, talking toddlers. Their familiar refrains-"No!" and "Do it Myself" -reveal that they have entered a period of budding selfhood. Toddlers want to decide for themselves-not just in toileting but in other situations as well. The great conflict of toddlerhood, autonomy versus shame and doubt, is resolved favorably when parents provide young children with suitable guidance and reasonable choices. A self-confident, secure 2 year old has been encouraged not just to use the toilet but to eat .with a spoon and to help pick up his toys. His parents do not criticize or attack him when he fails at these new skills. And they meet his assertions of independence with tolerance and understanding. For example, they grant him an extra 5 minutes to finish his play before leaving for the grocery store and wait patiently while he tries to zip his jacket.

According to Erikson, the parent who is over- or under controlling in toileting is likely to be so in other aspects of the toddler's life. The outcome is a child who feels forced and ashamed and doubts his ability to control his impulses and act competently on his own. In sum, basic trust and autonomy grow out of warm, sensitive parenting and reasonable expectations for impulse control starting in the second year.

Check Your Progress 1

Explain the Erikson's theory of infant and toddler personality

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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9.2 EMOTIONAL DEVELOPMENT

Emotions play a powerful role in organizing the attainments that Erikson regarded as so important: social relationships, exploration of the environment, and discovery of the self. Because infants cannot describe their feelings, determining exactly which emotions they are

experiencing is a challenge. Although vocalizations and body movements provide some in-formation, facial expressions offer the most reliable cues. Emotional expressions are built-in social signals, has inspired researchers to analyze infants' facial patterns to determine the range of emotions they display at different ages.

9.2.1 Development of Some Basic Emotions

Basic emotions are universal in humans and other primates, have a long evolutionary history of promoting survival, and can be directly inferred from facial expressions. They in-clude happiness, interest, surprise, fear, anger, sadness, and disgust. Do infants come into the world with the ability to express basic emotions? Although signs of some emotions are present, babies' earliest emotional life consists of little more than two global arousal states: attraction to pleasant stimulation and withdrawal from unpleasant stimulation. Over time, emotions become clear, well-organized signals.

Around 6 months, face, voice, and posture form organized patterns that vary meaningfully with environmental events. For example, Suja typically responded to her parents' playful in-teraction with a joyful face, pleasant cooing, and a relaxed posture, as if to say, "This is fun!" In contrast, an unresponsive parent often evokes a sad face, fussy vocalizations, and a drooping body (sending the message, "I'm despondent") or an angry face, crying, and "pick -me- up" gestures (as if to say, "Change this unpleasant event!") . If parental depressive signals continue, they can profoundly disrupt emotional and social development. In sum, by the middle of the first year, emotional expressions are well organized and specific- and therefore tell us a great deal about the infant's internal state (Table 1). Three basic emotions-happiness, anger, and fear-have received the most research attention.

Table 1

Milestones of Emotional Development During the First Two Years	
Approximate Age	**Milestone**
Birth	Infants' emotions consist largely of two global arousal states: attraction to pleasant stimulation and withdrawal from unpleasant stimulation.
2-3 months	Infants engage in social smiling and respond in kind to adults' facial expressions.
3-4 months	Infants begin to laugh at very active stimuli.
6-8 months	Expressions of basic emotions are well organized and vary meaningfully with environmental events. Infants start to become angry more often and in a wider range of situations. Fear, especially stranger anxiety, begins to rise. Attachment to familiar caregivers is clearly evident, and separation anxiety appears. Infants use familiar caregivers as a secure base for exploration.
8-12 months	Infants perceive facial expressions as organized patterns, and meaningful understanding of them improves. Social referencing appears. Infants laugh at subtle elements of surprise.
18-24 months	Self-conscious emotions of shame, embarrassment, guilt, and pride appear. A vocabulary for talking about feelings develops rapidly, and emotional self-regulation improves. Toddlers appreciate that others' emotional reactions may differ from their own. First signs of empathy appear.

Happiness. Happiness-first in terms of blissful smiles later through exuberant laughter-contributes to many aspects of development. Infants smile and laugh when they achieve new

skills, expressing their delight in motor and cognitive mastery. The smile also encourages caregivers to be affectionate and stimulating, so the baby smiles even more. Happiness binds parent and baby into a warm, supportive relationship and fosters the infant's developing competencies.

During the early weeks, newborn babies smile when full, during sleep, and in response to gentle touches and sounds, such as stroking the skin, rocking, and the mother's soft, high pitched voice. By the end of the first month, infants start to smile at interesting sights, but these must be dynamic and eye catching, such as a bright object jumping suddenly across the baby's field of vision. Between 6 and 10 weeks, the human face evokes a broad grin called the **social smile**. These changes in smiling parallel the development of infant perceptual capacities-in particular, babies' increasing sensitivity to visual patterns, including the human face.

Laughter, which first occurs around 3 to 4 months, reflects faster processing of information than does smiling. Around the middle of the first year, infants smile and laugh more when interacting with familiar people, a preference that strengthens the parent-child bond. Like adults, 10- to 12-month-olds have several smiles, which vary with context. They show a broad, "cheek-raised" smile in response to a parent's greeting; a reserved, muted smile in response to a friendly stranger; and a "mouth-open" smile during stimulating play.

Anger and Fear. Newborn babies respond with generalized distress to a variety of unpleasant experiences, including hunger, painful medical procedures, changes in body temperature, and too much or too little stimulation. From 4 to 6 months into the second year, angry expressions increase in frequency and intensity. Older babies also show anger in a wider range of situations-for example, when an object is taken away, the caregiver leaves for a brief time, or they are put down for a nap.

The most frequent expression of fear is to unfamiliar adults, a response called **stranger anxiety**. But if the adult sits still while the baby moves around and a parent is nearby, infants often show positive and curious behavior. The stranger's style of interaction-expressing warmth, holding out an attractive toy, playing a familiar game, and approaching slowly rather than abruptly-reduces the baby's fear.

9.2.2 Understanding and Responding to the Emotions of Others

Infants' emotional expressions are closely tied to their ability to interpret the emotional cues of others. Babies match the feeling tone of the caregiver in face-to-face communication. Early on, infants detect others' emotions through a fairly automatic process of *emotional contagion,* just as we tend to feel happy or sad when we sense these emotions in others.

Between 7 and 10 months, infants perceive facial expressions as organized patterns, and they can match the emotion in a voice with the appropriate face of a speaking person. Responding to emotional expressions as organized wholes indicates that these signals have become meaningful to babies. As skill at detecting what others are looking at and reacting to improves, infants realize that an emotional expression not only has meaning but is also a meaningful reaction to a specific object or event.

Once these understandings are in place, infants engage in **social referencing**, in which they actively seek emotional information from a trusted person in an uncertain situation. Many studies show that the caregiver's emotional expression (happy, angry, or fearful) influences whether a 1-year-old will be wary of strangers, play with an unfamiliar toy, or cross the deep side of the visual cliff. Social referencing gives infants and toddlers a powerful means for learning. By responding to caregivers' emotional messages, they can avoid harmful situations.

9.2.3 Emergence of Self-Conscious Emotions

Besides basic emotions, humans are capable of a second, higher-order set of feelings,

including shame, embarrassment, guilt, envy, and pride. These are called **self-conscious emotions** because each involves injury to or enhancement of our sense of self. For example, when we are ashamed or embarrassed, we feel negatively about our behavior, and we want to retreat so others will no longer notice our failings. In contrast, pride reflects delight in the self's achievements, and we are inclined to tell others what we have accomplished.

Self-conscious emotions appear in the middle of the second year, as the sense of self emerges. Shame and embarrassment can be seen as 18- to 24-month-olds lower their eyes, hang their heads, and hide their faces with their hands. Guilt like reactions is also evident. Besides self-awareness, self-conscious emotions require an additional ingredient: adult instruction in when to feel proud, ashamed, or guilty. Parents begin this tutoring early when they say, "My, look at how far you can throw that ball!" or, "You should feel ashamed for grabbing that toy!".

9.2.4 Beginnings of Emotional Self-Regulation

Besides expressing a wider range of emotions, infants and toddlers begin to manage their emotional experiences. **Emotional self-regulation** refers to the strategies we use to adjust our emotional state to a comfortable level of intensity so we can accomplish our goals. If you drank a cup of coffee to wake up this morning, reminded yourself that an anxiety-provoking event would be over soon, or decided not to see a scary horror film, you were engaging in emotional self-regulation. A good start regulating emotion during the first 2 years contributes greatly to autonomy and mastery of cognitive and social skills.

In the early months of life, infants have only a limited capacity to regulate their emotional states. Although they can turn away from unpleasant stimulation and can mouth and suck when their feelings get too intense, they are easily overwhelmed. They depend on the soothing interventions of caregivers-lifting the distressed baby to the shoulder, rocking, and talking softly.

As caregivers help infants regulate their emotions, they contribute to the child's style of self-regulation. Parents who read and respond sympathetically to the baby's emotional cues have infants who are less fussy, more easily soothed, and more interested in exploration. In contrast, parents who wait to intervene until the infant has become extremely agitated re-inforce the baby's rapid rise to intense distress. When caregivers fail to regulate stressful experiences for babies who cannot yet regulate them for themselves, brain structures that buffer stress may fail to develop properly, resulting in an anxious, reactive temperament.

In the second year, growth in representation and language leads to new ways of regulating emotions. A vocabulary for talking about feelings, such as "happy;' "love;' "surprised;' "scary;' "yucky;' and "mad;' develops rapidly after 18 months. Children of this age are not yet good at using language to comfort themselves. But once they can describe their internal states, they can guide caregivers to helping them.

Check Your Progress 2

Mention how emotional development plays a powerful role among infants and toddlers
Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.
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9.3 TEMPERAMENT AND DEVELOPMENT

When we describe one person as cheerful and "upbeat," another as active and energetic, and still others as calm, cautious, or prone to angry outbursts, we are referring to temperament - stable individual differences in quality and intensity of emotional reaction, activity level, attention, and emotional self-regulation. The temperamental differences among

children are a great concern because the psychological traits that make up temperament are believed to form the cornerstone of the adult personality.

As temperament increases, the chances that a child will experience psychological problems or alternatively, be protected from the effects of a highly stressful home life. It was found that, parenting practices can modify children's emotional styles considerably.

9.3.1 The Structure of Temperament

Thomas and Chess's nine dimensions, listed in Table 2, served as the first influential model of temperament and inspired all others that followed. When detailed descriptions of infants' and children's behavior obtained from parental interviews were rated on these dimensions, certain characteristics clustered together, yielding three types of children:

Table 2 - Two Models of Temperament			
Thomas and Chess		**Rothbart**	
Dimension	**Description**	**Dimension**	**Description**
Activity level	Ratio of active periods to inactive ones	Activity level	Level of gross motor activity
Rhythmicity	Regularity of body functions, such as sleep, wakefulness, hunger, and excretion	Soothability	Reduction of fussing, crying, and distress in response to caregiver's soothing
Distractibility	Degree to which stimulation from the environment alters behavior-for example, whether crying stops when a toy is offered	Attention span/ persistence	Duration of orienting or interest
Approach/ withdrawal	Response to a new object, food, or person	Fearful distress	Wariness and distress in response to intense or novel stimuli, including time to adjust to new situations
Adaptability	Ease with which child adapts to changes in the environment, such as sleeping or eating in a new place	Irritable distress	Extent of fussing, crying, and distress when desires are frustrated
Attention span and persistence	Amount of time devoted to an activity, such as watching a mobile or playing with a toy	Positive affect	Frequency of expression of happiness and pleasure
Intensity of reaction	Energy level of response, such as laughing, crying, talking, or gross motor activity		
Threshold of responsiveness	Intensity of stimulation required to evoke a response		
Quality of mood	Amount of friendly, joyful behavior as opposed to unpleasant, unfriendly behavior		

a. The **easy child** quickly establishes regular routines in infancy, is generally cheerful, and adapts easily to new experiences.
b. The **difficult child** is irregular in daily routines, is slow to accept new experiences, and tends to react negatively and intensely.
c. The **slow-to-warm-up child** is inactive, shows mild, low-key reactions to environmental stimuli, is negative in mood, and adjusts slowly to new experiences.

Of the three types, the difficult pattern has sparked the most interest, since it places children at high risk for adjustment problems-both anxious withdrawal and aggressive behavior in early and middle childhood. Compared with difficult children, slow-to-warm-up children do not present many problems in the early years. However, they tend to show excessive fearfulness and slow, constricted behavior in the late preschool and school years, when they are expected to respond actively and quickly in classrooms and peer groups.

A second model of temperament, devised by Mary Rothbart, is also shown in Table.2. It combines overlapping dimensions of Thomas and Chess. For example, "distractibility" and

"attention span and persistence", considered opposite ends of the same dimension, are called "attention span/persistence." It also includes a dimension not identified by Thomas and Chess-"irritable distress"-that taps emotional self-regulation. And it omits overly broad dimensions, such as "Rhythmicity:' "intensity of reaction" and "threshold of responsiveness". A child who is rhythmic in sleeping is not necessarily rhythmic in eating or bowel habits. And a child who smiles and laughs quickly and intensely is not necessarily quick and intense in fear or irritability.

9.3.2 Measuring Temperament

Temperament is often assessed through interviews or questionnaires given to parents. Behavior ratings by pediatricians, teachers, and others familiar with the child and direct observations by researchers have also been used. Parental reports have been emphasized because of their convenience and parents' depth of knowledge about the child. At the same time, information from parents has been criticized as being biased and subjective. Nevertheless, parent ratings are moderately related to observations of children's behavior. And parent perceptions are useful for understanding the way parents view and respond to their child.

To explore the biological basis of temperament, physiological measures are used. Most efforts have focused on inhibited, or shy, children, who react negatively to and withdraw from novel stimuli, and uninhibited, or sociable, children, who react positively to and approach novel stimuli. Heart rate, hormone levels, and electrical brain-wave recordings in the frontal region of the cerebral cortex differentiate children with inhibited and uninhibited temperaments.

9.3.3 Stability of Temperament

Even though there is long-term stability of temperament. It would be difficult to claim that temperament really exists if children's emotional styles were not stable over time. Infants and young children who score low or high on attention span, irritability, sociability, or shyness are likely to respond similarly when assessed again a few years later and, occasionally, even into the adult years.

When the evidence as a whole is examined carefully, however, temperamental stability from one age period to the next is generally low to moderate. Although quite a few children remain the same, a good number have changed when assessed again. In fact, some characteristics, such as shyness and sociability, are stable over the long term only in children at the extremes-those who are very inhibited or very outgoing to begin with.

A major reason as to why temperament is not more stable is that temperament itself develops with age. The early months are a period of irritability and activity level, fussing and crying for most babies. As infants can better regulate their attention and emotions, many who initially seemed irritable become calm and content. At first, an active, wriggling infant tends to be highly aroused and uncomfortable, whereas an inactive baby is often alert and attentive. As infants begin to move on their own, the reverse is so! An active crawler is usually alert and interested in exploration, whereas a very inactive baby might be fearful and withdrawn.

The changes shown by many children suggest that experience can modify biologically based temperamental traits (although children rarely change from one extreme to another-that is, a shy toddler practically never becomes highly sociable).

9.3.4 Genetic Influences

The word *temperament* implies a genetic foundation for individual differences in personality. It is known that identical twins are more similar than fraternal twins across a wide range of temperamental and personality traits. Heritability estimates suggest a moderate role for heredity in temperament and personality: About half of the individual differences can be traced to differences in genetic makeup.

Consistent ethnic and sex differences in early temperament exist, again implying a role for heredity. Asian babies tend to be less active, less irritable, less vocal, more easily soothed when upset, and better at quieting themselves. From an early age, boys tend to be more active and daring and girls more anxious and timid-a difference reflected in boys' higher injury rates throughout childhood and adolescence.

9.3.5 Environmental Influences

Heredity and environment often combine to strengthen the stability of temperament, since a child's approach to the world affects the experiences to which she is exposed. Japanese mothers usually say that babies come into the world as independent beings that must learn to rely on their mothers through close physical contact. North American mothers are likely to believe just the opposite-that they must wean babies away from dependence into autonomy. Asian mothers interact gently, soothingly, and gesturally and discourage strong emotion in their babies, whereas Caucasian mothers use a more active, stimulating, verbal approach. These behaviors enhance cultural differences in temperament.

A similar process seems to contribute to sex differences in temperament. Within the first 24 hours after birth (before they have had much experience with the baby), parents already perceive boys and girls differently. Sons are rated as larger, better coordinated, more alert, and stronger. Daughters are viewed as softer, more awkward, weaker, and more delicate. Gender-stereotyped beliefs carryover into the way parents treat their infants and toddlers. Parents more often encourage sons to be physically active and daughters to seek help and physical closeness. These practices promote temperamental differences between boys and girls.

In families with several children, an additional influence on temperament is at work. Parents often look for and emphasize personality differences in their children. This is reflected in the comparisons parents make: "She's a lot more active," or "He's more sociable". Each child, in turn, evokes responses from caregivers that are consistent with parental views and with the child's actual temperamental style.

9.3.6 Temperament and Child Rearing: The Goodness-of-Fit Model

It is a known fact that the temperaments of many children change with age. This suggests that environments do not always sustain or intensify a child's existing temperament. If a child's disposition interferes with learning or getting along with others, adults must gently but consistently counteract the child's maladaptive behavior.

Thomas and Chess (1977) proposed a **goodness-of-fit model** to explain how temperament and environment can together produce favorable outcomes. Goodness of fit involves creating child-rearing environments that recognize each child's temperament while encouraging more adaptive functioning.

Goodness of fit helps explain why difficult children (who withdraw from new experiences and react negatively and intensely) are at high risk for later adjustment problems. These children, at least in Western middle-SES families, frequently experience parenting that fits poorly with their dispositions. As infants, they are far less likely to receive sensitive caregiving. By the second year, parents of difficult children tend to resort to angry, punitive discipline, and the child reacts with defiance and disobedience. Then parents often behave inconsistently, rewarding the child's noncompliance by giving in to it, although they initially resisted. These practices maintain and even increase the child's irritable, conflict-ridden style. In contrast, when parents are positive and involved and engage in the sensitive, face-to face play that helps infants regulate emotion, difficultness declines by age 2.

Check Your Progress 3

State the significant the role of temperament in a child's life

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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9.4 DEVELOPMENT OF ATTACHMENT

Attachment is the strong, affectional tie we have with special people in our lives that leads us to experience pleasure and joy when we interact with them and to be comforted by their nearness during times of stress. By the second half of the first year, infants have become attached to familiar people who have responded to their needs. Watch babies of this age, and notice how they single out their parents for special attention. For example, when the mother enters the room, the baby breaks into a broad, friendly smile. When she picks him up, he pats her face, explores her hair, and snuggles against her. When he feels anxious or afraid, he crawls into her lap and clings closely.

Freud first suggested that the infant's emotional tie to the mother is the foundation for all later relationships. Erikson's theory states how the *psychoanalytic perspective* regards feeding acts as the primary context in which caregivers and babies build their close emotional bond. *Behaviorism,* too, emphasizes the importance of feeding, but for different reasons. According to a well-known behaviorist account, as the mother satisfies the baby's hunger, infants learn to prefer her soft caresses, warm smiles, and tender words of comfort because these events have been paired with tension relief.

Although feeding is an important context for building a close relationship, attachment does not depend on hunger satisfaction. In the 1950s, a famous experiment showed that rhesus monkeys reared with terry-cloth and wire-mesh "surrogate mothers" clung to the soft terry-cloth substitute, even though the wire-mesh "mother" held the bottle and infants had to climb on it to be fed. Similarly, human infants become attached to family members who seldom feed them, including fathers, siblings, and grandparents.

9.4.1 Ethological Theory of Attachment

It recognizes the infant's emotional tie to the caregiver as an evolved response that promotes survival, is the most widely accepted view. Contact with the parent also ensures that the baby will be fed, but John Bowlby (1969) pointed out that feeding is not the basis for attachment. Instead, the attachment bond has strong biological roots.

According to Bowlby, the infant's relationship with the parent begins as a set of innate signals that call the adult to the baby's side. Over time, a true affectional bond develops, which is supported by new cognitive and emotional capacities as well as by a history of warm, sensitive care. Attachment develops in four phases:

1. *The preattachment phase* (birth to 6 weeks). Built-in signals-grasping, smiling, crying, and gazing into the adult's eyes - help bring newborn babies into close contact with other humans. Once an adult responds, infants encourage her to remain nearby because closeness comforts them. Babies of this age recognize their own mother's smell and voice. But they are not yet attached to her since they do not mind being left with an unfamiliar adult.

2. *The "attachment-in-the-making" phase* (6 weeks to 8 months). During this phase, infants respond differently to a familiar caregiver than to a stranger. As infants learn that their own actions affect the behavior of those around them, they begin to develop a *sense of trust*- the expectation that the caregiver will respond when signaled. But even though they recognize the parent, babies still do not protest when separated from her.

3. *The phase of "clear-cut" attachment* (6-8 months to 18 months-2 years). Now attachment to the familiar caregiver is clearly evident. Babies display separation anxiety, becoming upset when the adult whom they have come to rely on leaves. Separation anxiety does not always occur; like stranger anxiety, it depends on infant temperament and the current situation. Besides protesting the parent's departure, older infants and toddlers try hard to maintain her presence. They approach, follow, and climb on her in preference to others. And they use the familiar caregiver as a **secure base** or point from -which to explore, venturing into the environment and then returning for emotional support.

4. *Formation of a reciprocal relationship* (18 months-2 years and on). By the end of the second year, rapid growth in representation and language permits toddlers to understand some of the factors that influence the parent's coming and going and to predict her return. As a result, separation protest declines. Now children start to negotiate with the caregiver, using requests and persuasion to alter her goals.

According to Bowlby, out of their experiences during these four phases, children construct an enduring affectional tie to the caregiver that they can use as a secure base in the parents' absence. This inner representation becomes a vital part of personality. It serves as an **internal working model**, or set of expectations about the availability of attachment figures and their likelihood of providing support during times of stress. This image becomes the model, or guide, for all future relationships.

9.4.2 Measuring the Security of Attachment

Although virtually all family-reared babies become attached to a familiar caregiver by the second year, the quality of this relationship differs from child to child. A widely used technique for assessing the quality of attachment between 1 and 2 years of age is the **Strange Situation**. Mary Ainsworth and her colleagues said that securely attached infants and toddlers should use the parent as a secure base from which to explore an unfamiliar playroom. In addition, when the parent leaves, an unfamiliar adult should be less comforting than the parent.

Observing the responses of infants researchers have identified a secure attachment pattern and three patterns of insecurity.

Secure attachment. These infants use the parent as a secure base from which to explore. When separated, they may or may not cry, but if they do, it is because the parent is absent and they prefer her to the stranger. When the parent returns, they actively seek contact, and their crying is reduced immediately.

Avoidant attachment These infants seem unresponsive to the parent when she is present. When she leaves, they are usually not distressed, and they react to the stranger in much the same way as to the parent. During reunion, they avoid or are slow to greet the parent, and when picked up, they often fail to cling.

Resistant attachment Before separation, these infants often seek closeness to the parent and often fail to explore. When she returns, they display angry, resistive behavior, sometimes hitting and pushing. Many continue to cry after being picked up and cannot be comforted easily.

Disorganized - disoriented attachment This pattern reflects the greatest insecurity. At reunion, these infants show a variety of confused, contradictory behaviors. They might look away while being held by the parent or approach her with flat, depressed emotion. A few cry out after having calmed down or display odd, frozen postures.

Infants' reactions in the Strange Situation resemble their use of the parent as a secure base and their response to separation at home. For this reason, the procedure is a powerful tool for assessing attachment security.

9.4.3 Stability of Attachment and Cultural Variations

Quality of attachment is usually secure and stable for middle-SES babies experiencing favorable life conditions. And infants who move from insecurity to security typically have well-adjusted mothers with positive family and friendship ties. Perhaps many became parents before they were psychologically ready but, with social support, grew into the role. In contrast, for low-SES families with many daily stresses, attachment usually moves away from security or changes from one insecure pattern to another.

These indicate that securely attached babies more often maintain their attachment status than do insecure babies. Cross-cultural evidence indicates that, German infants show considerably more avoidant attachment than American babies do. Japanese mothers rarely leave their babies in the care of unfamiliar people, so the Strange Situation probably creates far greater stress for them than for infants who frequently experience maternal separations. Also, Japanese parents value the infant clinginess and attention seeking that is part of resistant attachment, considering them to be normal indicators of infant closeness and dependence. Despite these cultural variations, the secure pattern is still the most common pattern of attachment in all societies studied to date.

9.4.4 Factors That Affect Attachment Security

There are four important factors that might influence attachment security: (1) opportunity to establish a close relationship, (2) quality of caregiving, (3) the baby's characteristics, and (4) family context.

Opportunity for Attachment When a baby does not have the opportunity to establish an affectional tie to a caregiver, for example institutionalized infants who had been given up by their mothers between 3 and 12 months of age. The babies when placed on a large ward where they shared a nurse with at least seven other babies. In contrast to the happy, outgoing behavior they had shown before separation, they wept and withdrew from their surroundings, lost weight, and had difficulty sleeping. If a consistent caregiver did not replace the mother the depression deepened rapidly.

These institutionalized babies had emotional difficulties because they were prevented from forming a bond with one or a few adults. When they grow up they were likely to display emotional and social problems desire for adult attention, over-friendliness to unfamiliar adults and peers and few friendships.

Quality of Caregiving   **Sensitive caregiving**-responding promptly, consistently and appropriately to infants and holding them tenderly and carefully - is moderately related to attachment security in diverse cultures. In contrast, insecurely attached infants tend to have mothers who engage in less physical contact, handle them awkwardly, behave in a "routine" manner, and are sometimes negative, resentful, and rejecting.

A special form of communication c a l led **interactional synchrony** separated the experiences of secure and insecure babies. It is best described as a sensitively tuned "emotional dance," in which the caregiver responds to infant signals in a well-timed, rhythmic, appropriate fashion. In addition, both parents match emotional states, especially the positive ones.

Infant Characteristics Since attachment is the result of a *relationship* that builds between two partners, infant characteristics should affect how easily it is established. In stressed, poverty-stricken families, prematurity, birth complications, and newborn illness are linked to attachment insecurity. But when parents have the time and patience to care for a baby with special needs and view their infants positively, at-risk newborns fare quite well in attachment security

Babies who are irritable and fearful may simply react to brief separations with intense anxiety, regardless of the parent's sensitivity to the baby. Consistent with this view,

emotionally reactive, difficult babies are more likely to develop later insecure attachments.

Family Circumstances Job loss, a failing marriage, financial difficulties, and other stressors can undermine attachment by interfering with the sensitivity of parental care. Or they can affect babies' sense of security directly, by exposing them to angry adult interactions or unfavorable child-care arrangements. The availability of social supports, especially assistance in caregiving, reduces stress and fosters attachment security.

Parents bring to the family context a long history of attachment experiences, out of which they construct internal working models that they apply to the bonds established with their babies. Internal working models are *reconstructed memories* affected by many factors, including relationship experiences over the life course, personality, and current life satisfaction. Longitudinal studies show that negative life events can weaken the link between an individual's own attachment security in infancy and a secure internal working model in adulthood. And insecurely attached babies who become adults with insecure internal working models often have lives that, based on adulthood self-reports, are filled with family crises.

Our early rearing experiences do not destine us to become sensitive or insensitive parents. Rather, the way we view our childhoods-our ability to come to terms with negative events, to integrate new information into our working models, and to look back on our own parents in an understanding, forgiving way-is much more influential in how we rear our children than is the actual history of care we received.

9.4.5 Multiple Attachments

Babies develop attachments to a variety of familiar people-not just mothers but also fathers, siblings, grandparents, and professional caregivers. Although Bowlby made room for multiple attachments in his theory, he believed that infants are predisposed to direct their attachment behaviors to a single special person, especially when they are distressed.

Fathers Like mothers' sensitive caregiving, fathers' sensitivity predicts secure attachment-an effect that becomes stronger the more time they spend with their babies. But as infancy progresses mothers and fathers in many cultures-Australia, India, Israel, Italy, Japan, and the United States-relate to babies in different ways. Mothers devote more time to physical care: expressing affection. Fathers spend more time in playful interaction. Mothers and fathers also play differently with babies. Fathers tend to engage in more exciting, highly physical bouncing and lifting games, especially with their infant sons. However, this picture of "mother as caregiver" and "father as playmate" has changed in some families due to the revised work status of women.

Siblings Despite a declining family size, 80 percent of children still grow up with at least one sibling. The arrival of a baby brother or sister is a difficult experience for most preschoolers, who quickly realize that now they must share their parents' attention and affection. They often become demanding and clingy for a time and engage in deliberate naughtiness. And their security of attachment typically declines, more so if they are over age 2 (old enough to feel threatened and displaced) and if the mother is under stress due to marital or psychological problems.

An older child can also be seen kissing, patting, and calling out, "Mom, he needs you;' when the baby cries-signs of growing affection. By the end of the baby's first year, siblings typically spend much time together. Infants of this age are comforted by the presence of their preschool-age brother or sister during short parental absences. And in the second year, they often imitate and actively join in play with the older child

9.4.6 Attachment and Later Development

According to psychoanalytic and ethological theories, the inner feelings of affection and security that result from a healthy attachment relationship support all aspects of psychological development. Preschool teachers viewed children who were securely attached as babies as

high in self-esteem, socially competent, cooperative, and popular. In contrast, they viewed avoidantly attached agemates as isolated and disconnected and resistantly attached agemates as disruptive and difficult.

Secure attachment in infancy causes improved cognitive, emotional, and social competence in later years. When parents respond sensitively not just in infancy but also during later years, children are likely to develop favorably. In contrast, parents who react insensitively for a long time have children who establish lasting patterns of avoidant, resistive, or disorganized behavior and are at greater risk for academic, emotional, and social difficulties. At the same time, infants and young children are resilient beings. A child whose parental caregiving improves or who has compensating, affectionate ties outside the family is likely to fare well.

Check Your Progress 4

State why attachment is the strong and create affectional tie among infants and toddlers

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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9.5 LET US SUM UP

In this Lesson, we have touched upon the following points:

- i) Erikson's Basic Trust versus Mistrust
- ii) Autonomy versus Shame and Doubt
- iii) Emotional Development
- iv) Temperament and Development.
- v) Development of Attachment
  In this Lesson, we have touched upon the following points:
- x) Characteristics of Infancy

9.6 Check Your Progress: Model Answers

1. Your answer may include the discussion of Erikson's theory

- i) Basic Trust versus Mistrust
- ii) Autonomy versus Shame and Doubt

2. Emotional development among infant and toddlers are:

- i) Development of Some Basic Emotions
- ii) Understanding and Responding to the Emotions of Others
- iii) Emergence of Self-Conscious Emotions
- iv) Beginnings of Emotional Self-Regulation

3. The temperament involving development are:

- i) The Structure of Temperament
- ii) Measuring Temperament
- iii) Stability of Temperament
- iv) Genetic Influences
- v) Environmental Influences
- vi) Temperament and Child Rearing: The Goodness-of-Fit Model

4. Development of Attachment includes
    i)   Ethological Theory of Attachment
    ii)   Measuring the Security of Attachment
    iii)   Stability of Attachment and Cultural Variations
    iv)   Factors That Affect Attachment Security
    v)   Multiple Attachments
    vi)   Attachment and Later Development

9.7 Lesson – End Activities
1. Briefly discuss about the effect of attachment.
2. "Clear – cut" attachement phase – obser children and write the major changes in the pase.

9.8 References
1. Erickson, E., Childhood and Society, New York: Norton, 1968, p. 263.
2. Erickson, Moral Stages and Moralinration: The Cognitive Development Approach.

LESSON – 10
SELF-DEVELOPMENT - HAZARDS

Contents

1.0 AIMS AND OBJECTIVES

This Lesson will help understand the development of self and hazards that are common during infancy and toddler hood.

After going through this Lesson, you will be able to:

xv)   State the emergence of self among infants

xvi)   Mention the Self-Awareness and early emotional and social development

xvii) Put forth the emergence of Self-Control

xviii)List the hazards during the infancy and toddler hood

10.1 INTRODUCTION

Infancy is a rich formative period for the development of physical and social understanding. Infants develop an appreciation of the permanence of objects, over the first year, infants recognize and respond appropriately to others' emotions and distinguish familiar from unfamiliar people. That both objects and people achieve an independent, stable existence for the infant implies that knowledge of the self as a separate, permanent entity emerges around this time.

10.1.1 Self-Awareness

As early as the first few months, babies smiled and returned friendly behaviors to their image in the mirror realized that gazing and grinning back was really itself.

Emergence of the I-Self and Me-Self Researchers have exposed infants and toddlers to images of themselves in mirrors, on videotapes, and in photos. When shown two side-by-side video images of their kicking legs, one from their own perspective (camera behind the baby) and one from an observer's perspective (camera in front of the baby), 3-month-olds look longer at the observer's view. This suggests that within the first few months, infants seem to have some sense of their own body as a distinct entity, since they have habituated to it, as indicated by their interest in novel images.

The earliest aspect of the self to emerge is the **I – self**, or sense of self as agent, involving awareness that the self is separate from the surrounding world and can control its own thoughts and actions. According to many theorists, the beginnings of the I -self lie in infants'

recognition that their own actions cause objects and people to react in predictable ways. In support of this idea, babies whose parents encourage them to explore and respond to their signals consistently and sensitively are advanced in constructing a sense of self as agent. For example, between 1 and 2 years of age, they display more complex self-related actions during make-believe play, such as making a doll labeled as the self take a drink or kiss a teddy bear.

Smiling and vocalizing at a caregiver who smiles and vocalizes back helps specify the relation between self and social world. And watching the movements of one's own hand provides still another kind of feedback-one under much more direct control than other people or objects. The second aspect of the self is the **me-self**, a sense of self as an object of knowledge and evaluation. It consists of all qualities that make the self unique, including physical characteristics, possessions and (as child gets older) attitudes, beliefs, and personality traits. During the second year, toddlers start to construct a me-self; they become aware of the self's features. In one study, 9- to 24-month-olds were placed in front of a mirror. Then, under the pretext of wiping the baby's face, each mother was asked to rub red dye on her infant's nose. Younger infants touched the mirror as if the red mark had nothing to do with them. But by 15 months, toddlers rubbed their strange-looking red noses. They were keenly aware of their unique appearance. By age 2, almost all children recognize themselves in photos and use their name or a personal pronoun ("I" or "me") to refer to themselves.

Like the I-self, the me-self seems to be fostered by sensitive caregiving. Securely attached toddlers display more complex knowledge of their own and their parents' features than do their insecurely attached agemates.

Self-Awareness and Early Emotional and Social Development Self-awareness quickly becomes a central part of children's emotional and social lives. Self-conscious emotions depend on an emerging sense of self. As the self strengthens in the second year, toddlers show the beginnings of self-conscious behavior: bashfulness and embarrassment. Self-awareness also leads to the child's first efforts to appreciate another's perspective. It is accompanied by the first signs of **empathy**-the ability to understand another's emotional state and *feel with* that person, or respond emotionally in a similar way. For example, toddlers start to give to others what they themselves find comforting-a hug, a reassuring comment, or a favorite doll or blanket. At the same time, they demonstrate clearer awareness of how to upset others. One 18-month-old heard her mother comment to another adult, "Amudha (sibling) is really frightened of spiders. In fact, there's a particular toy spider that we've got that she just hates". The innocent-looking toddler ran to get the spider out of the toy box, returned, and pushed it in front of Amudha's face!

10.1.2 Categorizing the Self

When children have a me-self, they use their representational and language capacities to create a mental image of themselves. One of the first signs of this change is that toddlers compare themselves to other people. Between 18 and 30 months, children categorize themselves and others on the basis of age ("baby;' "boy;' or "man"), sex ("boy" versus "girl"), physical characteristics ("big;' "strong"), and even goodness and badness ("I a good girl." "Tarun mean!"). Toddlers' understanding of these social categories is limited, but they use this knowledge to organize their own behavior. For example, children's ability to label their own gender is associated with a sharp rise in gender-stereotyped responses.

10.1.3 Emergence of Self-Control

Self-awareness provides the foundation for **self-control**, the capacity to resist an impulse to engage in socially disapproved behavior. Self-control is essential for morality, another dimension of the self that will flourish during childhood and adolescence. To behave in a self-controlled fashion, children must have some ability to think of themselves as separate, autonomous beings who can direct their own actions. And they must have the

representational and memory capacities to recall a caregiver's directive and apply it to their own behavior.

As these capacities emerge, the first glimmerings of self control appear between 12 and 18 months as **compliance**. Toddlers show clear awareness of caregivers' wishes and expectations and can obey simple requests and commands. And as every parent knows, they can also decide, to do just the opposite! One way toddlers assert their autonomy is by resisting adult directives. But among toddlers who experience warm parenting, opposition is far less common than compliance with an eager, willing spirit, which suggests that the child is beginning to adopt the adult's directive as his own. Around 18 months, the capacity for self-control appears, it improves steadily into early childhood.

As self-control improves, mothers increase the rules they require toddlers to follow, from safety and respect for property and people to family routines, manners, and simple chores. Still, toddlers' control over their own actions depends on constant parental oversight and reminders.

Check Your Progress 1

Explain the significant role of formative period in the self development

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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10.2 HAZARDS OF INFANCY

In spite of its short duration, infancy is one of the most hazardous periods in the life span. Hazards at this time may be physical, psychological, or both and they can affect both present and future adjustment. In the case of the plateau in development, the physical adjustments may take place too slowly, thus threatening the infant's life. Psychologically, this plateau is hazardous because it may cause parents to become anxious and fearful about the infant's development, feelings that can persist and lead to over protectiveness in later years.

10.2.1 Physical Hazards

Some of the physical hazards of infancy are of only temporary significance, while others can affect the individual's entire life pattern. The most serious physical hazards are those relating to an unfavorable prenatal environment, a difficult and complicated birth, a multiple birth, postmaturity, and prematurity, and conditions leading to infant mortality.

Unfavorable Prenatal Environment: As a result of unfavorable conditions in the prenatal environment, the infant may have difficulty adjusting to postnatal life. Excessive smoking on the part of the mother, for example, can affect the development of the fetus. Prolonged and intense maternal stress is another important factor, causing the infant to be tense and nervous.

Difficult and Complicated Birth: A difficult or complicated birth frequently results in temporary or permanent brain damage. If the birth requires the use of instruments, as in the case where the fetus is so large that it has to be aided in its passage down the birth canal or if the fetus lies in a foot first or a transverse position, the chances of brain damage from the use of instruments to aid delivery are always present.

A caesarean section or a precipitate birth, on the other hand, is likely to result in anoxia, a temporary loss of oxygen to the brain. If anoxia is severe, the brain damage will be far greater than if anoxia lasts for only a few seconds. The more complicated the birth and the more damage there is to the brain tissue, the greater the effect on the infant's postnatal life and adjustments.

Severe and persistent brain damage will have adverse effects on all adjustments during infancy and often into childhood or even throughout life. The effects of brain damage are most frequently shown in uncoordinated behavior, hyperactivity, learning difficulties, and emotional problems.

Multiple Birth Children of multiple births are usually smaller and weaker than singletons as a result of crowding during the prenatal period, which inhibits fetal movements. These babies tend to be born prematurely, which adds to their adjustment problems.

Postmaturity: It is hazardous only when the fetus becomes so large that the birth requires the use of instruments or surgery, in which case the hazards are due to the conditions associated with birth rather than to postmaturity per se. One study of babies born more than three weeks after term reported that they experienced neonatal adjustment problems and were also socially maladjusted and required special schooling by the age of seven.

Prematurity: Prematurity causes - more neonatal deaths than any other condition. Prematurely born infants are also especially susceptible to brain damage at birth because the skull is not yet developed enough to protect the brain from pressures experienced during birth. Anoxia is another common problem since the premature baby's respiratory mechanism is not fully developed.

The problems of adjustment every newborn infant must face are exaggerated in the prematures. For example, they require nearly three times as much oxygen as full-term infants because their breathing is characterized by jerks and gasps. They often have difficulty in expanding their lungs, and muscular weakness makes breathing difficult.

Because sucking and swallowing reflexes are underdeveloped, the premature infant will require special feeding with a medicine dropper or tube. The premature's body temperature is not yet properly controlled, and special equipment is needed to duplicate as nearly as possible the constant temperature of intrauterine life.

Infant Mortality Unquestionably the most serious of the physical hazards of infancy is infant mortality. The most critical times for death during the period of infancy are the day of birth (when two-thirds of all neonatal deaths occur) and the second and third days after birth. Neonatal deaths have been reported to be most common during the months of June and July but, to date, no satisfactory explanation for this has been given.

The causes of infant mortality are numerous and varied. Some neonatal deaths are due to conditions that detrimentally affected the prenatal environment and thus impaired normal development. Some are the result of difficult and complicated births, such as those requiring the use of instruments or caesarean section. Some are the result of brain damage, anoxia, or excessive medication of the mother during labor. And some-but fewer than in the past-are due to unfavorable conditions in the postnatal environment; a radical temperature change may cause pneumonia, for example, or a substitute for the mother's milk may cause diarrhea or other digestive disturbances.

10.2.2 Psychological Hazards

Even though psychological hazards tend to have less effect on the infant's adjustment to postnatal life than physical hazards, they are nonetheless important because of their long-term effects. Psychological scars acquired during infancy can cause the individual lifelong adjustment problems.

Relatively few of the potential psychological hazards of infancy have received more attention.

Traditional Beliefs about Birth Difficult births, for example, are believed to result in "difficult children" -those who are hard to handle and whose behavior tends to deviate from

that of children born with a minimum of difficulty. For centuries it has been believed that children of multiple births have to be different and inferior to singletons and that prematures are doomed to be physical and mental weaklings.

Time of birth on the future development of the child, while there is little scientific evidence to substantiate the belief that there is a "best time" to be born, there is evidence that, because the mother's health plays an extremely important role during the prenatal period, any unfavorable condition during her pregnancy may and often does prove to be hazardous to her unborn child.

A baby who is born within a year after the birth of a sibling is subject to a less favorable prenatal environment than would have been the case had the interval between births been longer. The mother has not had time to recover fully from the previous birth, and such an infant tends to be lethargic at birth which affects postnatal adjustments. Throughout the early years of life, babies born soon after the birth of an older sibling are likely to receive less of their much needed attention and stimulation because of the other demands on the mother's time.

Helplessness To some parents the helplessness of the newborn infant is appealing while, to most, it is frightening. So long as the infants are in the hospital and under the care of doctors and nurses, parents are not too concerned about their helplessness. However, when they take them home from the hospital and assume the responsibility for their care, infantile helplessness becomes a serious psychological hazard. The reason for this is that parents wonder if they are capable of assuming the care of their newborn babies and this, in turn, makes them nervous and anxious.

Anxiety and insecurity are quickly transmitted to the infants through the way mothers handle them and this affects their postnatal adjustments. The helplessness of the newborn is more of a psychological hazard in the case of firstborns than of later-born children. By the time parents have had several children; they accept the helplessness of the newborn in a more relaxed way and are not so likely to be disturbed by it as they are for the firstborn infant.

Individuality of the Infant To most adults, being different is interpreted as being inferior. When parents steep themselves in child-care literature before the arrival of their first child, or when they set up norms of behavior based on what their earlier-born children did at different ages, they tend to judge a newborn infant in these terms.

Parental concern is then expressed in their treatment of the infant. This, in turn, affects the infant's adjustments to postnatal life and tends to increase the severity of the problems that concerned the parents. Under such conditions, the infant's individuality becomes a psychological hazard which, unless parents accept individuality as normal, will play havoc with the adjustments made not only during infancy but also as childhood progresses.

Developmental Lag Some infants lag behind are those born prematurely or those who were injured at birth. Instead of regaining lost birth weight by the end of the first week or sooner, they may continue to lose weight or rest on a plateau with no improvement at all. Even worse, they may show such a pronounced lag that instead of being allowed to go home with their parents three to four days after birth, as is usual, they are kept in the hospital and may even have to have special nursing care.

Even a healthy, full-term infant may show developmental lag should there be some minor and temporary illness or should the mother's milk be inadequate and the formula substituted is not suited to the infant's needs.

Plateau in *Development* Even though a plateau in development is normal immediately after birth, many first-time parents are unaware of this. As a result, they are concerned when their baby seems to be making no progress.

However, it often leaves some psychological obstacles, three of which are common and

serious. First, it makes parents believe their infant is delicate and, as a result, should have extra care and attention. This encourages over protectiveness which, once developed, often persists as a habit. Second, it weakens parents' confidence in their ability to assume full care of the infant after leaving the hospital. If by then the infant has not regained lost birth weight, this lack of confidence is greatly increased. And third, parents feel that they must handle the infant as little as possible and with great care to prevent further loss of weight or failure to gain weight. As a result, they deprive the infant of one of the essentials of development, stimulation of the different areas of the body.

Lack **of** *Stimulation* There is increasing scientific evidence that newborn infants need stimulation of different areas of their bodies and of different sense organs if they are to develop as they should. This, of course, is not a "new-fangled idea" because, in the days when babies were born at home, they were picked up, rocked, talked to, and sung to as part of their routine care.

Because it is customary today for babies to be born in hospitals, they are often deprived of the stimulation received by babies born at home or even by those whose mothers have them in their hospital rooms under the rooming-in plan. And, until very recently, premature infants were kept in isolettes or incubators where they received only the minimum of stimulation.

New-Parent Blues States of depression, often called "new-parent blues," are almost universal among new parents. These depressive states tend to be more pronounced in mothers than in fathers and in parents of first babies than in those who have already had one or more children.

In new mothers, depressive states are partly physical and partly psychological. The glandular changes accompanying pregnancy and childbirth, fatigue from labor and childbirth, and the generally weakened condition that persists even after normal childbirth all contribute to maternal states of depression.

For most fathers, new-parent blues are more psychological than physiological. They are often concerned about the extra expenses they must meet, especially if the mother must give up her job. Many men also are concerned about how the pattern of their lives will change as a result of parenthood and what effect this will have on their marital relationship.

New-parent blues can and often do play havoc with the infant's adjustments to postnatal life. The new baby senses the tensions of the parents, especially of the mother, and this makes it nervous and prone to crying. Many infants cry more after they get home than they did in the hospital.

Unfavorable Attitudes on the Part **of** *Significant People* Even though parents, siblings, and grandparents may have favorable attitudes toward the unborn baby during most of the pregnancy, their feelings may change as the birth draws nearer and they become increasingly aware of the new responsibilities they will have to face.

Disappointment about the infant's sex and its appearance, its excessive crying and difficulties in taking nourishment, and its extreme helplessness which is often frightening to new parents are just a few of the many reasons. Unfavorable attitudes are often intensified by birth complications, the unexpected arrival of twins or triplets, and the new-parent blues described above.

The mother's attitudes are especially important because they can directly affect the care the baby receives. Thus the infant's behavior also influences the mother's behavior; if this is unfavorable to begin with, it will become increasingly so, with the result that the infant's adjustment problems are worsened.

Names Because it is legally established shortly after birth, a child's name can be classified as one of the important *potential* psychological hazards of infancy. Their names do not become real hazards until children are old enough to respond to how people outside the family react

to them (usually during the preschool years). Names become real psychological hazards only if they cause the children embarrassment-or sometimes even humiliation-if their friends think their names are "funny" or regard them as sex-inappropriate. While it is impossible to predict during infancy how individuals will react to their names as they grow older, certain kinds of names are almost universally hazardous.

Check Your Progress 2

State the physical and psychological hazards of infancy

    Notes: a) Write your answer in the space given below.

        b) Check your answer with the one given at the end of this lesson.

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10.3 HAZARDS IN TODDLERHOOD

As toddlerhood is the foundation age, it is an especially hazardous time. The hazards may be physical, psychological, or both, as is true of infancy. For example, excessive crying is both physically and psychologically damaging to the baby and to the home atmosphere. It leads to gastrointestinal disturbances, regurgitation of food, night waking, and general nervous tension. Furthermore, excessive crying leads to feelings of insecurity which affect the baby's developing personality. In addition, excessive crying affects the baby's relationships with the parents and other family members unfavorably. This, in turn, indirectly affects personality development. In the first year of toddlerhood, physical hazards tend to be more numerous and more serious than psychological ones, while the reverse is true during the second year.

10.3.1 Physical Hazards

Physical hazards are serious for all babies but especially for those who are born prematurely; those' who suffer from brain damage or other birth defects; and those whose physical development and general physical condition at birth are poor.

Mortality Greater mortality occurs during the first three months of toddlerhood than later-with approximately two-thirds of all deaths during the first year of life occurring during the first month. During the first year of toddlerhood, death is usually caused by serious illness while, during the second year, death is more often due to accidents. Throughout toddlerhood, more boys die than girls.

Crib Death Apparently normal, healthy babies are sometimes the victims of sudden and unexpected death-referred to in medical circles as *crib death.* Usually crib death occurs after a long period of sleep.

To date, medical science has been unable to find the exact cause or causes of crib death. There is some evidence that it is common in babies who experience abnormalities in breathing or who have had some abnormal condition at birth, such as jaundice. It is also more common in babies who have had oxygen therapy during the newborn period.

More crib death occurs during the first year of toddlerhood than during the second; and more during the first six months of the first year than in the second six months. There is no evidence, to date, that crib death is more *common* among boys than among girls, or among babies of lower socioeconomic groups as compared with those of higher groups.

Illnesses While it is true that many deaths during the first few months of postnatal life are due to such illnesses as gastrointestinal or respiratory complications, the number of deaths due to serious illness then declines rapidly because most babies today are given inoculations

and vaccinations to immunize them against diseases which, in the past, often proved to be fatal.

However, minor illnesses such as colds and digestive upsets are common. Prompt diagnosis and proper medical care can keep these from causing serious harm, but if they are neglected, as frequently happens in the case of colds, serious disturbances can develop rapidly, especially ear infections. Prolonged illnesses, even though not terminal, can interfere with the normal growth pattern.

Accidents Although accidents are infrequent during the first *year* of life, owing to the *fact* that babies are carefully protected in their cribs, play pens, and carriages, they are far more frequent during the second *year,* when babies can move about more freely and are not as well protected. Some toddlerhood accidents, such as bruises and scratches, are minor and have no permanent effects. Others, such as blows on the head or cuts, may be serious enough to leave permanent scars or may even be fatal. Even minor accidents, however, leave psychological scars. Babies are often conditioned to *fear* situations similar to those in which accidents occurred or they develop a generalized timidity as a result of frequent accidents.

Malnutrition May come from inadequate food intake or from an unbalanced diet, can play havoc not only with physical growth but also with mental development. It not only causes stunted growth but also leads to physical defects such as carious teeth, bowed legs, and a tendency to suffer from more or less constant illnesses.

Because the brain grows and develops at such an accelerated rate during toddlerhood, it can be seriously impaired by malnutrition. The first two years of postnatal life have been called the *critical period* in brain growth because of the marked increase in internal development of the brain cells at this time. As a result, it is the time when the brain is most vulnerable to damage. If babies suffer from malnutrition at this time, there is no evidence that the development that normally would take place will do so later.

Foundations of Obesity Many parents equate health in toddlerhood with plumpness and do all they can to see that their babies are chubby. There is evidence that fat babies tend to have obesity problems as they grow older while thin babies do not. This is because the number and size of the fat cells of the body are established early in life.

There are three critical periods of fat-cell development. The first occurs during the three months before birth, the second during the first three years of postnatal life, and the third during the early part of adolescence. If babies are overfed, they are likely to have an obesity problem for the rest of their lives.

The reason for this is that even if children slim down later, they still have the same number of cells capable of storing fat-a built-in potential for becoming obese. Similarly, babies who are fed large amounts of carbohydrates during this critical period of fat-cell development are not only overweight as babies but are more subject to diabetes and heart dis-ease as they grow older. Bottle-fed babies are more likely to be overfed than breast-fed babies, and thus lay the foundation for obesity problems.

Physiological Habits The foundations of the important physiological habits-eating, sleeping, and eliminating-are established during toddlerhood, and thus a common physical hazard of this period is the establishment of unfavorable attitudes on the baby's part toward these habits.

10.3.2 Psychological Hazards

The most serious psychological hazards of toddlerhood involve the baby's failure to master the developmental task for that age. Mastery of these tasks is important for two reasons. First, the sooner babies gain control over their bodies, the sooner they can become independent of help from others. Second, mastery of these tasks provides the foundations on

which mastery of later developmental tasks will be built. The better the mastery of toddlerhood tasks, the more easily and quickly will the child be able to master the tasks of early childhood.

Most of the serious psychological hazards of toddlerhood are related, either directly or indirectly, to the failure to master the developmental tasks of toddlerhood.

Hazards in Motor Development   When motor development is delayed, babies will be at a great disadvantage when they begin to play with age-mates. The more they lag behind the group in motor control, the slower they are likely to be in acquiring the skills other children possess. Furthermore, because the desire to be independent makes its appearance early in the second year, babies whose motor development lags behind that of their peers become frustrated when they try to do things for themselves and fail.

Speech Hazards Delayed speech, like delayed motor control, is serious in toddlerhood because, at this age, the foundations are being laid for the development of the tools of communication that will be needed later as social horizons broaden. In early childhood, when interest in people outside the home begins to awaken, children whose speech lags markedly behind that of other children find themselves in the role of outsiders.

There are a number of reasons for delayed speech, the most common of which are low level of intelligence, lack of stimulation (especially during the first year of life), and multiple births. When parents and other caretakers fail to stimulate babbling and early attempts to speak, most babies lose interest in trying to speak. The result is that their speech is often markedly delayed. By contrast, when babies are encouraged to babble and to learn to say words, their speech development conforms to the normal pattern and is often accelerated. The more novelty there is in the environment, the greater the baby's motivation to vocalize.

Emotional Hazards There are four common psychological hazards that frequently arise in relation to emotional development during the toddlerhood years.

1. Emotional Deprivation: Babies who are not given the opportunity to experience the normal emotions of toddlerhood-especially affection, curiosity, and joy-do not thrive physically. If emotional deprivation is severe and prolonged, it inhibits the secretion of the pituitary hormones, including the growth hormone, and this may lead to what has been called "deprivation dwarfism." In addition, emotional deprivation in toddlerhood often causes babies to be backward in their motor and speech development and they do not learn how to establish social contacts or show affection. They usually become listless, depressed, and apathetic and often develop nervous mannerisms such as thumb-sucking.

2. Stress: Stress-a prolonged unpleasant emotional state, such as fear or anger-can cause endocrine changes which upset body homeostasis. This, then, is reflected in eating and sleeping difficulties, in nervous mannerisms such as excessive thumb sucking, and in excessive crying. There are many causes of stress-poor health, parental neglect and poor environmental conditions that interfere with proper sleeping and eating-but constant and close association with a nervous, tense mother is a particularly important factor.

3. Too Much Affection: Parents who are oversolicitious or over demonstrative encourage their babies to focus their attention on themselves and to become self-bound and selfish. Babies thus expect others to show affection for them but they do not reciprocate.

4. Dominant Emotions: Conditions in the baby's environment encourage the development of certain emotions to the exclusion of others, and these eventually become dominant unless conditions change and the development of other emotions is encouraged. Timidity may persist long after toddlerhood if a shy or fearful chi Id is exposed to too many strangers or too many frightening situations.

10.3.3 Social Hazards

The major social hazard of toddlerhood is lack of opportunity and motivation to learn to become social. This encourages the prolongation of egocentrism, which is characteristic of all babies, and leads to the development of introversion. Being deprived of opportunities for social contacts is detrimental at any age, but it is especially so from the ages of six weeks to six months-the critical time in the development of attitudes which affect the pattern of socialization. While social attitudes can and do change, many individuals who formed unfavorable social attitudes as babies continue to be socially less well adjusted as they grow older.

Play Hazards Play in toddlerhood is potentially hazardous, both physically and psychologically. Many toys can inflict cuts and bruises or cause the baby to choke on a part that has come loose. The major psychological hazard is that the baby may come to rely too much on the toys themselves for amusement, instead of learning to play in ways that involve interaction with others. Television; used as a built-in babysitter, also discourages the baby from taking an active role in play. When playing games with adults or older siblings, babies are usually allowed to win. As a result, they find competition with other children difficult as they grow older and are not able to lose graciously.

Hazards **in** *Understanding* Even though understanding is in a rudimentary stage of development, it presents one serious psychological hazard. In the development of concepts, it is relatively easy to replace wrong meanings associated with people, objects, or situations with correct meanings. However, all concepts have some emotional weighting, and this is where the potential hazard lies. If, for example, the baby learns to associate sweets with rewards for good behavior and to think of vegetables as a form of punishment, the emotional weighting of these concepts may lead to persistent food likes and dislikes.

Hazards **in** *Morality* No one expects babies to be moral in the sense that their behavior conforms to the moral standards of the social group or that they will feel guilt and shame if they fail to do so. However, a serious psychological hazard to future moral development occurs when babies discover that they get more attention when they do things to annoy and antagonize others than when they behave in a more socially approved way.

During toddlerhood, the patterns of behavior that present the greatest problems for caretakers are dawdling, defiance, and disobedience-the "three D's" of morality. While not one of these unsocial patterns of behavior is well developed even as toddlerhood draws to a close, the foundations are often laid at this time.

Family-Relationship Hazards Because the family constitutes the main social environment, any unfavorable condition in family relationships or in the baby's relationships with different family members leads to psychological hazards with serious and far-reaching consequences. Of the many potential hazards in family relationships, the following six are the most common and the most far-reaching in their effects.

1. Separation from Mother: Unless a stable and satisfactory substitute is provided, babies who are separated from their mothers develop feelings of insecurity which are expressed in personality disturbances that may lay the foundation for later maladjustments.

2. Failure to Develop Attachment Behavior: Babies who fail to establish attachment behavior with their mothers, or some stable mother-substitute, suffer from feelings of insecurity similar to those associated with separation from their mothers. In addition, they do not experience the pleasures that come from close, personal relationships. This handicaps them in establishing friendships as they grow older.

3. Deterioration in Family Relationships: This almost always occurs during the second

year of life is psychologically hazardous because babies notice that family members have changed attitudes toward them and treat them differently. As a result, they usually feel unloved and rejected-feelings which lead to resentment and insecurity.

4. Overprotectiveness: Babies who are overprotected and prevented doing what they are capable of doing become overdependent and afraid to do what other babies of their ages do. This, in time, is likely to lead to the abnormal fear of school-*school phobia*-and excessive shyness in the presence of strangers.

5. Inconsistent Training: Inconsistent child-training methods-which can be the result of permissiveness or of parents' feelings of inadequacy in the parental role-provide poor guidelines for babies. This slows down their learning to behave in approved ways.

6. Child Abuse: When parents' are unhappy in their parental roles or when a frictional relationship exists between them, some babies become the targets of anger and resentment. The babies are either neglected or abused. The second year of life is a more common time for child abuse than the first because babies are more troublesome to their parents and this triggers the outlet of anger, resentment, and other unpleasant emotions engendered in the relationship of the parents.

Hazards **in** *Personality Development* The developing self-concept is in large part a mirror image of what babies believe significant people in their lives think of them. As family relationships deteriorate during the second year of toddlerhood, self-concepts reflect the unfavorable attitudes babies think family members have toward them. They then express these unfavorable self-concepts in aggressive, resentful, negativistic, or withdrawn behavior, all of which make them seem less endearing to family members than they were earlier. The changed attitudes of family members are then reflected in their treatment of the babies. This reinforces the unfavorable self-concepts that the baby is in the process of developing.

Check Your Progress 3

Explain the various hazards in toddlerhood

    Notes: a) Write your answer in the space given below.

        b) Check your answer with the one given at the end of this lesson.

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10.4 LET US SUM UP

In this Lesson, we have touched upon the following points:

    xi)   Self Development
    xii)   Categorizing the Self
    xiii)   Self-Control emergence in infancy
    xiv)   Hazards of infancy and toddler hood

10.5 Check Your Progress: Model Answers

1. Your answer may include the following

    i)   Development of Self-Awareness
    ii)   Categorizing the Self
    iii)   Emergence of Self-Control in infancy

2. The hazards of infancy include

    I. Physical Hazards
    i)   Multiple Birth
    ii)   Postmaturity
    iii)   Prematurity
    iv)   Infant Mortality

v) Psychological Hazards

vi) Individuality of the Infant

vii) Helplessness

II Psychological Hazards

    i) Helplessness

    ii) Developmental Lag

    iii) Lack of Stimulation

3. The Hazards of toddler hood are:

  I Physical Hazards

    i) Mortality

    ii) Crib Death

    iii) Illnesses

    iv) Accidents

    v) Malnutrition

  II Psychological Hazards

  i) Speech Hazards

  ii) Emotional Hazards

  III Social Hazards

  i) Play Hazards

  ii) Hazards in Understanding

  iii) Hazards in Morality

  iv) Family-Relationship Hazards

  v) Hazards in Personality Development

10.6 Lesson – End Activities

1. Mention the Hazards of Infamy.

2. Write few remedies measure for speech hazards.

10.7 References

1. Erickson, E., Childhood and Society, New York : Norton, 1950

2. Piaget, J., The Origins of Intelligence in Children, New York : Norton, 1988.

UNIT III

LESSON - 11
EARLY CHILDHOOD - CHARACTERISTICS - DEVELOPMENTAL TASKS - BODY GROWTH - BRAIN DEVELOPMENT - INFLUENCES ON PHYSICAL GROWTH AND HEALTH

CONTENTS

11.0 AIMS AND OBJECTIVES

This Lesson will help understand the characteristics and developmental tasks with reference to body and brain development.

After going through this Lesson, you will be able to:
i)   understand the characteristics of early childhood
ii)   discuss the developmental tasks
iii)   state the body growth and brain development of a child
iv)   explain the factors that influence the physical and health of a child

11.1 INTRODUCTION

Childhood begins when the relative dependency of toddlerhood is over, at approximately the age of two years, and extends to the time when the child becomes sexually mature, at approximately thirteen years for the average girl and fourteen years for the average boy. After children become sexually mature, they are known as *adolescents.*

During this long period of time-roughly eleven years for girls and twelve years for boys marked changes take place in the child both physically and psychologically. Today it is widely recognized that childhood should be subdivided into two separate periods, early and late childhood. Early childhood extends from two to six years, and late childhood extends from six to the time the child becomes sexually mature. Thus early childhood begins at the

conclusion of toddlerhood-the age when dependency is practically a thing of the past is being replaced by growing independence-and ends at about the time the child enters first grade in school.

The new pressures and expectations that accompany the child's formal entrance into school result in changes in patterns of behavior, interests, and values. As a result, children become "different people from what they were earlier.

11.2 CHARACTERISTICS OF EARLY CHILDHOOD

Just as certain characteristics of toddlerhood make it a distinctive period in the life span, so certain characteristics of early childhood set it apart from other periods. These characteristics are reflected in the names that parents, educators, and psychologists commonly apply to this period.

11.2.1 Names Used by Parents

Early childhood is considered as a *problem age* or a *troublesome* age. While toddlerhood presents problems for parents, most of these centers around the baby's physical care. With the dawn of childhood, behavior problems become more frequent and more troublesome than the physical-care problems of toddlerhood.

As to why the behavior problems dominate the early childhood years is that young children are developing distinctive personalities and are demanding an independence which, in most cases, they are incapable of handling successfully. In addition young children are often obstinate, stubborn, disobedient, negativistic, and antagonistic. They have frequent temper tantrums, they are often bothered by bad dreams at night and irrational fears during the day, and they suffer from jealousies.

Due to these problems, early childhood seems less appealing age than toddlerhood to many parents. The dependency of the baby, so endearing to parents as well as to older siblings, is now replaced by resistance on the child's part to their help and a tendency to reject demonstrations of their affection. Furthermore, few young children are as cute as babies, which also make them less appealing.

Early childhood is referred to the *toy age* because young children spend much of their waking time playing with toys. Studies of children's play have revealed that toy play reaches its peak during the early childhood years and then begins to decrease when children reach the school age. This, of course, does not mean that interest in playing with toys ends abruptly when the child enters school. Instead, with entrance into first grade, children are encouraged to engage in games and modified forms of sports, none of which require the use of toys. When alone, however, children continue to play with their toys well into the third or even fourth standard.

11.2.2 Names Used by Educators

The early childhood years is referred as *preschool* age to distinguish it from the time when children are considered old enough, both physically and mentally, to cope with the work they will be expected to do when they begin their formal schooling Even when children go to nursery school or kindergarten, they are labeled *preschoolers* rather than *schoolchildren.* In the home, day-care center, nursery school, or kindergarten, the pressures and expectations young children are subjected to are very different from those they will experience when they begin their formal education in the first standard. The early childhood years, either in the home or in a preschool, are a time of preparation.

11.2.3 Names Used by Psychologists

A number of different names are used to describe the outstanding characteristics of the psychological development of children during the early years of childhood. One of the most commonly applied names is the *pregang age,* the time when children are learning the

foundations of social behavior as a preparation for the more highly organized social life they will be required to adjust to when they enter first standard.

Since the major development that occurs during early childhood centers around gaining control over the environment, many psychologists refer to early childhood as the *exploratory* age, a label which implies that children want to know what their environment is, how it works, how it feels, and how they can be a part of it. This includes people as well as inanimate objects. One common way of exploring in early childhood is by asking questions: thus this period is often referred to as the *questioning age*.

Imitation of the speech and actions of others are more pronounced during early childhood. For this reason, it is also known as the *imitative age*. However, in spite of this tendency, most children show more creativity in their play during early childhood than at any other time in their lives. For that reason, psychologists also regard it as the *creative* age.

11.3 DEVELOPMENTAL TASKS OF EARLY CHILDHOOD

Although the foundations of some of the developmental tasks young children are expected to master before they enter school are laid in toddlerhood, much remains to be learned in the relatively short four-year span of early childhood.

When toddlerhood ends, all normal babies have learned to walk, though with varying degrees of proficiency; have learned to take solid foods; and have achieved a reasonable degree of physiological stability. The major task of learning to control the elimination of body wastes has been almost completed and will be fully mastered within another year or two.

While most babies have built up a useful vocabulary, have reasonably correct pronunciation of the words they use, can comprehend the meaning of simple statements and commands, and can put together several words into meaningful sentences, their ability to communicate with others and to comprehend what others say to them is still on a low level. Much remains to be mastered before they enter school.

Similarly, they have some simple concepts of social and physical realities, but far too few to meet their needs as their social horizons broaden and as their physical environment expands. Few babies know more than the most elementary facts about sex differences, and even fewer understand the meaning of sexual modesty. It is questionable whether any babies, as they enter early childhood, actually know what is sex-appropriate in appearance, and they have only the most rudimentary understanding of sex-appropriate behavior.

This is equally true of concepts of right and wrong. What knowledge they have is limited to home situations and must be broadened to include concepts of right and wrong in their relationships with people outside the home, especially in the neighborhood, in school, and on the playground.

One of the most important and, for many young children, one of the most difficult of the developmental tasks of early childhood, is learning to relate emotionally to parents, siblings, and other people. The emotional relationships that existed during toddlerhood must be replaced by more mature ones. The reason for this is that relationships to others in toddlerhood are based on babyish dependence on others to meet their emotional needs, especially their need for affection. Young children, however, must learn to give as well as to receive affection. In short, they must learn to be outer-bound instead of self bound.

Check Your Progress 1

State the how characteristics of early child hood are reflected

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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11.4 BODY GROWTH

The rapid increase in body size of the first 2 years tapers off into a slower growth pattern during early childhood. On average, children add 2 to 3 inches in height and about 5 pounds in weight each year. Boys continue to be slightly larger than girls. At the same time, the "baby fat" that began to decline in toddlerhood drops off further. The child gradually becomes thinner, although girls retain somewhat more body fat, and boys are slightly more muscular. As the torso lengthens and widens, internal organs tuck neatly inside, and the spine straightens. By age 5 the top-heavy, bowlegged, potbellied toddler has become a more streamlined, flat-tummied, longer-legged child with body proportions similar to those of adults. Consequently, posture and balance improve-changes that support the gains in motor coordination. Individual differences in body size are even more apparent during early childhood than in infancy and toddlerhood.

11.4.1 Skeletal Growth

The skeletal changes that are under way in infancy continue throughout early childhood. Between ages 2 and 6, approximately 45 new *epiphyses,* or growth centers in which cartilage hardens into bone, emerge in various parts of the skeleton. Other epiphyses will appear in middle childhood. X-rays of these growth centers enable doctors to estimate children's *skeletal age,* or progress toward physical maturity. During early and middle childhood, information about skeletal age is helpful in diagnosing growth disorders.

Parents and children are especially aware of another aspect of skeletal growth: By the end of the preschool years, children start to lose their primary, or "baby;' teeth. The age at which they do so is heavily influenced by genetic factors. For example, girls, who are ahead of boys in physical development, lose their primary teeth sooner. Environmental influences, especially prolonged malnutrition, can delay the appearance of permanent teeth.

Even though primary teeth are temporary, dental care is important. Diseased baby teeth can affect the health of permanent teeth. Brushing consistently, avoiding sugary foods, drinking fluoridated water, and getting topical fluoride treatments and sealants (plastic coatings that protect tooth surfaces) prevent cavities. Unfortunately, childhood tooth decay remains high, especially among low-SES children.

11.4.2 Asynchronies in Physical growth

Body systems differ in their unique, carefully timed patterns of maturation. Physical growth is *asynchronous. Body size (as measured by height and* weight) and a variety of internal organs follow the general growth curve, which involves rapid growth infancy, slower gains in early and middle childhood and rapid growth again during adolescence. Yet there are exceptions to this trend. The genitals develop slowly from birth to age 4, change little throughout middle childhood, and then grow rapidly during adolescence. In contrast, the lymph glands grow at an astounding pace in infancy and childhood, and then their rate of growth declines in adolescence. The lymph system helps fight infection and assists with absorption of nutrients, thereby supporting children's health and survival. During the first few years, the brain grows more rapidly than any other part of the body.

11.5 BRAIN DEVELOPMENT

Between ages 2 and 6 years, the brain increases from 70 to 90 percent of its adult weight. Brain-imaging studies reveal that energy metabolism in the cerebral cortex reaches a peak around age 4. By this time, many cortical regions have overproduced synapses, resulting in a high energy need. As *formation of synapses, myelinization,* and *synaptic pruning* continue, preschoolers improve in a wide variety of skills-physical coordination, perception, attention, memory, language, logical thinking, and imagination.

Recall that the cerebral cortex is made up of two *hemispheres.* Measures of neural activity in various cortical regions reveal especially rapid growth from 3 to 6 years in frontal-lobe

areas devoted to planning and organizing behavior. Furthermore, for most children, the left hemisphere is especially active between 3 and 6 years and then levels off. In contrast, activity in the right hemisphere increases steadily throughout early and middle childhood.

These findings fit nicely with what we know about several aspects of cognitive development. Language skills (typically housed in the left hemisphere) increase at an astonishing pace in early childhood, and they support children's increasing control over behavior. In contrast, spatial skills (such as finding one's way from place to place, drawing pictures, and recognizing geometric shapes) develop gradually over childhood and adolescence. Differences in rate of development between the two hemispheres suggest that they are continuing to *lateralize* (specialize in cognitive functions).

11.5.1 Handedness

One morning on a visit to the preschool, I watched 3year-old Moira as she drew pictures, worked puzzles, joined in snack time, and played outside. Unlike most of her classmates, Moira does most things-drawing, eating, and zipping her jacket-with her left hand. But she uses her right hand for a few activities, such as throwing a ball. Hand preference is evident in 10 percent of l-year-olds and strengthens during early childhood. Ninety percent of 5-year-olds prefer one hand over the other

A Strong hand preference reflects the greater capacity of one side of the brain- the individual's dominant cerebral hemisphere – to carry out skilled motor action. Other important abilities may be located on the dominant side as well. In support of this idea, for right-handed people, who make up 90 percent of the population in Western nations, language is housed with hand control in the left hemisphere. For the remaining left-handed 10 percent, language is often shared between the hemispheres. This indicates that the brains of left-handers tend to be less strongly lateralized than those of right-handers. Consistent with this idea, many left-handed individuals are *ambidextrous.* Although they prefer their left hand, they sometimes use their right hand skillfully as well.

Is handedness hereditary? Researchers disagree on this issue. Left-handed parents show only a weak tendency to have left-handed children. One genetic theory proposes that most children inherit a gene that *biases* them for right-handedness and a left -dominant cerebral hemisphere. However, that bias is not strong enough to overcome experiences that might sway children toward a left-hand preference.

Research confirms that experience can profoundly affect handedness. Both identical and fraternal twins are more likely than ordinary siblings to differ in handedness. The hand preference of each twin is related to body position in the uterus; twins usually lie in opposite orientations. According to one theory, the way most fetuses lie-turned toward the left-may promote greater postural control by the right side of the body. Also, wide cultural differences exist in rates of left-handedness. For example, in Tanzania, Africa, children are physically restrained and punished for favoring their left hand. Less than 1 percent of Tanzanians are left-handed.

Perhaps you have heard that left-handedness is more frequent among severely retarded and mentally ill people than it is in the general population. Although this is true, recall that when two variables are correlated, one does not necessarily cause the other. Atypical lateralization is probably not responsible for the problems of these individuals. Instead, they may have suffered early damage to the left hemisphere, which caused their disabilities and also led to a shift in handedness. In support of this idea, left-handedness is associated with prenatal and birth difficulties that can result in brain damage, including prolonged labor, prematurity, Rh incompatibility, and breech delivery .

Keep in mind, however, that only a small number of lefthanders show developmental problems. In fact, unusual lateralization may have certain advantages. Left- and mixed-handed youngsters are more likely than their right-handed agemates to develop outstanding

verbal and mathematical talents. More even distribution of cognitive functions across both hemispheres may be responsible.

11.5.2 Other Advances in Brain Development

Besides the cortex, other parts of the brain make strides during early childhood. As we look at these changes, you will see that all involve establishing links between different parts of the brain, increasing the coordinated functioning of the central nervous system.

At the rear and base of the brain is the cerebellum, a structure that aids in balance and control of body .movement. Fibers linking the cerebellum to the cerebral cortex begin to myelinate after birth, but they do not complete this process until about age 4. This change undoubtedly contributes to dramatic gains in motor control, so that by the end of the preschool years children can play hopscotch, pump a playground swing, and throw a ball with a well-organized set of movements.

The reticular formation, a structure of the brain that maintains alertness and consciousness, myelinates throughout childhood and into adolescence. Neurons in the reticular formation send out fibers to the frontal lobes of the cortex, contributing to improvements in sustained, controlled attention.

The corpus callosum is a large bundle of fibers that connects the two cortical hemispheres. Myelinization of the corpus callosum does not begin until the end of the first year of life. Between 3 and 6 years, it grows rapidly and then enlarges at a slower pace into adolescence. The corpus callosum supports integration of many aspects of thinking, including perception, attention, memory, language, and problem solving. The more complex the task, the more crucial communication between the hemispheres becomes.

Check Your Progress 2

Write a note on the body growth and brain development

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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11.6 INFLUENCES ON PHYSICALGROWTH AND HEALTH

While discussing growth and health in early childhood, heredity remains important, environmental factors continue to play crucial roles. Emotional well-being, good nutrition, relative freedom from disease, and physical safety are essential.

11.6.1 Heredity and Hormones

The impact of heredity on physical growth is evident throughout childhood. Children's physical size and rate of growth are related to those of their parents. Genes influence growth by controlling the body's production of hormones. The pituitary gland, located at the base of the brain, plays a critical role by releasing two hormones that induce growth.

The first is growth hormone (GH), which from birth on is necessary for development of all body tissues except the central nervous system and genitals. Children who lack GH reach an average mature height of only 4 feet, 4 inches. When treated with injections of GH starting at an early age, these GH-deficient children show catch-up growth and then grow at a normal rate, reaching a height much greater than they would have without treatment.

The second pituitary hormone affecting children's growth, thyroid-stimulating hormone (TSH), stimulates the thyroid gland (located in the neck) to release *thyroxine,* which is necessary for normal development of the nerve cells of the brain and for GH to have its full impact on body size. Infants born with a deficiency of thyroxine must receive it at once or they will be mentally retarded. At later ages, children with too little thyroxine grow at a below-average rate. By then, the central nervous system is no longer affected because the

most rapid period of brain development is complete. With prompt treatment, such children catch up in body growth and eventually reach normal size.

11.6.2 Emotional Well-Being

In childhood as in infancy, emotional well-being can have a profound effect on growth and health. Preschoolers with very stressful home lives (due to divorce, financial difficulties, or a change in their parents' employment status) suffer more respiratory and intestinal illnesses and more unintentional injuries than others.

Extreme emotional deprivation can interfere with the production of GH and lead to psychosocial dwarfism, a growth disorder that appears between 2 and 15 years of age. Typical characteristics include very short stature, decreased GH secretion, immature skeletal age, and serious adjustment problems, which help distinguish psychosocial dwarfism from normal shortness. When such children are removed from their emotionally inadequate environments, their GH levels quickly return to normal, and they grow rapidly. But if treatment is delayed, the dwarfism can be permanent.

11.6.3 Nutrition

With the transition to early childhood, many children become unpredictable and choosy eaters. This decline in appetite is normal. It occurs because growth has slowed. Furthermore, preschoolers' wariness of new foods may be adaptive. By sticking to familiar foods, they are less likely to swallow dangerous substances when adults are not around to protect them. Parents need not worry about variations in amount eaten from meal to meal. Preschoolers compensate for a meal in which they ate little with a later one in which they eat more.

Even though they eat less, preschoolers need a high-quality diet. They require the same foods adults do-only smaller amounts. Fats, oils, and salt should be kept to a minimum be-cause of their link to high blood pressure and heart disease in adulthood. Foods high in sugar should also be avoided. In addition to causing tooth decay, they lessen young children's appetite for healthy foods and increase their risk of overweight and obesity.

The social environment powerfully influences young children's food preferences. Children tend to imitate the food choices of people they admire-adults as well as peers. A pleasant mealtime climate also encourages healthy eating. Repeated exposure to a new food (without any direct pressure to eat it) increases children's acceptance. Sometimes parents bribe their children, saying, "Finish your vegetables, and you can have an extra cookie." This practice causes children to like the healthy food less and the treat more. Too much parental control over children's eating limits their opportunities to develop self-control.

11.6.4 Infectious Disease

In well-nourished children, ordinary childhood illnesses have no effect on physical growth. But when children are undernourished, disease interacts with malnutrition in a vicious spiral, and the consequences for physical growth can be severe.

Infectious Disease and Malnutrition. Illnesses such as measles and chicken pox, which typically do not appear until after age 3 in industrialized nations, occur much earlier. Poor diet depresses the body's immune system, making children far more susceptible to disease. Of the 10 million annual worldwide deaths in children under age 5, 99 percent are in developing countries and 70 percent are due to infectious diseases.

Disease, in turn, is a major cause of malnutrition and, through it, hinders physical growth. Illness reduces appetite and limits the body's ability to absorb foods. These outcomes are especially severe in children with intestinal infections. In developing countries, diarrhea is widespread and increases in early childhood because of unsafe water and contaminated foods, leading to growth stunting and several million childhood deaths each year.

Most growth retardation and deaths due to diarrhea can be prevented with nearly cost free oral rehydration therapy (ORT), in which sick children are given a glucose, salt, and water

solution that quickly replaces fluids the body loses. Since 1990, public health workers have taught nearly half the families in the developing world how to administer ORT. As a result, the lives of more than 1 million children are being saved annually.

Immunization. In industrialized nations, childhood diseases have declined dramatically during the past half-century, largely due to widespread immunization of infants and young children. All children were guaranteed free immunizations, a program that has led to a steady improvement in early childhood immunization rates.

Inability to pay for vaccines, however, is only one cause of inadequate immunization. Misconceptions also contribute for example, the notion that vaccines do not work or that they weaken the immune system. Furthermore, some parents have been influenced by media reports suggesting that the measles-mumps-rubella vaccine has contributed to a rise in number of children diagnosed with autism. Yet large-scale studies show no association between immunization and autism. Public education programs directed at increasing parental knowledge about the importance and safety of timely immunizations are badly needed. Diseases that spread most rapidly are diarrhea and respiratory infections the illnesses most frequently suffered by young children. The risk that a respiratory infection will result in *otitis media,* or middle ear infection, is almost double that of children remaining at home.

11.6. 5 Childhood Injuries

Unintentional injuries - auto collisions, pedestrian accidents, drownings, poisonings, firearm wounds, burns, falls, and swallowing of foreign objects-are the leading cause of childhood mortality in industrialized countries. Among injured children and youths who survive, thousands suffer pain, brain damage, and permanent physical disabilities.

Auto and traffic accidents, drownings, and burns are the most common injuries during early childhood. Motor vehicle collisions are by far the most frequent source of injury at all ages, ranking as the leading cause of death among children more than 1 year old.

Factors Related to Childhood Injuries. We are used to thinking of childhood injuries as "accidental." But a close look reveals that meaningful causes underlie them, and we can, indeed, do something about them.

Individual differences exist in the safety of children's behaviors. Because of their higher activity level and greater willingness to take risks during play, boys are more likely to be injured than girls. Temperamental characteristics-irritability, inattentiveness, and negative mood-are also related to childhood injuries. Children with these traits present special child-rearing challenges. They are likely to protest when placed in auto seat restraints, to refuse to take a companion's hand when crossing the street, and to disobey even after repeated adult instruction and discipline.

Poverty, low parental education, and more children in the home are also strongly associated with injury. Parents who must cope with many daily stresses often have little time and energy to monitor the safety of their youngsters. And their homes and neighborhoods pose further risks. Noise, crowding, and confusion characterize run-down, inner-city neighborhoods with few safe places to play.

Poverty, rapid population growth, overcrowding in cities, and heavy road traffic combined with weak safety measures are major causes. Safety devices, such as car safety seats and bicycle helmets, are neither readily available nor affordable in most developing countries. This indicates that besides reducing poverty and teenage pregnancy and upgrading the status of child care, additional steps must be taken to ensure children's safety.

Preventing Childhood Injuries. Childhood injuries have many causes, so a variety of approaches are needed to control them. Laws prevent many injuries by requiring car safety seats, child-resistant caps on medicine bottles, flameproof clothing, and fenced in backyard swimming pools.

Communities can help by modifying their physical environments. Inexpensive and widely available public transportation can reduce the time that children spend in cars. Playgrounds, a common site of injury, can be covered with protective surfaces, such as rubber matting, sand, and wood chips. Free, easily installed window guards can be given to families in high-rise apartment buildings to prevent falls. And widespread media and information campaigns can inform parents and children about safety issues.

Nevertheless, even though they know better, many parents and children behave in ways that compromise safety. Preschoolers spontaneously recall only about half of their parents' home safety rules; they need prompting to remember others and supervision to ensure that they comply even with well-learned rules. A variety of programs based on *behavior modification* (modeling and reinforcement) have improved safety practices. In one, counselors helped parents identify dangers in the home-fire hazards, objects that young children might swallow poisons, firearms, and others. Then they demonstrated specific ways to eliminate the dangers. Some interventions reward parents and children with prizes if the children arrive at child care or school restrained in car seats.

Efforts like these have been remarkably successful, yet their focus is fairly narrow-on decreasing specific environmental risks and risky behaviors. Attention must also be paid to family conditions that can prevent childhood injury: relieving crowding in the home, providing social supports to ease parental stress, and teaching parents to use effective discipline.

Check Your Progress 3

Write the factors that influences on physical growth and health during early child hood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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11.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Characteristics of Early Childhood
ii)   Skeletal Growth
iii)   Asynchronies in Physical growth
iv)   Handedness

11.8 Check Your Progress: Model Answers

1.   Characteristics of early child hood are reflected in the names used by
    i)   Parents
    ii)   Educators
    iii)   Psychologists

2. The body growth and brain development involves
    i)   Skeletal Growth
    ii)   Asynchronies in Physical growth
    iii)   Handedness

3. The factors that could **i**nfluence physical growth and health are:
    i)   Heredity and Hormones
    ii)   Emotional Well-Being
    iii)   Nutrition
    iv)   Heredity and Hormones
    v)   Emotional Well-Being

11.9 Lesson – End Activities
1. Discuss about infectious disease.
2. Mention few criteria for high quality food.

11.10 References

1. Kohlberg, L., Moral Stage3s and Moralization : A Cognitive Developmental Approach,
New York: 1958.
2. Piaget, J., The Origins of Intelligence in Children, New York : International university
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LESSON – 12
**MOTOR DEVELOPMENT - PIAGET'S THEORY: THE PREOPERATIONAL
STAGE - VYGOTSKY'S SOCIOCULTURAL THEORY - ERIKSON'S THEORY:
INITIATIVE VERSUS GUILT - CHILD REARING AND EMOTIONAL AND
SOCIAL DEVELOPMENT**.

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Contents

12.0 AIMS AND OBJECTIVES

This Lesson will help understand the motor development, preoperational stage, child rearing and emotional and social development.

After going through this Lesson, you will be able to:
v)   understand motor skills in early childhood
vi)   mention the Piaget's theory of preoperational stage
vii)   discuss the Vygotsky's sociocultural theory
viii) explain Erikson's theory of initiative versus guilt
ix)   list the child rearing, emotional and social development

12.1 INTRODUCTION

You will see that an explosion of new motor skills occurs in early childhood, each of which builds on the simpler movement patterns of toddlerhood. The same principle that

governs motor development during the first 2 years of life continues to operate during the preschool years. Children integrate previously acquired skills into more complex, *dynamic systems of action.* Then they revise each new skill as their bodies grow larger and stronger, their central nervous systems develop, and their environments present new challenges.

12.1.1 Gross Motor Development

As children's bodies become more streamlined and less top heavy, their center of gravity shifts downward, toward the trunk. As a result, balance improves greatly, paving the way for new motor skills involving large muscles of the body. By age 2, preschoolers' gaits become smooth and rhythmic-secure enough that soon they leave the ground, at first by running and later by jumping, hopping, galloping, and skipping.

As children become steadier on their feet, their arms and torsos are freed to experiment with new skills-throwing and catching balls, steering tricycles, and swinging on horizontal bars and rings. Then upper- and lower-body skills combine into more refined actions. Five- and 6-year-olds simultaneously steer and pedal a tricycle and flexibly move their whole body when throwing, catching, hopping, and jumping. By the end of the preschool years, all skills are performed with greater speed and endurance. Table 1 provides a closer look at gross motor development in early childhood.

Table 1 Changes in Gross and Fine Motor Skills during Early Childhood

Age	Gross Motor Skills	Fine Motor Skills
2-3 years	Walks more rhythmically; hurried walk changes to run. A jump, hops, throw, and catches with rigid upper body. Pushes riding toy with feet; little steering.	Puts on and removes simple items of clothing. Zips and unzips large zippers. Uses spoon effectively.
3-4 years	Walks up stairs, alternating feet, and downstairs, leading with one foot. Jumps and hops, flexing upper body. Throws and catches with slight involvement of upper body; still catches by trapping ball against chest. Pedals and steers tricycle.	Fastens and unfastens large buttons. Serves self food without assistance. Uses scissors. Copies vertical line and circle. Draws first picture of person, using tadpole image.
4-5 years	Walks downstairs, alternating feet. Runs more smoothly. Gallops and skips with one foot. Throws ball with increased body rotation and transfer of weight on feet; catches ball with hands. Rides tricycle rapidly, steers smoothly.	Uses fork effectively. Cuts with scissors following line. Copies triangle, cross, and some letters.
5-6 years	Increases running speed. Gallops more smoothly; engages in true skipping. Displays mature throwing and catching pattern. Rides bicycle with training wheels.	Uses knife to cut soft food. Ties shoes. Draws person with six parts. Copies some numbers and simple words.

12.1.2 Fine Motor Development

Like gross motor development, fine motor skills take a giant leap forward during the preschool years. Because control of the hands and fingers improves, young children put puzzles together, build with small blocks, cut and paste, and string beads. To parents, fine motor progress is most apparent in two areas: (1) children's care of their own bodies, and (2)

the drawings and paintings that fill the walls at home.

12.1.2.a Self - Help Skills. Young children gradually become self-sufficient at dressing and feeding, although parents need to be patient about these abilities (Table 1). When tired and in a hurry, young children often revert. And the 3-year-old who dresses himself sometimes ends up with his shirt on inside out, his pants on backwards, and his left shoe on his right foot! Perhaps the most complex self-help skill of early childhood is shoe tying, mastered around age 6. Success requires a longer attention span, memory for an intricate series of hand movements, and the dexterity to perform them. Shoe tying illustrates the close connection between motor and cognitive development. Drawing and writing are additional examples.

12.1.2.b From Scribbling to Pictures. A variety of factors combine with fine motor control to influence the development of children's artful representations. These include cognitive advances-the realization that pictures can serve as symbols and gains in planning skills and spatial understanding, which result in a move from a focus on separate objects to a broader visual perspective. The emphasis that the child's culture places on artistic expression also makes a difference.

Typically, drawing progresses through the following sequence:

1. *Scribbles.* Children begin to draw during the second year. At first, gestures rather than the resulting scribbles contain the intended representation.
2. *First representational forms.* By age 3, children's scribbles start to become pictures. Often this happens after they make a gesture with the crayon, notice that they have drawn a recognizable shape, and then decide to label it.
A major milestone in drawing occurs when children use lines to represent the boundaries of objects. This enables 3- and 4-year-olds to draw their first picture of a person.

3. *More realistic drawings.* Young children do not demand that a drawing be realistic. But as cognitive and fine motor skills improve, they learn to desire greater realism. As a result, they create more complex drawings. The drawings might contain more conventional figures, in which the head and body are differentiated.

12.1.2.c Cultural Variations in Children's Drawings. In cultures with rich artistic traditions, children's drawings reflect the conventions of their culture and are more elaborate. In cultures with little interest in art, even older children and adolescents produce simple forms. Once children realize that lines must evoke human features, they find solutions to figure drawing that vary somewhat from culture to culture but, overall, follow the sequence described earlier.

12.1.2.d Early Printing. As preschoolers experiment with lines and shapes, notice print in storybooks, and observe people writing, they try to print letters and, later, words. Often the first word printed is the child's name. Initially, it may be represented by a single letter.

12.1.3 Individual Differences in Motor Skills
A child with a tall, muscular body tends to move more quickly and to acquire certain skills earlier than a short, stocky youngster. Researchers believe that body build contributes to the superior performances who have longer limbs, since they have better leverage.

Sex differences in motor skills are evident in early childhood. Boys are slightly ahead of girls in skills that emphasize force and power. By age 5, they can jump slightly farther, run slightly faster, and throw a ball much farther (about 5 feet farther). Girls have an edge in fine motor skills and in certain gross motor skills that require a combination of good balance and foot movement, such as hopping and skipping. Boys' greater muscle mass and (in the case of throwing) slightly longer forearms may contribute to their skill advantages. And girls' greater overall physical maturity may be partly responsible for their better balance and precision of

movement.

When children have play spaces appropriate for running, climbing, jumping, and throwing and have access to puzzles, construction sets, and art materials that promote ma-nipulation, drawing, and writing, they respond eagerly to these challenges.

Check Your Progress 1

Bring out the motor skills development during early child hood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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12.2 PIAGET'S THEORY: THE PREOPERATIONAL STAGE

As children move from the sensorimotor to preoperational stage, which spans the years 2 to 7, the most obvious change is an extraordinary increase in representational, or symbolic, activity. Recall that infants and toddlers have some ability to represent their world. During early childhood, this capacity blossoms.

12.2.1 Advances in Mental Representation

Piaget acknowledged that language is our most flexible means of mental representation. By detaching thought from action, it permits far more efficient thinking than was possible earlier. When we think in words, we overcome the limits of our momentary experiences. We can deal with past, present, and future at once and combine concepts in unique ways, as when we think about a hungry caterpillar eating bananas or monsters flying through the forest at night.

Despite the power of language, Piaget did not believe that it plays a major role in cognitive development. Instead, he believed that sensorimotor activity leads to internal images of experience, which children then label with words. In support of Piaget's view, the first words toddlers use have a strong sensorimotor basis. In addition, toddlers acquire an impressive range of categories long before they use words to label them.

12.2.2 Make-Believe Play

Make-believe play is another excellent example of the development of representation during early childhood. Piaget believed that through pretending, young children practice and strengthen newly acquired representational schemes. Drawing on his ideas, several investigators have traced the development of make-believe during the preschool years.

12.2.2.a Development of Make-Believe. David a 3 year old boy visited a neighbor's house. David wandered around, picked up the receiver of a toy telephone, said, "Hi, Mommy: and then dropped it. In the housekeeping area, he found a cup, pretended to drink, and then toddled off again.

A comparison of David's pretend illustrates three important changes. It reflects the pre-school child's growing symbolic mastery:

A. *Over time, play increasingly detaches from the real-life conditions associated with it.* In early pretending, toddlers use only realistic objects-for example, a toy telephone to talk into or a cup to drink from. Most of these first pretend acts imitate adults' actions and are not yet flexible. Children younger than age 2, for example, will pretend to drink from a cup but refuse to pretend a cup is a hat.

After age 2, children pretend with less realistic toys, such as a block standing in for a telephone receiver. And during the third year, they can flexibly imagine objects and events, without any support from the real world.

B. *Play becomes less self-centered with age.* At first, make-believe is directed toward the self- for example, David pretends to feed only himself. A short time later, children direct pretend actions toward other objects, as when the child feeds a doll. And early in the third year, they become detached participants who make a doll feed itself. Make-believe gradually becomes less self-centered as children realize that agents and recipients of pretend actions can be independent of themselves.

C. *Play gradually includes more complex scheme combinations.* David can pretend to drink from a cup but he does not yet combine pouring and drinking. Later, children combine schemes with those of peers in **sociodramatic play**, the make-believe with others that is under way by age 21/2 and increases rapidly during the next few years. By the end of early childhood, children have a sophisticated understanding of role relationships and story lines.

The appearance of complex sociodramatic play indicates that children do not just represent their world; they are *aware* that make-believe is a representational activity-an understanding that increases between ages 4 and 8. Listen closely to preschoolers as they assign roles and negotiate make-believe plans: "You *pretend to be* the Doctor; I'll *act like* I'm a patient!" In communicating about pretend, children think about their own and others' fanciful representations. This indicates that they have begun to reason about people's mental activities.

12.2.2.b Benefits of Make-Believe. Today, Piaget's view of make-believe as mere practice of representational schemes is regarded as too limited. Play not only reflects but also con-tributes to children's cognitive and social skills. Compared with social non pretend activities (such as drawing or putting puzzles together), during sociodramatic play preschoolers' in-teractions last longer, show more involvement, draw larger numbers of children into the activity, and are more cooperative.

12.2.3 Limitations of Preoperational Thought

Piaget described preschoolers in terms of what they *cannot,* rather than *can,* understand. He compared them to older, more competent children in the concrete operational stage, as the term preoperational suggests. According to Piaget, young children are not capable of *operations*--mental actions that obey logical rules. Instead, their thinking is rigid, limited to one aspect of a situation at a time, and strongly influenced by the way things appear at the moment.

12.2.3.a Egocentrism. For Piaget, the most serious deficiency of preoperational thinking, the one that underlies all others, is **egocentrism** - failure to distinguish the symbolic viewpoints of others from one's own. He believed that when children first mentally represent the world, they tend to focus on their own viewpoint. Hence, they often assume that others perceive, think, and feel the same way they do.

Egocentrism, Piaget pointed out, shows up in other aspects of children's reasoning. He regarded egocentrism as responsible for preoperational children's **animistic thinking**-the belief that inanimate objects have lifelike qualities, such as thoughts, wishes, feelings, and intentions. The 3-year-old who charmingly explains that the sun is angry at the clouds and has chased them away is demonstrating this kind of reasoning. According to Piaget, because young children egocentrically assign human purposes to physical events, magical thinking is common during the preschool years. Piaget argued that preschoolers' egocentric bias prevents them from *accommodating,* or reflecting on and revising their faulty reasoning in response to their physical and social worlds.

12.2.3.b Inability to Conserve. Conservation refers to the idea that certain physical char-acteristics of objects remain the same, even when their outward appearance changes. At snack time, Preethi and Samy each had identical boxes of cereals, but after Preethi opened

hers out on the table, Samy was convinced that she had more.

Another type of conservation task involves liquid. The child is shown two identical tall glasses of water and asked if they contain equal amounts. Once the child agrees that they do, the water in one glass is poured into a short, wide container, changing the appearance of the water but not its amount. Then the child is asked whether the amount of water is the same or has changed. Preoperational children think the quantity has changed. They explain, "There is less now because the water is way down here" (that is, its level is so low) or, "There is more now because it is all spread out."

Preoperational children's inability to conserve highlights several related aspects of their thinking. First, their understanding is *centered,* or characterized by **centration**. They focus on one aspect of a situation, neglecting other important features. In conservation of liquid, the child *centers* on the height of the water, failing to realize that all changes in height are compensated for by changes in width. Second, children are easily distracted by the perceptual appearance of objects. It *looks like* there is less water in the short, wide container, so it *must have* less water. Third, children treat the initial and final states of the water as unrelated events, ignoring the *dynamic transformation* (pouring of water) between them.

The most important illogical feature of preoperational thought is its **irreversibility**, an inability to mentally go through a series of steps in a problem and then reverse direction, returning to the starting point. *Reversibility* is part of every logical operation. After Preethi spills her box of cereals, Samy cannot reverse by thinking to himself, "I know that Preethi doesn't have more cereals than I do. If we put them back in that little box, her raisins and my cereals would look just the same."

12.2.3.c Lack of Hierarchical Classification. Lack of logical operations leads preschoolers to have difficulty with **hierarchical classification**-the organization of objects into classes and subclasses on the basis of similarities and differences. Piaget's famous *class inclusion problem,* demonstrates this limitation. Children are shown 16 flowers, 4 of which are blue and 12 of which are yellow. Asked, "Are there more yellow flowers or flowers?" the preoperational child responds, "More yellow flowers," failing to realize that both yellow and blue flowers are included in the category "flowers." Preoperational children center on the overriding perceptual feature of yellow. They do not think reversibly by moving from the whole class (flowers) to the parts (yellow and blue) and back again.

12.3 PIAGET AND EDUCATION

Piaget's theory has had a major impact on education, especially during early childhood. Three educational principles derived from his theory continue to have a widespread influence on teacher training and classroom practices:

Discovery learning: In a Piagetian classroom, children are encouraged to discover for themselves through spontaneous interaction with the environment. Instead of presenting ready-made knowledge verbally, teachers provide a rich variety of activities designed to promote exploration-art materials, puzzles, table games, dress-up clothing, building blocks, books, measuring tools, musical instruments, and more.

Sensitivity to children's readiness to learn: A Piagetian classroom does not try to speed up development. Instead, Piaget believed that appropriate learning experiences build on children's current thinking. Teachers watch and listen to their students, introducing experiences that enable them to practice newly discovered schemes and that are likely to challenge their incorrect ways of viewing the world. But teachers do not impose new skills before children indicate they are interested and ready.

Acceptance of individual differences: Piaget's theory assumes that all children go through the same sequence of development, but at different rates. Therefore, teachers must plan activities for individual children and small groups rather than just for the whole class. In

addition, teachers evaluate educational progress by comparing each child to that child's own previous development. They are less interested in how children measure up to normative standards, or the average performance of same-age peers.

Check Your Progress 2

Spell out the significant aspects of the Piaget's preoperational stage

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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12.4 VYGOTSKY'S SOCIOCULTURAL THEORY

Piaget's emphasis on language as a source of cognitive development brought on yet another challenge, this time from Vygotsky's sociocultural theory, which stresses the social context of cognitive development. During early childhood, rapid growth in language broadens preschoolers' ability to participate in social dialogues with more knowledgeable in-dividuals, who encourage them to master culturally important tasks. Soon children start to communicate with themselves in much the same way they converse with others. This greatly enhances the complexity of their thinking and their ability to control their own behavior.

12.4.1 Private Speech

Watch preschoolers as they go about their daily activities, and you will see that they frequently talk out loud to themselves. For example, as Samy worked a puzzle, he said, "Where's the red piece? Now, a blue one. No, it doesn't fit. Try it here.'

Piaget called these utterances *egocentric speech,* reflecting his belief that young children have difficulty taking the perspectives of others. For this reason, he said, their talk is often "talk for self" in which they run off thoughts in whatever form they happen to occur, regardless of whether a listener can understand. Piaget believed that cognitive maturity and certain social experiences-namely, disagreements with peers-eventually bring an end to egocentric speech. Through arguments with agemates, children repeatedly see that others hold viewpoints different from their own. As a result, egocentric speech declines.

Vygotsky voiced a powerful objection to Piaget's conclusions. He reasoned that children speak to themselves for self-guidance. Because language helps children think about their mental activities and behavior and select courses of action, Vygotsky viewed it as the foundation for all higher cognitive processes, including controlled attention, deliberate memorization and recall, categorization, planning, problem solving, and self-reflection. As children get older and find tasks easier, their self-directed speech is internalized as silent, *inner speech-the* verbal dialogues we carry on with ourselves while thinking and acting in everyday situations.

Children's self-directed speech is now called **private speech** instead of egocentric speech. Research shows that children use more of it when tasks are difficult and they are confused about how to proceed. Also, as Vygotsky predicted, private speech goes underground with age, changing into whispers and silent lip movements. Finally, children who freely use private speech during a challenging activity are more attentive and involved and do better than their less talkative agemates.

12.4.2 Social Origins of Early Childhood Cognition

Vygotsky believed children's learning takes place within a *zone of proximal development*-a range of tasks too difficult for the child to do alone but possible with the help of others. Consider the joint activity of Samy and his mother, who assists him in putting together a difficult puzzle.

Samy's mother keeps the puzzle within his zone of proximal development, at a

manageable level of difficulty. To do so, she engages in **scaffolding**-adjusting the support offered during a teaching session to fit the child's current level of performance. When the child has little notion of how to proceed, the adult uses direct instruction and breaks the task into manageable units. As the child's competence increases, effective scaffolders gradually and sensitively withdraw support, turning over responsibility to the child. Gradually, children take the instructions and make it part of their private speech, and use that speech to organize their independent efforts.

12.4.3 Vygotsky and Education

Piagetian and Vygotskian classrooms clearly have features in common. Both emphasize active participation and acceptance of individual differences. Yet a Vygotskian classroom goes beyond independent discovery. It promotes *assisted discovery*. Teachers guide children's learning with explanations, demonstrations, and verbal prompts, carefully tailoring their efforts to each child's zone of proximal development. Assisted discovery is also helped along by *peer collaboration*. Teachers group together classmates of differing abilities and encourage them to teach and help one another.

Vygotsky saw make-believe play as the ideal social context for fostering cognitive development in early childhood. As children create imaginary situations, they learn to follow internal ideas and social rules rather than their immediate impulses. For example, a child pretending to go to sleep follows the rules of bedtime behavior. Another child imagining himself to be a father and a doll to be a child conforms to the rules of parental behavior. According to Vygotsky, make-believe play is a unique, broadly influential zone of proximal development in which children tryout a wide variety of challenging activities and acquires many new competencies.

12.5 ERIKSON'S THEORY: INITIATIVE VERSUS GUILT

Erikson described early childhood as a period of "vigorous unfolding." Once children have a sense of autonomy, they become less contrary than they were as toddlers. Their energies are freed for tackling the psychological conflict of the preschool years: **initiative versus guilt**. As the word *initiative* suggests, young children have a new sense of purposefulness. They are eager to tackle new tasks, join in activities with peers, and discover what they can do with the help of adults. And they also make strides in conscience development.

Erikson regarded play as a central means through which young children find out about themselves and their social world. Play permits preschoolers to tryout new skills with little risk of criticism and failure. It also creates a small social organization of children who must cooperate to achieve common goals. Around the world, children act out family scenes and highly visible occupations-police officer, doctor, and nurse.

It is known Erikson's theory builds on Freud's psychosexual stages. In Freud's well-known Oedipus and Electra conflicts, to avoid punishment and maintain the affection of parents, children form a *superego,* or conscience, by *identifying* with the same-sex parent. That is, they take the parent's characteristics into their personality and, as a result, adopt the moral and gender-role standards of their society. Each time the child disobeys standards of conscience, painful feelings of guilt occur.

For Erikson, the negative outcome of early childhood is an overly strict superego that causes children to feel too much guilt because they have been threatened, criticized, and punished excessively by adults. When this happens, preschoolers' exuberant play and bold efforts to master new tasks break down.

Although Freud's Oedipus and Electra conflicts are no longer regarded as satisfactory explanations of conscience development, Erikson's image of initiative captures the diverse changes in young children's emotional and social lives. The preschool years are, indeed, a

time when children develop a confident self-image, more effective control over their emotions, new social skills, the foundations of morality, and a clear sense of themselves as boy or girl.

Check Your Progress 3

Discuss the Vygotsky's sociocultural theory with reference to language development.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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12.6 CHILD REARING AND EMOTIONAL AND SOCIAL DEVELOPMENT

Parents can foster children's competence-through warmth and sensitivity to children's needs, by serving as models and reinforcers of mature behavior, by using reasoning and inductive discipline, and by guiding and encouraging children's mastery of new skills.

12.6.1 Child-Rearing Styles

Child-rearing styles are combinations of parenting behaviors that occur over a wide range of situations, creating an enduring child-rearing climate. Information on child rearing by watching parents interact with their preschoolers reveal three features that consistently differentiate an *authoritative style* from less effective styles: (1) acceptance and involvement, (2) control, and (3) autonomy granting.

Table 1 Features of Child Rearing styles			
Child-Rearing Styles	**Acceptance and Involvement**	**Control**	**Autonomy Granting**
Authoritative	Is warm, attentive, and sensitive to the child's needs	Makes reasonable demands for maturity, and consistently enforces and explains them	Permits the child to make decisions in accord with readiness
Authoritarian	Is cold and rejecting and frequently degrades the child	Makes many demands coercively by yelling, commanding, and criticizing	Makes decisions for the child Rarely listens to the child's point of view
Permissive	Is warm but overindulgent or inattentive	Makes few or no demands	
Uninvolved	Is emotionally detached and withdrawn	Makes few or no demands	Permits the child to make many decisions before the child is ready Is indifferent to the child's decision making and point of view

Table 1 shows how child-rearing styles differ in these features. Let's discuss each style in turn.

12.6.2 Authoritative Child Rearing. The authoritative style - the most successful approach to child rearing-involves high acceptance and involvement, adaptive control techniques, and appropriate autonomy granting. Authoritative parents are warm, attentive, and sensitive to their child's needs. They establish an enjoyable, emotionally fulfilling parent-child relationship that draws the child into close connection. At the same time, authoritative parents

exercise firm, reasonable control; they insist on mature behavior and give reasons for their expectations. Finally, authoritative parents engage in gradual, appropriate autonomy granting, allowing the child to make decisions in areas where he is ready to make choices. Throughout childhood and adolescence, authoritative parenting is linked to many aspects of competence, such as upbeat mood, self-control, task persistence, cooperativeness, high self-esteem, social and moral maturity, and favorable school performance.

12.6.3 Authoritarian Child Rearing. Parents who use an **authoritarian style** are low in acceptance and involvement, high in coercive control, and low in autonomy granting. Authoritarian parents appear cold and rejecting; they frequently degrade their child by putting her down. To exert control, they yell, command, and criticize. "Do it because I said so!" is the attitude of these parents. If the child disobeys, authoritarian parents resort to force and punishment. In addition, they make decisions for their child and expect the child to accept their word in an unquestioning manner. If the child does not, authoritarian parents resort to force and punishment. Children of authoritarian parents are anxious and unhappy. When interacting with peers, they tend to react with hostility when frustrated. Boys, especially show high rates of anger and defiance. Girls are dependent, lacking in exploration, and overwhelmed by challenging tasks.

12.6.4 Permissive Child Rearing The permissive style of child rearing is warm and accepting. But rather than being involved, such parents are overindulging or inattentive. Permissive parents engage in little control of their child's behavior. And instead of gradually granting autonomy, they allow children to make many of their own decisions at an age when they are not yet capable of doing so. Their children can eat meals and go to bed when they feel like it and watch as much television as they want. They do not have to learn good manners or do any household chores. Children of permissive patents are impulsive, disobedi-ent, and rebellious. They are also overly demanding and dependent on adults, and they show less persistence on tasks than children whose parents exert more control. The link between permissive parenting and dependent, non achieving behavior is especially strong for boys

12.6.5 Uninvolved Parenting. The **uninvolved style** combines low acceptance and involvement with 1ittle control and general indifference to autonomy granting. Often these parents are emotionally detached and depressed and so overwhelmed by life stress that they have little time and energy for children. At its extreme, uninvolved parenting is a form of child maltreatment called *neglect*. Especially when it begins early, it disrupts virtually all aspects of development, including attachment, cognition, and emotional and social skills.

12.6.6 What Makes Authoritative Child Rearing So Effective?

Authoritative child rearing seems to create an emotional context for positive parental influence. First, warm, involved parents who are secure in the standards they hold for their children provide models of caring concern as well as confident, self-controlled behavior. Second, control that appears fair and reasonable to the child, not arbitrary, is far more likely to be complied with and internalized. Finally, authoritative parents make demands and engage in autonomy granting that fits with their children's ability to take responsibility for their own behavior. As a result, these parents let children know that they are competent individuals who can do things successfully for themselves, thereby fostering high self-esteem and cognitive and social maturity.

12.6.7 Cultural Variations

Ethnic groups often have distinct child-rearing beliefs and practices. For example, compared with Native Americans, Chinese adults describe their parenting as more controlling. They are more directive in teaching and scheduling their children's time, as a way of fostering self-control and high achievement. In most instances, Chinese parents combine

control with high warmth. But when control becomes coercive, it is harmful in Chinese as well as Western cultures. A great many factors contribute to good parenting: personal characteristics of the child and parent, SES, access to extended family and community supports, cultural values and practices, and public policies.

12.6.8 Child Maltreatment

Child maltreatment is as old as human history, but only recently has there been widespread acknowledgement that the problem exists and research aimed at understanding it. Perhaps public concern has increased because child maltreatment is especially common in large industrialized nations. There are many children who were identified as victims. Because most cases go unreported, the true figures could be high.

Child maltreatment takes the following forms:

- *Physical abuse*: assaults on children that produce pain, cuts, welts, bruises, burns, broken bones, and other injuries
- *Sexual abuse*: sexual comments, fondling, intercourse, and other forms of exploitation
- *Neglect*: living conditions in which children do not receive enough food, clothing, medical attention, or supervision
- *Psychological abuse*: Failure of caregivers to meet children's needs for affection and emotional support, and actions-such as ridicule, humiliation, or terrorizing-that damage children's cognitive, emotional, or social functioning

Psychological and sexual abuses are the most destructive forms. The rate of psychological abuse may be the highest, since it accompanies most other types. About 10 percent of confirmed maltreatment victims are sexually abused. And here again, many more children are affected, but they are too frightened to seek help or are pressured into silence. Although children of all ages are targets of sexual abuse, the largest numbers of victims are identified in middle childhood.

12.6.9 Origins of Child Maltreatment

Early it was believed that child maltreatment was rooted in adult psychological disturbance. But it soon became clear that although child maltreatment is more common among disturbed parents, a single "abusive personality type" does not exist. Sometimes even "normal" parents harm their children! Also, parents who were abused as children do not necessarily repeat the cycle with their own children.

To understand child maltreatment, we now turn to ecological systems theory. The interacting variables-at the family, community, and cultural levels-promote child abuse and neglect.

The Family. Within the family, certain children-those whose characteristics make them more of a challenge to rear-are more likely to become targets of abuse. These include premature or very sick babies and children who are temperamentally difficult, are inattentive and overactive, or have other developmental problems. But whether such children actually are maltreated depends on parents' characteristics.

Maltreating parents are less skillful than other parents in handling discipline confrontations. They also suffer from biased thinking about their child. Abusive parents react to stressful situations with high emotional arousal. At the same time, low income, unemployment, marital conflict, overcrowded living conditions, frequent moves, and extreme household disorganization are common in abusive homes.

The Community. The majority of abusive and neglectful parents are isolated from both formal and informal social supports. This social isolation has at least two causes. First, because of their own life histories, many of these parents have learned to mistrust and avoid others. They do not have the skills necessary for establishing and maintaining positive relationships with friends and relatives. Second, maltreating parents are more likely to live in

unstable, run-down neighborhoods that provide few links between family and community, such as parks, child-care centers, preschool programs, recreation centers, and churches. For these reasons, they lack "lifelines" to others and have no one to turn to for help during stressful times.

The Larger Culture. Cultural values, laws, and customs profoundly affect the chances that child maltreatment will occur when parents feel overburdened. Societies that view violence as an appropriate way to solve problems set the stage for child abuse. The Supreme Court has given directions against the right of school officials to use corporal punishment. Some countries have policies or laws that prohibit physical punishment of children, rates of child abuse are low.

12.6.10 Consequences of Child Maltreatment

The family circumstances of maltreated children impair the development of emotional self-regulation, empathy and sympathy, self concept, social skills, and academic motivation. Over time, these youngsters show serious learning and adjustment problems, including academic failure, severe depression, aggressive behavior, peer difficulties, substance abuse, and delinquency. The home lives of abused children abound with opportunities to learn to use aggression as a way of solving problems.

The demeaning parental messages, in which children are ridiculed, humiliated, rejected, or terrorized, result in low self-esteem, high anxiety, self-blame, aggression, and efforts to escape from extreme psychological pain-at times severe enough to lead to attempted suicide in adolescence. At school, maltreated children are serious discipline problems. Their noncompliance, poor motivation, and cognitive immaturity interfere with academic achievement an outcome that further undermines their chances for life success.

12.6.11 Preventing Child Maltreatment

Because child maltreatment is embedded in families, communities, and society as a whole, efforts to prevent it must be directed at each of these levels. Many approaches have been suggested, including interventions that teach high-risk parents effective child-rearing strategies, high school child development courses that include direct experience with children, and broad social programs aimed at bettering economic conditions for low-SES families.

Parents Anonymous, an organization that has as its main goal helping child-abusing parents learn constructive parenting practices, does so largely through social supports. It offers self-help group meetings, daily phone calls, and regular home visits to relieve social isolation and teach responsible child-rearing skills. Even with intensive treatment, some adults persist in their abusive acts. When parents are unlikely to change their behavior, taking the drastic step of separating parent from child and legally terminating parental rights is the only reasonable course of action.

Check Your Progress 4

A. State the Child-rearing styles as combinations of parenting behaviors.

B. List the types of Child maltreatment and its origin.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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12.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Motor development during early child hood

ii)   Piaget's theory of Preoperational Stage

iii)   Vygotsky's Sociocultural Theory

iv)   Erikson's Theory of initiative versus guilt

v)   Child Rearing and emotional and social development.

12.8 Check Your Progress: Model Answers

1. The motor skills development during early child hood could include:
    i)   Gross Motor Development
    ii)   Fine Motor Development
    iii)   Individual Differences in Motor Skills
2. The significant aspects of Piaget's pre operational stage are:
    i)   Advances in Mental Representation
    ii)   Development of Make-Believe play
    iii)   Egocentrism
    iv)   Inability to Conserve
    v)   Lack of Hierarchical Classification
3. Vygotsky's sociocultural theory points at:
    i)   Private Speech
    ii)   egocentric speech
    iii)   zone of proximal development
    iv)   scaffolding
    v)   assisted discovery
    vi)   peer collaboration
4. A. Child-rearing styles are:
    i)   Authoritative Child Rearing
    ii)   Authoritarian Child Rearing
    iv)   Permissive Child Rearing
    v)   Uninvolved Parenting
    B. The types of Child maltreatment and its origin are:
    i)   Physical abuse
    ii)   Sexual abuse
    a.   Neglect
    b.   Psychological abuse
    Origin
    i)   The Family
    ii)   The Community
    iii)   The Larger Culture

12.9 Lesson – End Activities

1. Explain the Educational Implications of Vygotsky's Socio Cultural Theory.

2. Describe about the origins of Child Mal treatment.

12.10 References

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LESSON – 13
SELF-UNDERSTANDING - PEER RELATIONS - FOUNDATIONS OF MORALITY - GENDER TYPING

Contents

13.0 AIMS AND OBJECTIVES

This Lesson will help understand the self understanding, peer relations, development of morality and gender identity during early child hood.

After going through this Lesson, you will be able to:

x)   Denote the self-concept development
xi)   Discuss the kind of peer relations children get into
xii)   State the emphasizes of different theories on the aspect of morality
xiii) Mention the process of developing gender roles

13.1 INTRODUCTION

During early childhood, new powers of representation permit children to reflect on themselves. Language enables them to talk about the, *I – self* - their own subjective ex-perience of being. As the, I -self becomes more firmly established, children focus more intently on the, me-self-knowledge and evaluation of the self's characteristics. They start to develop a **self-concept**, the set of attributes, and values that an individual believes defines who he or she is.

13.2 SELF UNDERSTANDING

Foundations of Self-Concept: The preschoolers mention observable characteristics, such as their name, physical appearance, possessions, and everyday behaviors these indicate self-concepts are very concrete.

By age 3 1/2, preschoolers also describe themselves in terms of typical emotions and attitudes, as in "I'm happy when I play with my friends" or "I don't like being with grown-ups". This suggests that they have some awareness of their unique psychological characteristics. As further support for this budding grasp of personality, when given a trait label, such as "shy" or "mean;' 4-year-olds infer appropriate motives and feelings. But

preschoolers do not refer directly to traits when describing themselves. This capacity must wait for greater cognitive maturity.

The adult-child conversations about personally experienced events contribute to the development of an autobiographical memory. Parents often use these discussions to impart evaluative information about the child's actions, as when they say, "You were a big boy when you did that!" Consequently, these narratives serve as a rich source of early self-knowledge and, as the Cultural Influences, as a major means through which the young child's self-concept is imbued with cultural values.

13.2.1 Emergence of Self-Esteem

Another aspect of self-concept emerges in early childhood: **Self-esteem,** the judgments we make about our own worth and the feelings associated with those judgments. Self esteem ranks among the most important aspects of self-development, since evaluations of our own competencies affect our emotional experiences, future behavior, and long-term psychological adjustment.

By age 4, preschoolers have several self-esteems, such as learning things well in school, trying hard at challenging tasks, making friends, and treating others kindly. However, their understanding is not as differentiated as that of older children and adults. And usually they rate their own ability as extremely high and underestimate the difficulty of tasks.

High self-esteem contributes greatly to preschoolers' initiative during a period in which they must master many new skills. Nevertheless, by age 4, some children give up easily when faced with a challenge, such as working a hard puzzle or building a tall block tower. They are discouraged after failure and conclude that they cannot do the task.

13.3 PEER RELATIONS

As children become increasingly self-aware, more effective at communicating, and better at understanding the thoughts and feelings of others, their skill at interacting with peers improves rapidly. Peers provide young children with learning experiences they can get in no other way. Because peers interact on an equal footing, they must assume responsibility for keeping a conversation going, cooperating, and setting goals in play. With peers, children form friendships-special relationships marked by attachment and common interests. Let's look at how peer interaction changes over the preschool years.

13.3.1 Advances in Peer Sociability

The peer sociability among 2- to 5-year-olds, when noticed had a dramatic rise with age in joint, interactive play. It can be concluded that social development proceeds in a three-step sequence. It begins with **nonsocial activity**-unoccupied, onlooker behavior and solitary play. Then it shifts to **parallel play**, in which a child plays near other children with similar materials but does not try to influence their behavior. At the highest level are two forms of true social interaction. One is **associative play**, in which children engage in separate activities, but they exchange toys and comment on one another's behaviour. The other is **cooperative play**, a more advanced type of interaction in which children orient toward a common goal, such as acting out a make believe theme or building a sand castle.

13.3.1a Recent Evidence on Peer Sociability. Play forms emerge in the order suggested by Parten, but they do not form a developmental sequence in which later-appearing ones replace earlier ones. Instead, all types coexist during the preschool years. Furthermore, although nonsocial activity declines with age, it is still the most frequent form among 3to 4-year-olds. Even among kindergartners it continues to take up as much as a third of children's free-play time. Also, solitary and parallel play remain fairly stable from 3 to 6 years, accounting for as much of the young child's playas highly social, cooperative interaction.

It is the *type,* rather than the amount, of solitary and parallel play that changes during

early childhood. Often parents wonder if a preschooler who spends much time playing alone is developing normally. Only *certain kinds* of nonsocial activity - aimless wandering, hovering near peers, and functional play involving immature, repetitive motor action-are cause for concern. Children who behave in these ways usually are temperamentally inhibited preschoolers who have not learned to regulate their high social fearfulness. Often their parents have overprotected them rather than encouraged them to approach other children.

13.3.1b Cultural Variations. Peer sociability in collectivist societies takes different forms than in individualistic cultures. For example, children in India generally play in large groups that require high levels of cooperation. Much of their behavior during sociodramatic play and early games is imitative, occurs in unison, and involves close physical contact.

Cultural beliefs about the importance of play also affect early peer associations. Adults who view play as mere entertainment is less likely to provide props and encourage pretend than those who value its cognitive and social benefits.

13.3.2 First Friendships

As preschoolers interact, first friendships form that serve as important contexts for emotional and social development. The word *friendship* means to most is a mutual relationship involving companionship, sharing, understanding of thoughts and feelings, and caring for one another in times of need. In addition, mature friendships endure over time and survive occasional conflicts.

Preschoolers understand something about the uniqueness of friendship. They know that a friend is someone "who likes you" and with whom you spend a lot of time playing. Yet their ideas about friendship are far from mature. Four to 7-year-olds regard friendship as pleasurable play and sharing of toys. As yet, friendship does not have a long-term, enduring quality based on mutual trust.

Nevertheless, interactions between young friends are unique. Preschoolers give twice as much reinforcement, in the form of greetings, praise, and compliance, to children they iden-tify as friends, and they also receive more from them. Friends are also more emotionally expressive-talking, laughing, and looking at each other more often-than non friends. Furthermore, early childhood friendships offer social support..

13.3.3 Parental Inf1uences on Early Peer Relations

It is within the family that children first acquire skills for interacting with peers. Parents influence children's peer sociability both *directly,* through attempts to influence children's peer relations, and *indirectly,* through their child-rearing practices and play behaviors.

13.3.3.a Direct Parental Influences. Preschoolers whose parents frequently arrange informal peer play activities tend to have larger peer networks and be more socially skilled. In providing play opportunities, parents show children how to initiate their own peer contacts. Parents also offer guidance on how to act toward others. Their skillful suggestions for solving peer problems-such as managing conflict, discouraging teasing, and entering a play group-are associated with preschoolers' social competence and peer acceptance.

13.3.3.b Indirect Parental Influences. Many parenting behaviors are aimed at promoting peer sociability but nevertheless spill over into peer relations. For example, secure attachments to parents are linked to more responsive, harmonious peer interactions. The emotionally expressive and supportive communication that contributes to attachment security may be responsible. Highly involved, emotionally positive parent-child conversations and play were linked to children's pro social behavior and positive peer relations.

Check Your Progress 1

State how peer interaction changes over the preschool years?

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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13.4 FOUNDATIONS OF MORALITY

If you watch children's behavior and listen in on their conversations, you will find many examples of their developing moral sense. By age 2, they react with distress to acts that are aggressive or that otherwise might do harm, and they use words to evaluate behavior as "good" or "bad".

Throughout the world, adults take note of this budding capacity to distinguish right from wrong. Some cultures have special words for it. By the end of early childhood, children can state a great many moral rules, such as "You're not supposed to take things without asking" or "Tell the truth!" In addition, they argue over matters of justice, as when they say, "You sat there last time, so it's my turn;' or, "It's not fair. He got more!"

All theories of moral development recognize that conscience begins to take shape in early childhood. And most agree that at first, the child's morality is *externally controlled* by adults. Gradually, it becomes regulated by *inner standards*. Truly moral individuals do not just do the right thing when authority figures are around. Instead, they have developed a compassionate concern for others and principles of good conduct, which they follow in a wide variety of situations.

Although points of agreement exist among major theories, each emphasizes a different aspect of morality. Psychoanalytic theory stresses the *emotional side* of conscience development in particular, identification and guilt as motivators of good conduct. Social learning theory focuses on *moral behavior* and how it is learned through reinforcement and modeling. And the cognitive-developmental perspective emphasizes *thinking* - children's ability to reason about justice and fairness.

13.4.1 The Psychoanalytic Perspective

According to Freud, young children form a *superego,* or conscience, by *identifying* with the same-sex parent, whose moral standards they adopt. Children obey the superego to avoid *guilt,* a painful emotion that arises each time they are tempted to misbehave. Moral development, Freud believed, is largely complete by 5 to 6 years of age, at the end of the phallic stage.

A special type of discipline called **induction,** which helps the child notice feelings by pointing out the effects of the child's misbehavior on others, supports conscience formation. For example, a parent might say, "If you keep pushing him he'll fall down and cry;' or, "She feels so sad because you won't give back her doll". As long as the explanation matches the child's capacity to understand, induction is effective with children as young as 2 years of age. Preschoolers whose parents use it are more likely to make up for their misdeeds, and they more often display prosocial behavior.

Furthermore, Freud's theory places a heavy burden on parents, who must ensure through their disciplinary practices that children develop an internalized conscience. Although good discipline is crucial, children's characteristics can affect the success of parenting techniques.

Freud was correct that guilt is an important motivator of moral action. Inducing *empathy*

- based guilt (expressions of personal responsibility and regret, such as "I'm sorry I hurt him") by explaining how the child's behavior is harmful is a way to influence children without using coercion. Empathy-based guilt reactions are consistently associated with stopping harmful actions, repairing damage, and acting prosocially. But guilt is not the only force that compels us to act morally. And contrary to what Freud believed, moral development is not complete by the end of early childhood. Instead, it is a far more gradual process, extending into adulthood.

13.4.2 Social Learning Theory

Social learning theory does not regard morality as a special human activity with a unique course of development. Instead, moral behavior is acquired just like any other set of responses through reinforcement and modeling.

13.4.2.a The Importance of Modeling. Operant conditioning - following up children's good behavior with reinforcement in the form of approval, affection, and other rewards-is not enough for children to acquire moral responses. For a behavior to be reinforced, it must first occur spontaneously. Yet many prosocial acts, such as sharing, helping, or comforting an unhappy playmate, do not occur often enough at first for reinforcement to explain their rapid development in early childhood. Instead, social learning theorists believe that children largely learn to behave morally through *modeling-by* observing and imitating people who demonstrate appropriate behavior. Once children acquire a moral response, such as sharing or telling the truth, reinforcement in the form of praise increases its frequency.

Many studies show that models who behave helpfully or generously increase young children's prosocial responses. The following characteristics of models affect children's willingness to imitate:

A. Warmth and responsiveness. Preschoolers are more likely to copy the prosocial actions of an adult who is warm and responsive than those of an adult who is cold and distant. Warmth seems to make children more attentive and receptive to the model, and it is itself an example of a prosocial response.

B. Competence and power. Children admire and therefore tend to select competent, powerful models to imitate the reason they are especially willing to copy the behavior of older peers and adults.

C. Consistency between assertions and behavior. When models say one thing and do another-for example, announce that "it's important to help others" but rarely engage in helpful acts-children generally choose the most lenient standard of behavior that adults demonstrate

Models are most influential during the preschool years. At the end of early childhood, children with a history of consistent exposure to caring adults tend to behave prosocially re-gardless of whether a model is present. By that time, they have internalized prosocial rules from repeated observations of and encouragement by others.

13.4.2b Effects of Punishment. Many parents are aware that yelling at, slapping, or spanking children for misbehavior are ineffective disciplinary tactics. Sharp reprimands or physical force to restrain or move a child is justified when immediate obedience is necessary-for example, when a 3-year-old is about to run into the street. In fact, parents are most likely to use forceful methods under these conditions. When they wish to foster long-term goals, such as acting kindly toward others, they tend to rely on warmth and reasoning. And parents often combine power assertion with reasoning in response to very serious transgressions, such as lying and stealing.

When used frequently, however, punishment promotes only momentary compliance, not lasting changes in children's behavior. The more physical punishment children experience, the more likely they are to display depression, antisocial behavior, and poor academic per-formance in the future. Harsh punishment has undesirable side effects. First, when parents

spank, they often do so in response to children's aggression. Yet the punishment itself models aggression! Second, children who are frequently punished soon learn to avoid the punishing adult. As a result, those adults have little opportunity to teach desirable behaviors.

13.4.2c Alternatives to Harsh Punishment. Alternatives to criticism, slaps, and spankings can reduce the undesirable side effects of punishment. A technique called **time out** involves removing children from the immediate setting-for example, by sending them to their rooms-until they are ready to act appropriately. Time out is useful when a child is out of control. It usually requires only a few minutes to change behavior, and it also offers a "cooling off" period for angry parents. Another approach is *withdrawal of privileges,* such as playing outside or watching a favorite TV program.

When parents decide to use punishment, they can increase its effectiveness in three ways. The first is *consistency.* Permitting children to act inappropriately on some occasions but scolding them on others confuses children, and the unacceptable act persists. Second, a *warm parent-child relationship* is vital. Children of involved, caring parents find punishment especially unpleasant and want to regain parental warmth and approval as quickly as possible. Finally, *explanations* help children recall the misdeed and relate it to expectations for future behavior.

13.4.2d Positive Discipline. The most effective forms of discipline encourage good conduct-by building a positive relationship with the child, offering models of appropriate behavior, letting children know ahead of time how to act, and praising them when they behave well. When preschoolers have positive and cooperative relationships with parents, they show firmer conscience development-in the form of responsible behavior, fair play in games, and consideration for others' welfare. These outcomes continue into the school years. Parent-child closeness leads children to want to heed parental demands because children feel a sense of commitment to the relationship.

Parents who use positive discipline also reduce opportunities for misbehavior. For example, on a long car trip, they bring along back-seat activities that relieve restlessness and boredom. At the supermarket, they engage preschoolers in conversation and encourage them to assist with shopping. Adults who help children acquire acceptable behaviors that they can use to replace forbidden acts greatly reduce the need for punishment.

13.4.3 The Cognitive-Developmental Perspective

The psychoanalytic and behaviorist approaches to morality focus on how children acquire ready-made standards of good conduct from adults. In contrast, the cognitive-developmental perspective regards children as *active thinkers* about social rules. As early as the preschool years, children make moral judgments, deciding what is right or wrong on the basis of concepts they construct about justice and fairness.

Three-year-olds know that a child who intentionally knocks a playmate off a swing is worse than one who does so accidentally. By age 4, children can tell the difference between truthfulness and lying. By the end of early childhood, children consider a person's intentions in evaluating lying.

Furthermore, preschoolers distinguish *moral imperatives,* which protect people's rights and welfare, from two other types of action: *social conventions,* or customs such as table manners and dress styles; and *matters of personal choice,* which do not violate rights and are up to the individual. Three-year-olds judge moral violations (stealing an apple) as more wrong than social-conventional violations (eating ice cream with fingers).

How do young children arrive at these distinctions? According to cognitive-developmental theorists, they do so by *actively make sense* of their experiences. They observe that after a moral offense, peers react emotionally, describe their own injury or loss, tells another child to stop, or retaliate. And an adult who intervenes is likely to call attention

to the rights and feelings of the victim. In contrast, peers seldom react to violations of social convention. And in these situations, adults tend to demand obedience without explanation or point to the importance of obeying rules or keeping order.

13.4.4 The Other Side of Morality: Development of Aggression

Beginning in late infancy, all children display aggression from time to time as they become better at identifying sources of anger and frustration. By the early preschool years, two forms of aggression emerge. The most common **instrumental aggression** in which children want an object, privilege, or space, and in trying to get it, they push, shout at, or otherwise attack a person who is in the way. The other type, **hostile aggression**, is meant to hurt another person.

Hostile aggression comes in two varieties. The first is **overt aggression**, which harms others through physical injury or the threat of such injury-for example, hitting, kicking, or threatening to beat up a peer. The second is **relational aggression**, which damages another's person relationships, as in social exclusion or rumor spreading. "Go away, I'm not your friend!" and "Don't play with Mary, she's bad" are examples.

Both the form of aggression and the way it is expressed change during early childhood. Physical aggression is gradually replaced by verbal aggression. And instrumental aggression declines as preschoolers learn to compromise over possessions. In contrast, hostile outbursts rise over early and middle childhood. Older children are better able to recognize malicious intentions and, as a result, more often retaliate in hostile ways.

On average, boys are more overtly aggressive than girls, a trend that appears in many cultures. The sex difference is due in part to biology-in particular, to male sex hormones, or androgens. Androgens contribute to boys' greater physical activity, which may increase their opportunities for physically aggressive encounters.

13.4.4a The Family as Training Ground for Aggressive Behavior. "I can't control him, he's impossible;' complained Nalini, Rajesh's mother, to Leela one day. When Leela asked if Rajesh might be troubled by something going on at home, she discovered that Rajesh's parents fought constantly and resorted to harsh, inconsistent discipline. The same childrearing practices that undermine moral internalization-love withdrawal, power assertion, physical punishment, and inconsistency-are linked to aggression from early childhood through adolescence, in children of both sexes. Compared with siblings in typical families, preschool siblings who have critical, punitive parents are more verbally and physically aggressive to one another. Destructive sibling conflict, in turn, contributes to poor impulse control and antisocial behavior by the early school years. Highly aggressive children tend to be rejected by peers, to fail in school, and (by adolescence) to seek out deviant peer groups, which lead them toward violent delinquency and adult criminality.

13.4.4b Television and Aggression. The television programs between 6 A.M. and 11 P.M. contain violent scenes, often in the form of repeated aggressive acts that go unpunished. In fact, most TV violence does not show victims experiencing any serious harm, and few programs condemn violence or depict other ways of solving problems. Of all TV programs, children's cartoons are the most violent.

Young children are especially likely to be influenced by television. One reason is that below age 8, children do not understand a great deal of what they see on TV. Because they have difficulty connecting separate scenes into a meaningful story line, they do not relate the actions of a TV character to motives or consequences. Young children also find it hard to separate true-to-life from fantasized television content. Not until age 7 do they fully realize that fictional characters do not retain the same roles in real life. These misunderstandings increase young children's willingness to uncritically accept and imitate what they see on TV.

Furthermore, television violence "hardens" children to aggression, making them more

willing to tolerate it in others. Heavy TV viewers believe that there is much more violence and danger in society, an effect that is especially strong for children who perceive televised aggression as relevant to their own lives. As these responses indicate, violent television modifies children's attitudes toward social reality so they increasingly match what children see on TV.

13.4.4c Helping Children and Parents Control Aggression. Treatment for aggressive children must begin early, before their antisocial behavior becomes so well practiced that it is difficult to change. Breaking the cycle of hostilities between family members and replacing it with effective interaction styles is crucial. Parents can participate in *social problem-solving training. C*ommon conflicts, discuss effective and ineffective ways of resolving them, and practice successful strategies. Children who receive such training show gains in social competence.

Check Your Progress 4

State the theories of moral development.

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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13.5 GENDER TYPING

The process of developing **gender roles** or gender linked preferences and behaviors valued by the larger society, is called gender typing. Early in the preschool years, **gender typing** is well under way. Children tended to play and form friendships with peers of their own sex. Girls spent more time in the housekeeping, art, and reading corners, whereas boys gathered more often in spaces devoted to blocks, woodworking, and active play.

The same theories that provide accounts of morality have been used to explain gender-role development. *Social learning theory,* with its emphasis on modeling and reinforcement, and *cognitive-developmental theory,* with its focus on children as active thinkers about their social world, is major current approaches. Consequently, a third perspective that combines elements of both, called *gender schema theory,* has gained favor.

13.5.1 Gender-Stereotyped Beliefs and Behavior

Even before children can label their own sex consistently, they stereotype their play world. When shown pairs of gender stereotyped toys (vehicles and dolls), 18-month-olds look longer at one stereotyped for their own gender. As soon as gender categories are established, children sort out what they mean in terms of activities and behavior. Preschoolers associate many toys, articles of clothing, tools, household items, games, occupations, and even colors (pink and blue) with one sex as opposed to the other. And their actions fall in line with their beliefs-not only in play preferences but in personality traits as well. We have already seen that boys tend to be more active, assertive, and overtly aggressive, whereas girls tend to be more fearful, dependent, compliant, emotionally sensitive, and relationally aggressive.

13.5.2 Genetic Influences on Gender Typing

The sex differences just described appear in many cultures around the world. Certain of them-the preference for same-sex playmates as well as male activity level and overt aggression and female warmth and sensitivity-are also widespread among mammalian species. According to an evolutionary perspective, the adult life of our male ancestors was oriented toward competing for mates, that of our female ancestors toward rearing children. Therefore, males became genetically primed for dominance and females for intimacy and responsiveness. Evolutionary theorists claim that family and cultural forces can affect the

intensity of biologically based sex differences, leading some individuals to be more gender-typed than others. But experience cannot eradicate those aspects of gender typing that served adaptive functions in human history.

13.5.3 Environmental Influences on Gender Typing

A wealth of evidence reveals that family influences, encouragement by teachers and peers, and examples in the broader social environment combine to promote the vigorous gender typing of early childhood.

13.5.3a The Family Beginning at birth, parents hold different perceptions and expectations of their sons and daughters. Many parents state that they want their children to play with "gender-appropriate" toys, and they also believe that boys and girls should be reared differently. Parents are likely to describe achievement, competition, and control of emotion as important for sons and warmth, "ladylike" behavior, and closely supervised activities as important for daughters.

These beliefs carry over into actual parenting practices. Parents give toys that stress action and competition (such as guns, cars, tools, and footballs) to boys. They give toys that emphasize nurturance, cooperation, and physical attractiveness (dolls, tea sets, jewelry, and jump ropes) to girls. Parents also actively reinforce independence in boys and closeness and dependency in girls. For example, they react more positively when a son plays with cars and trucks, demands attention, or tries to take toys from others. In contrast, they more often direct play activities, provide help, encourage participation in household tasks, and refer to emotions when interacting with a daughter. Furthermore, mothers more often *label emotions* when talking to girls, thereby teaching them to "tune in" to others' feelings. In contrast, they more often *explain emotions,* noting causes and consequences, to boys-an approach that emphasizes why it is important to control the expression of emotion.

13.5.3b Teachers. Besides parents, teachers encourage children's gender typing. Several times, Leslie caught herself responding in ways that furthered gender segregation and stereotyping in her classroom. One day, she called out, "Will the girls line up on one side and the boys on the other?" Then, as the class became noisy, she pleaded, "Boys, I wish you'd quiet down like the girls!"

As at home, girls get more encouragement to participate in adult-structured activities at preschool. They can frequently be seen clustered around the teacher, following directions in an activity. In contrast, boys more often choose areas of the classroom where teachers are minimally involved. As a result, boys and girls engage in very different social behaviors. Compliance and bids for help occur more often in adult-structured contexts, whereas assertiveness, leadership, and creative use of materials appear more often in unstructured pursuits.

 13.5.3c Peers. Children's same-sex peer groups strengthen gender-stereotyped beliefs and behavior. By age 3, same-sex peers positively reinforce one another for gender-typed play by praising, imitating, or joining in. In contrast, when preschoolers engage in "cross-gender" activities-for example, when boys play with dolls or girls with cars and trucks-peers criticize them. Boys are especially intolerant of "cross-gender" play in their male companions. A boy who frequently crosses gender lines is likely to be ignored by other boys even when he does engage in "masculine" activities!

13.5.3d The Broader Social Environment. Although children's everyday environments have changed to some degree, they continue to present many examples of gender-typed behavior-in occupations, leisure activities, entertainment TV, and achievements of men and women. Children do more than imitate the many gender-linked responses they observe. They also start to view themselves and their environment in gender-biased ways, a perspective that can

seriously restrict their interests, experiences, and skills.

13.5.4 Gender Identity

As adults, each of us have a gender identity - an image of oneself as relatively masculine or feminine in characteristics. By middle childhood, we can measure gender identity by asking children to rate themselves on personality traits. A child or adult with a "masculine" identity scores high on traditionally masculine items (such as ambitious, competitive, and self-sufficient) and low on traditionally feminine items (such as affectionate, cheerful, and soft-spoken). Someone with a "feminine" identity does just the reverse. Although most people view themselves in gender-typed terms, a substantial minority (especially females) have a gender identity called **androgyny**, scoring high on both masculine and feminine characteristics.

Gender identity is a good predictor of psychological adjustment. Masculine and androgynous children and adults have higher self-esteem, whereas feminine individuals often think poorly of themselves, perhaps because many of their traits are not highly valued by society. Also, androgynous individuals are more adaptable in behavior-for example, able to show masculine independence or feminine sensitivity, depending on the situation. Research on androgyny shows that it is possible for children to acquire a mixture of positive qualities traditionally associated with each gender-an orientation that may best help them realize their potential.

13.5.4.a Emergence of Gender Identity. How do children develop a gender identity? According to *social learning theory,* behavior comes before self-perceptions. Preschoolers first acquire gender-typed responses through modeling and reinforcement. Only then do they organize these behaviors into gender-linked ideas about themselves. In contrast, *cognitive developmental theory* maintains that self-perceptions come before behavior. Over the preschool years, children first acquire a cognitive appreciation of the permanence of their sex. They develop **gender constancy**, the understanding that sex is biologically based and remains the same even if clothing, hairstyle, and play activities change. Then children use this idea to guide their behavior.

Because many young children do not see members of the opposite sex naked, they distinguish males and females using information they do have-the way each gender dresses and behaves. Although preschoolers who know about genital differences usually say a doll dressed in other-sex clothing is still the same sex, they do not justify their answer by referring to sex as an innate, unchanging quality of people. This suggests that cognitive immaturity, not social experience, is responsible for preschoolers' difficulty grasping the permanence of sex.

13.5.4b Gender Schema Theory. It is an information-processing approach to gender typing that combines social learning and cognitive-developmental features. It emphasizes that both environmental pressures and children's cognitions work together to shape gender-role development. At an early age, children respond to instruction from others, picking up gender-typed preferences and behaviors. At the same time, they start to organize their experiences into *gender schemas,* or masculine and feminine categories, that they use to interpret their world. A young child who says, "Only boys can be doctors;' or, "Cooking is a girl's job;' already has some well-formed gender schemas. As soon as preschoolers can label their own sex, they select gender schemas consistent with it, applying those categories to themselves. As a result, their self-perceptions become gender-typed and serve as additional schemas that children use to process information and guide their own behavior.

13.5.5 Reducing Gender Stereotyping in Young Children

Adults can begin by eliminating gender stereotyping from their own behavior and from

the alternatives they provide for children. For example, mothers and fathers can take turns making dinner, bathing children, and driving the family car. They can provide sons and daughters with both trucks and dolls and pink and blue clothing. Teachers can make sure that all children spend time in both adult-structured and unstructured activities. Also, efforts can be made to shield children from television and other media presentations that portray rigid gender differences.

Once children notice the vast array of gender stereotypes in their society, parents and teachers can point out exceptions. For example, they can arrange for children to see men and women pursuing nontraditional careers. And they can reason with children, explaining that interests and skills, not sex, should determine a person's occupation and activities. Research shows that such reasoning is very effective in reducing children's tendency to view the world in a gender-biased fashion. A rational approach to child rearing promotes healthy, adaptable functioning in many other areas as well.

Check Your Progress 3

Discuss the environmental factors that influence gender typing

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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13.6 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)	Self-concept development
ii)	Advances in Peer Sociability
iii)	Foundations of Morality development
iv)	environmental factors that enable gender typing
v)	Emergence of gender identity

13.7 Check Your Progress: Model Answers

5. The peer interaction changes over the preschool years involves:

vi)	parallel play
vii)	associative play
viii)	cooperative play
ix)	Cultural Variations
x)	First Friendships

6. The theories of moral development are:

i)	The Psychoanalytic Perspective
ii)	Social Learning Theory
iii)	The Cognitive-Developmental Perspective

7. The environmental factors that influence gender typing could be:

i)	The Family
ii)	Teachers
iii)	Peers
iv)	The Broader Social Environment

13.8. Lesson – End Activities

1. Mention about the concept of mortality from the psychoanalytic perspective.
2. Mention the effect of punishment.

13.9 References

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LESSON – 14

LATE CHILDHOOD - PIAGET'S THEORY: THE CONCRETE OPERATIONAL STAGE - LANGUAGE DEVELOPMENT - LEARNING IN SCHOOL. ERIKSON'S 'THEORY: INDUSTRY VERSUS INFERIORITY

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Contents

14.0 AIMS AND OBJECTIVES

This Lesson will help understand the characteristics and language development during late childhood.

After going through this Lesson, you will be able to:

xiv)   understand the various names used by parents, teachers and psychologists

xv)   mention the Piaget's concrete operational stage

xvi)   list development of language developments that takes place

xvii)   discuss the significance of school in learning

xviii) compare industry versus inferiority as stated by Erikson

14.1 INTRODUCTION

Late childhood extends from the age of six years to the time the individual becomes sexually mature. At both its beginning and end, late childhood is marked by conditions that profoundly affect a child's personal and social adjustments.

During the last year or two of childhood, marked physical changes take place and these, also, are responsible for changes in attitudes, values, and behavior as this period draws to a close and children prepare, physically and psychologically, for adolescence. The physical changes that take place at the close of childhood bring about a state of disequilibrium in which the accustomed pattern of life is disturbed and there is a temporary upset until adjust-

ments to the changes can be made.

Although it is possible to mark off the beginning of late childhood fairly accurately, one cannot be so precise about the time this period comes to an end because sexual maturity-the criterion used to divide childhood from adolescence-comes at varying ages.

This is because there are marked variations in the ages at which boys and girls become sexually mature. As a result, some children have a longer-than average late childhood, while for others it is shorter than average. For the average girl, late childhood extends from six to thirteen, a span of seven years; for boys, it extends from six to fourteen, a span of eight years.

14.2 CHARACTERISTICS OF LATE CHILDHOOD

Parents, educators, and psychologists apply various names to late childhood and these names reflect the important characteristics of the period.

14.2.1 Names Used by Parents

To many parents, late childhood is the *troublesome* **age**-the time when children are no longer willing to do what they are told to do and when they are more influenced by their peers than by their parents and other family members. Because most older children, especially boys, are careless and irresponsible about their clothes and other material possessions, parents regard late- childhood as the *sloppy* **age**-the time when children tend to be careless and slovenly about their appearance and when their rooms are so cluttered that it is almost impossible to get into them. Even when there are strict family rules about grooming and care of possessions, few older children adhere to these rules unless parents demand that they do so and threaten them with punishment.

In families where there are brothers and sisters, it is common for the boys of the family to pick on the girls and to ridicule them-a pattern of behavior that comes from their association with peers outside the home. When girls retaliate, quarrels ensue in which there is much name-calling or actual physical attacks. Because of this common pattern of behavior in families where there are siblings of both sexes, late childhood is regarded by many parents as the *quarrelsome* **age**-the time when family fights are common and when the emotional climate of the home is far from pleasant for all family members.

14.2.2 Name Used by Educators

They call late childhood the *elementary school* **age**. It is the time when the child is expected to acquire the rudiments of knowledge that are considered essential for successful adjustment to adult life. It is also the time when the child is expected to learn certain essential skills, both curricular and extracurricular.

Educators also regard late childhood as a *critical period* in the achievement drive-a time when Children form the habit of being achievers, underachievers or overachievers. Once formed, habits of working below, above, or up to one's capacity tend to persist into adulthood. It has been reported that the level of achievement behavior in childhood is highly correlated with achievement behavior in adulthood.

14.2.3 Names Used by Psychologists

To the psychologist, late childhood is the **gang age**-the time when children's major concern is acceptance by their agemates and membership in a gang, especially a gang with prestige in the eyes of their age-mates. Because of this absorbing concern, children are willing to conform to group-approved standards in terms of appearance, speech, and behavior. This has led psychologists to label late childhood as the age of *conformity.*

Recent studies of creativity have shown that older children, if unhampered by environmental restraints, by criticism, or by ridicule from adults or peers, will turn their energies into creative activities. As a result, psychologists label late childhood the *creative* age, the time in the life span when it will be determined whether children will become conformists or producers of new and original work. While the foundations for creative

expressions are laid in early childhood, the ability to use these foundations for original activities is generally not well developed before children reach the late childhood years.

Late childhood is frequently called the *play age* by psychologists, not because more time is devoted to play than at any other age-which would be impossible after the child enters school-but rather because there is an overlapping of play activities characteristic of the younger years and those characteristic of adolescence. It is thus the breadth of play interest and activities rather than the time spent in play that is responsible for giving the name *play* age to late childhood.

14.3 PIAGET'S THEORY: THE CONCRETE OPERATIONAL STAGE (285)

When Leela insisted that the amount of water had changed after it had been poured from a tall, narrow container into a short, wide one at an earlier age, now at age 8, when Leela returned, these tasks were easy. "Of course it's the same," she exclaimed. "The water's shorter but it's also wider. Pour it back," she instructed "You'll see, it's the same amount!"

14.3.1 Achievements of the Concrete Operational Stage

Leela has entered Piaget's **concrete operational stage**, which spans the years from 7 to 11. During this period, thought is far more logical, flexible, and organized than it was during early childhood.

- **Conservation**. The ability to pass *conservation tasks* provides clear evidence of *operations*--mental actions that obey logical rules. Notice how Leela is capable of **decentration**, focusing on several aspects of a problem and relating them, rather than centering on just one. Leela also demonstrates reversibility, the capacity to think through a series of steps and then mentally reverse direction, returning to the starting point. It is solidly achieved in late childhood.
- **Classification.** Between ages 7 and 10, children pass Piaget's *class inclusion problem*. This indicates that they are more aware of classification hierarchies and can focus on relations between a general category and two specific categories at the same time-that is, three relations at once. You can see this in children's play activities. Collections -stamps, coins, baseball cards, rocks, bottle caps, and more-become common in late childhood.
- **Seriation.** The ability to order items along a quantitative dimension, such as length or weight, is called **seriation.** To test for it, Piaget asked children to arrange sticks of different lengths from shortest to longest. Older preschoolers can create the series, but they do so haphazardly. They put the sticks in a row but make many errors. In contrast, 6- to 7-year-olds are guided by an orderly plan. They create the series efficiently by beginning with the smallest stick, then moving to the next largest, and so on, until the ordering is complete.

  The concrete operational child can also seriate mentally, ability called **transitive inference.** In a well-known transitive inference problem, Piaget showed children pairings of differently colored sticks. From observing that Stick A is longer than Stick B and Stick B is longer than Stick C, children must make the mental inference that A is longer than C. Notice how this task, like Piaget's class inclusion task, requires children to integrate three relations at once-in this instance, A-B, B-C, and A-C. About half of 6-year-olds perform well on such problems, and performance improves considerably around age 8.
- **Spatial Reasoning.** Piaget found that school-age youngsters have a more accurate understanding of space. Let's take two examples: understanding of directions and maps. *Directions*. When asked to name an object to the left or right of another person, 5- and 6-year-olds answer incorrectly; they apply their own frame of reference. Between 7 and 8 years, children start to perform *mental rotations,* in which they align the self's frame to match that of a person in a different orientation. As a result, they can identify left and right for positions they do not occupy. Around 8 to 10 years, children can give clear,

well-organized directions for how to get from one place to another by using a "mental walk" strategy in which they imagine another person's movements along a route. Without special prompting, 6-year-olds focus on the end point without describing exactly how to get there.

Maps. Children's drawings of familiar large-scale spaces, such as their neighborhood or school, also change from early to late childhood. Preschoolers and young school-age children display *landmarks* on the maps they draw, but their placement is fragmented. When asked to place stickers showing the location of desks and people on a map of their classroom, they perform better. But if the map is rotated relative to the orientation of the classroom, they have difficulty placing the stickers accurately.

During the school years, children's maps become more organized. They draw landmarks along an *organized route of travel*-an attainment that resembles their improved direction giving. By the end of late childhood, children combine landmarks and routes into an *overall view of a large-scale space*. And they readily draw and read maps when the orientation of the map and the space it represents do not match.

14.3.2 Limitations of Concrete Operational Thought

Although school-age children are far more capable problem solvers than they were during the preschool years, concrete operational thinking suffers from one important limitation. Children think in an organized, logical fashion only when dealing with concrete information they can perceive directly. Their mental operations work poorly with abstract ideas-ones not apparent in the real world.

Piaget used the term **horizontal decalage** (meaning development within a stage) to describe the gradual mastery of logical concepts. The horizontal decalage is another indication of the concrete operational child's difficulty with abstractions. School-age children do not come up with the general logical principles and then apply them to all relevant situations. Instead, they seem to work out the logic of each problem separately.

14.3.3 Evaluation of the Concrete Operational Stage

Piaget was correct that school-age youngsters approach a great many problems in systematic and rational ways not possible in early childhood. But whether this difference occurs because of *continuous* improvement in logical skills or *discontinuous* restructuring of children's thinking (as Piaget's stage idea assumes) is an issue that prompts much disagreement. Many researchers think that both types of change may be involved. From early to late childhood, children apply logical schemes to many more tasks. Yet in the process, their thought seems to undergo qualitative change-toward a comprehensive grasp of the underlying principles of logical thought. Piaget himself seems to have recognized this possibility in the very concept of the horizontal decalage. So perhaps some blend of Piagetian and information-processing ideas holds the greatest promise for understanding cognitive development in late childhood.

Check Your Progress 1

A. State the various names put forth during late childhood.

B. List the achievements of the concrete operational stage.

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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14.4 LANGUAGE DEVELOPMENT

Vocabulary, grammar, and pragmatics continue to develop in late childhood, although less obviously than at earlier ages. In addition, school-age children's attitude toward language undergoes a fundamental shift. They develop *language awareness.*

14.4.1 Vocabulary

As their knowledge becomes better organized, school-age children think about and use words more precisely. Word definitions offer examples of this change. Five- and 6-year-olds give concrete descriptions that refer to functions or appearance-for example, *knife:* "when you're cutting carrots"; *bicycle:* "it's got wheels, a chain, and handlebars:' By the end of elementary school, synonyms and explanations of categorical relationships appear-for example, *knife:* "something you could cut with. A saw is like a knife. It could also be a weapon". This advance reflects the older child's ability to deal with word meanings on an entirely verbal plane. Older children can add new words to their vocabulary simply by being given a definition.

School-age children's more reflective and analytical approach to language permits them to appreciate the multiple meanings of words. For example, they appreciate that many words, such as "cool" or "neat;' have psychological as well as physical meanings: "What a cool shirt!" or "That movie was really neat!" These grasp of double meanings permits 8- to 10-year-olds to comprehend subtle metaphors, such as "sharp as a tack" and "spilling the beans". It also leads to a change in children's humor. Riddles and puns that go back and forth between different meanings of a key word are common.

14.4.2 Grammar

During the school years, mastery of complex grammatical constructions improves. For example, English-speaking children use the passive voice more frequently, and it expands from an abbreviated structure ("It broke") into full statements ("The glass was broken by Mary"). Although the passive form is challenging, language input makes a difference.

Another grammatical achievement of late childhood is advanced understanding of infinitive phrases, such as the difference between "John is eager to please" and "John is easy to please". Like gains in vocabulary, appreciation of these subtle grammatical distinctions is supported by an improved ability to analyze and reflect on language.

14.4.3 Pragmatics

Improvements in *pragmatics,* the communicative side of language, also take place. Children adapt to the needs of listeners in challenging communicative situations, such as describing one object among a group of very similar objects. Whereas preschoolers tend to give ambiguous descriptions, such as "the red one;' school-age children are much more precise. They might say, "The round red one with stripes on it"

Conversational strategies also become more refined. For example, older children are better at phrasing things to get their way. When faced with an adult who refuses to hand over a desired object, 9-year-olds, but not 5-year-olds, state their second requests more politely. School age children are also more sensitive than preschoolers to distinctions between what people say and what they mean.

14.4.4 Learning Two Languages at a Time

Throughout the world, many children grow up *bilingual,* learning two languages, and sometimes more than two, during childhood.

- **Bilingual Development.** Children can become bilingual in two ways: (1) by acquiring both languages at the same time in early childhood, or (2) by learning a second language after mastering the first. Children of bilingual parents who teach them both languages in early childhood show no special problems with language development. They acquire

normal native ability in the language of their surrounding community and good to native ability in the second language, depending on their exposure to it. When children acquire a second language after they already speak a first language, they generally take 3 to 5 years to become as fluent as native-speaking age mates. Children who are fluent in two languages do better than others on tests of selective attention, analytical reasoning, concept formation, and cognitive flexibility. Also, bilingual children are advanced in ability to reflect on language. They are more aware that words are arbitrary symbols, more conscious of language structure and sounds, and better at noticing errors of grammar and meaning-capacities that enhance reading achievement.

- **Bilingual Education.** The advantages of bilingualism provide strong justification for bilingual education programs in schools. In Tamil Nadu, where both Tamil and English are official languages. Educators committed to truly *bilingual education*-developing children's native language while fostering mastery of English. Providing instruction in the native tongue lets children know that their heritage is respected. In addition, it prevents *semilingualism,* or inadequate proficiency in both languages. When children gradually lose the first language as a result of being taught the second, they end up limited in both languages for a time, a circumstance that leads to serious academic difficulties. Semilingualism is believed to contribute to high rates of school failure and dropout among low-SES youngsters.

Check Your Progress 2

Mention the language development during late childhood.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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14.5 LEARNING IN SCHOOL

Schools are vital forces in children's cognitive development. Schools exert a powerful influence on children. Looking at schools as complex social systems-at their class size, educational philosophies, teacher student interaction patterns, and larger cultural context - provides important insights.

14.5.1 Class Size

Class size influences children's learning. Small class students- scored higher in reading and math achievement and continued to do so after they returned to regular-size classes. Placing teacher's aides in regular-size classes had no impact. Instead, consistently being in small classes from kindergarten through third standard predicted substantially higher achievement from fourth through ninth standards.

Why is small class size beneficial? Teachers of fewer children spend less time disciplining and more time giving individual attention, and children's interactions with one another are more positive and cooperative. Also, children who learn in smaller groups show better concentration and higher-quality class participation and express more favorable attitudes toward school.

14.5.2 Educational Philosophies

Each teacher brings to the classroom an educational philosophy that plays a major role in children's learning. Two philosophical approaches have received the most research attention. They differ in what children are taught, the way they are believed to learn, and how their progress is evaluated.

- **Traditional versus Open Classrooms.** In a **traditional classroom,** the teacher is the sole authority for knowledge, rules, and decision m aking and does most of the talking. Students are relatively passive, listening, responding when called on, and completing teacher-assigned tasks. Their progress is evaluated by how well they keep pace with a uniform set of standards for their grade.

  In an **open classroom**, students are viewed as active agents in their own development. The teacher assumes a flexible authority role, sharing decision making with students, who learn at their own pace. Students are evaluated in relation to their own prior development; comparisons with same-age students are less important. A glance inside an open classroom reveals richly equipped learning centers, small groups of students working on tasks they choose themselves, and a teacher responding to individual needs.

- **New Philosophical Directions.** The philosophies of some teachers fall in between traditional and open. They want to foster high achievement as well as critical thinking, positive social relationships, and excitement about learning. Approaches to elementary education, grounded in Vygotsky's sociocultural theory, represent this point of view. Vygotsky's emphasis on the social origins of higher cognitive processes has inspired the following educational themes:

  - ❖ *Teachers and children as partners in learning.* A classroom rich in both teacher-child and child-child collaboration transfers culturally valued ways of thinking to children.
  - ❖ *Experiences with many types of symbolic communication in meaningful activities.* As children master reading, writing, and quantitative reasoning, they become aware of their culture's communication systems, reflect on their own thinking, and bring it under voluntary control.
  - ❖ *Teaching adapted to each child's zone of proximal development.* Assistance that is responsive to current understandings but that encourages children to take the next step helps ensure that each child makes the best progress possible.

14.5.3 Teacher-Student Interaction

Elementary school students describe good teachers as caring, helpful, and stimulating-characteristics positively associated with learning. Yet with respect to stimulation, a disappointing finding is that teachers emphasize rote, repetitive drill more than higher-level thinking, such as grappling with ideas and applying knowledge to new situations.

Of course, teachers do not interact in the same way with all children. Well-behaved, high-achieving students typically get more encouragement and praise, whereas unruly students are often criticized and rarely called on in class discussions. When they seek special help or permission, their requests are usually denied.

Unfortunately, once teachers' attitudes toward students are established, they are in danger of becoming more extreme than is warranted by children's behavior. Of special concern are educational self-fulfilling prophecies: Children may adopt teachers' positive or negative views and start to live up to them. This effect is especially strong when teachers emphasize competition and publicly compare children.

When teachers hold inaccurate views, poorly achieving students are more affected. High-achieving students have less room to improve when teachers think well of them, and they can fall back on their history of success when a teacher is critical. Low-achieving pupils' sensitivity to self-fulfilling prophecies enhances their school performance when teachers believe in them. But unfortunately, biased teacher judgments are usually slanted in a negative direction, so only rarely do poor achievers have a chance to reap these benefits.

14.5.4 Teaching Children with Special Needs

We have seen that effective teachers flexibly adjust their teaching strategies to accommodate pupils with a wide range of characteristics. But such adjustments are increasingly difficult at the very low and high ends of the ability distribution. The requirement changes to serve children with special learning needs.

- **Children with Learning Difficulties.** In **mainstreaming**, students with learning difficulties are placed in regular class rooms for part of the school day, a practice designed to prepare them better for participation in society. Largely due to parental pressures, mainstreaming has been extended to **full inclusion** –placement in regular classrooms full time.

  Some main streamed students are **mildly mentally retarded** – children who's IQs fall between 55 and 70 and who also show problems in adaptive behavior, or skills of everyday living. But the largest number-5 to 10 percent of school-age children have learning disabilities, great difficulty with one or more aspects of learning, usually reading. As a result, their achievement is considerably behind what would be expected on the basis of their IQ. The problems of these students cannot be traced to any obvious physical or emotional difficulty or to environmental disadvantage. Instead, subtle deficits in brain functioning seem to be involved. In most instances, the cause is unknown.

  Placement of these children in regular classes at providing appropriate academic experiences as well as integrated participation in classroom life is not positive. Although some main streamed and fully included students benefit academically, many do not. Achievement gains depend on both the severity of the disability and the support services available in the regular classroom. Furthermore, children with disabilities are often rejected by regular-classroom peers. Students with mental retardation are overwhelmed by the social skills of their classmates; they cannot interact quickly or adeptly in a conversation or game. And the processing deficits of some children with learning disabilities lead to problems in social awareness and responsiveness.

  These children do best when they receive instruction in a resource room for part of the day and in the regular classroom for the remainder-an arrangement that the majority of school-age children with learning disabilities can have. In the resource room, a special education teacher works with students on an individual and small group, basis. Then, depending on their progress, children join regular classmates for different subjects and amounts of time.

  Once children enter the regular classroom, special steps must to be taken to promote peer acceptance. Cooperative learning experiences in which children with learning difficulties and their classmates work together lead to friendly interaction and improved social acceptance. Teachers can also prepare children for the arrival of a student with special needs-a process best begun early, before children have become less accepting of peers with disabilities

- **Gifted Children**. Some children are gifted, displaying exceptional intellectual strengths. Their characteristics are diverse. In every grade, there could be one or two students with IQ scores above 130, the standard definition of giftedness based on intelligence test performance. High-IQ children are particularly quick at academic work. They have keen memories and an exceptional capacity to solve challenging academic problems. Yet recognition that intelligence tests do not sample the entire range of human mental skills has led to an expanded conception of giftedness in schools.

  Creativity and Talent. Creativity is the ability to produce work that is original yet appropriate-something others have not thought of that is useful in some way. High potential for creativity can result in a child being designated as gifted. Tests of creative

capacity tap **divergent thinking**-the generation of multiple and unusual possibilities when faced with a task or problem. Divergent thinking contrasts sharply with **convergent thinking**, which involves arriving at a single correct answer and is emphasized on intelligence tests.

Extreme giftedness often results in social isolation. The highly driven, nonconforming, and independent styles of many gifted children and adolescents lead them to spend more time alone, partly because of their rich inner lives and partly because solitude is necessary for them to develop their talents. Still, gifted children desire gratifying peer relationships and some-girls more often than boys-try to hide their abilities to become better liked. Compared with their ordinary agemates, gifted youths, especially girls, report more emotional and social difficulties, including low self-esteem and depression. Many talented youths become experts in their fields, few become highly creative. The skill involved in rapidly mastering an existing field is not the same as innovating in that field. The world, however, needs both experts and creators.

Educating the Gifted. Although programs for the gifted exist in many schools, debate about their effectiveness usually focuses on factors irrelevant to giftedness-whether to provide enrichment in regular classrooms, to pull children out for special instruction (the most common practice), or to advance brighter students to a higher grade. Children of all ages fare well academically and socially within each of these models. Yet the extent to which they foster creativity and talent depends on opportunities to acquire relevant skills.

Gardner's theory of multiple intelligences has inspired several model programs that provide enrichment to all students. Meaningful activities, each tapping a specific intelligence or set of intelligences, serve as contexts for assessing strengths and weaknesses and, on that basis, teaching new knowledge and original thinking.

14.6 Erikson's theory: Industry versus Inferiority

According to Erikson, the personality changes of the school years build on Freud's *latency stage*. Although Freud's theory is no longer widely accepted, children whose experiences have been positive enter late childhood with the calm confidence Freud intended by the term *latency.* Their energies are redirected from the make-believe of early childhood into realistic accomplishment.

Erikson believed that the combination of adult expectations and children's drive toward mastery sets the stage for the psychological conflict of late childhood: **industry versus inferiority**, which is resolved positively when experiences lead children to develop a sense of competence at useful skills and tasks. In cultures everywhere, improved physical and cognitive capacities mean that adults impose new demands. Children, in turn, are ready to meet these challenges and benefit from them.

In industrialized nations, the transition to late childhood is marked by the beginning of formal schooling. With it comes literacy training, which prepares children for the vast array of specialized careers in complex societies. In school, children become aware of their own and others' unique capacities, learn the value of division of labor, and develop a sense of moral commitment and responsibility. The danger at this stage is *inferiority,* reflected in the sad pessimism of children who have little confidence in their ability to do things well. This sense of inadequacy can develop when family life has not prepared children for school life or when experiences with teachers and peers are so negative that they destroy children's feelings of competence and mastery.

Erikson's sense of industry combines several developments of late childhood: a positive but realistic self-concept, pride in accomplishment, moral responsibility, and cooperative participation with agemates.

Check Your Progress 3

State the factors that cater to learning in school.

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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14.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Motor development during early child hood

ii)   Piaget's theory of Preoperational Stage

vi)   Vygotsky's Sociocultural Theory

vii)   Erikson's Theory of initiative versus guilt

viii)   Child Rearing and emotional and social development.

14.8 Check Your Progress: Model Answers

8. A. The various names put forth during late childhood could include:

i)   troublesome age

ii)   sloppy age

iii)   quarrelsome age

iv)   elementary school age

v)   gang age

vi)   play age

B. Achievements of the concrete operational stage are:

 i.Conservation

 ii.decentration

  iii.Classification

iv.Seriation

 v.Spatial Reasoning

9. The language development during late childhood includes:

i)   Vocabulary,

ii)   Grammar

iii)   pragmatics

iv)   Bilingual Development

10. The factors that cater to learning in school

i)   Class Size

ii)   Educational Philosophies

iii)   Teacher-Student Interaction

iv)   Teaching Children with Special Needs

14.9 Lesson – End Activities

1. Highlight the characteristics of creative children.

2. What type of student – teacher relationship you feel as important for effective learning.

14.10 References

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LESSON – 15
SELF- UNDERSTANDING – EMOTIONAL DEVELOPMENT - PEER RELATIONS - GENDER TYPING - FAMILY INFLUENCES - PROBLEMS OF DEVELOPMENT

Contents

15.0 AIMS AND OBJECTIVES

This Lesson will help understand the self understanding, emotional development, peer relations, gender and family influences during late child hood.

After going through this Lesson, you will be able to:
- xix)   List the emotional factors
- xx)   State the significance of peer relations
- xxi)   Mention the gender identity development
- xxii) Understand the family influence on development
- xxiii) Discuss the problems encountered by the child

15.1 INTRODUCTION

Several transformations in self-understanding take place in late childhood. First, children can describe themselves in terms of psychological traits. Second, they start to compare their own characteristics with those of their peers. Finally, they speculate about the causes of their strengths and weaknesses. These new ways of thinking about the self have a major impact on children's self-esteem.

15.1.1 Changes in Self-Concept

During the school years, children develop a much more refined *me-self,* or self-concept, organizing their observations of behaviors and internal states into general dispositions, with a major change taking place between ages 8 and 11.

Instead of specific behaviors, this child emphasizes competencies, as in "I'm a very good violinist". Also, they could clearly describe their personality and mentions both positive and negative traits-"truthful" but "not pretty". Older school-age children are far less likely than younger children to describe themselves in all-or-none ways. A major reason for these qualified self-descriptions is that school-age children often make *Social comparisons,* judging their appearance, abilities and behaviour in relation to those of others, Although 4- to 6-year-olds can compare their own performance to that of one peer, older children can compare multiple individuals, including themselves.

There are factors responsible for these revisions in self concept. Cognitive development affects the changing *structure* of the self--children's ability to combine typical experiences and behaviors into psychological dispositions. The *content* of self-concept is a product of both cognitive capacities and feedback from others. Sociologist George Herbert Mead proposed that a well-organized psychological self emerges when the child's *I-self* adopts a view of the *me-self* that resembles others' attitudes toward the child. Mead's ideas indicate that *perspective-taking skills-* in particular, an improved ability to infer what other people are thinking-are crucial for the development of a self-concept based on personality traits. During the school years, children become better at "reading" the messages they receive from others and incorporating these into their self-definitions. As school-age children internalize others' expectations, they form an *ideal self* that they use to evaluate their *real self.* A large discrepancy between the two can greatly undermine self-esteem, leading to sadness, hopelessness, and depression.

15.1.2 Development of Self-Esteem

Most preschoolers have very high self-esteem. As children move into late childhood, they receive much more feedback about their performance in different activities compared with that of their peers. As a result, self-esteem differentiates, and it also adjusts to a more realistic level.

15.1.2a A Hierarchically Structured Self-Esteem. When asked children to indicate the extent to which a variety of statements, such as, "1 am good at homework" or "I'm usually the one chosen for games;' are true of themselves. Answers reveal that by age 6 to 7, children have formed at least four self-esteems-academic competences, social competence, physical/athletic competence, and physical appearance-that become more refined with age. Furthermore, the capacity to view the self in terms of stable dispositions permits school-age children to combine their separate self-evaluations into a general psychological image of themselves-an overall sense of self-esteem. As a result, self-esteem takes on the hierarchical structure.

15.1.2b Changes in Level of Self-Esteem. As children evaluate themselves in various areas, self-esteem drops during the first few years of elementary school. Typically, this decline is not great enough to be harmful. Most (but not all) children appraise their characteristics and competencies realistically while maintaining an attitude of self-acceptance and self-respect. Then, from fourth to sixth standard, self-esteem rises for the majority of youngsters, who feel especially good about their peer relationships and athletic capabilities.

15.1.3 Influences on Self-Esteem

From late childhood on, strong relationships exist between self-esteem and everyday behavior. Academic self esteem predicts children's school achievement. Children with high

social self-esteem are better liked by peers. Boys come to believe they have more athletic talent than girls, and they are more advanced in a variety of physical skills. Furthermore, a profile of low self-esteem in all areas is linked to anxiety, depression, and increasing antisocial behavior. There are social influences that might lead self esteem to be high for some children and low for others.

15.1.3a Culture. Cultural forces profoundly affect self-esteem. For example, an especially strong emphasis on social comparison in school may explain why some children score lower in self-esteem than other children, despite their higher academic achievement. In Asian classrooms, competition is tough and achievement pressure is high. At the same time, Asian children less often call on social comparisons to promote their own self esteem. Because their culture values modesty and social harmony, they tend to be reserved about judging themselves positively but generous in their praise of others.

Furthermore, a widely accepted cultural belief is that boys' overall sense of self-esteem is higher than girls', yet the difference is small. Girls may think less well of themselves because they internalize this negative cultural message. Children and adolescents who attend schools or live in neighborhoods where their SES and ethnic groups are well represented feel a stronger sense of belonging and have fewer self-esteem problems.

15.1.3b Child-Rearing Practices. Children whose parents use an *authoritative* child-rearing style feel especially good about themselves. Warm, positive parenting lets children know that they are accepted as competent and worthwhile. And firm but appropriate expectations, backed up with explanations, seem to help children evaluate their own behavior against reasonable standards.

When parents help or make decisions for their youngsters when they do not need assistance, children often suffer from low self-esteem. These controlling parents communicate a sense of inadequacy to children. And overly tolerant, indulgent parenting is linked to unrealistically high self-esteem, which also undermines development. Children who feel superior to others tend to lash out at challenges to their overblown self-images and to have adjustment problems, including meanness and aggression.

15.1.3c Making Achievement-Related Attributions. *Attributions* are our common, everyday explanations for the causes of behavior. Children attribute their disappointing performance to *luck* and to their usual success to *ability*. Cognitive development permits school-age children to separate all these variables in explaining performance. Those who are high in academic self-esteem make *mastery-oriented attributions*, crediting their successes to ability-a characteristic they can improve through trying hard and can count on when faced with new challenges. And they attribute failure to factors that can be changed and controlled, such as insufficient effort or a very difficult task. So whether these children succeed or fail, they take an industrious, persistent approach to learning.

Unfortunately, children who develop **learned helplessness** attribute their failures, not their successes, to ability. When they succeed, they are likely to conclude that external factors, such as luck, are responsible. Furthermore, unlike their mastery-oriented counterparts, they have come to believe that ability is fixed and cannot be changed by trying hard. So when a task is difficult, these children experience an anxious loss of control-in Erikson's terms, a pervasive sense of inferiority. They give up before they have really tried.

15.1.3d Supporting Children's Self-Esteem At times, well-intended messages from adults undermine children's competence. *Attribution retraining* is an intervention that encourages learned-helpless children to believe that they can overcome failure by exerting more effort. Most often, children are given tasks hard enough so they will experience some failure. Then they get repeated feedback that helps them revise their attributions, such as, "You can do it if

you try harder." Children are also taught to view their successes as due to ability and effort rather than chance, by giving them additional feedback after they succeed, such as, "You're really good at this." Another approach is to encourage low-effort children to focus less on grades and more on mastering a task for its own sake. Instruction in meta cognition and self-regulation is also helpful, to make up for learning lost in this area and to ensure that renewed effort will payoff.

15.2 EMOTIONAL DEVELOPMENT

Greater self-awareness and social sensitivity support emotional development in late childhood. Gains take place in experience of self-conscious emotions, understanding of emotional states, and emotional self-regulation.

15.2.1 Self-Conscious Emotions

In late childhood, the self-conscious emotions of pride and guilt become clearly governed by personal responsibility. An adult need not be present for a new accomplishment to spark pride or for a transgression to arouse guilt. Also, children do not report guilt for any mishap, as they did at younger ages, but only for intentional wrongdoing, such as ignoring responsibilities, cheating, or lying.

Pride motivates children to take on further challenges. And guilt prompts them to make amends and strive for self improvement as well. But harsh, insensitive reprimands from adults-such as, "Everyone else can do it! Why can't you?" can lead to intense shame, which is particularly destructive. As children form an overall sense of self-esteem, they can take one or two unworthy acts to be the whole of self-worth, setting up maladaptive responses of high self-blame and passive retreat or intense anger at others who participated in the shame-evoking situation.

15.2.2 Emotional Understanding

School-age children's understanding of mental activity means that they are more likely to explain emotion by referring to internal states, such as happy or sad thoughts, than to external events-the focus of preschoolers. Older children are also more aware of the diversity of emotional experiences. Around age 8, children recognize that they can experience more than one emotion at a time, each of which may be positive or negative and differ in intensity. For example, recalling the birthday present a boy received from his grandmother, it reflected, "I was very happy that I got something but a little sad that I didn't get just what I wanted."

As with self-understanding, gains in emotional understanding are supported by cognitive development and social experiences, especially adults' sensitivity to children's feelings and willingness to discuss emotions. Together, these factors lead to a rise in empathy as well. As children move closer to adolescence, advances in perspective taking permit an empathic response not just to people's immediate distress, but also to their general life condition.

15.2.3 Emotional Self-Regulation

Rapid gains in emotional self-regulation occur in late childhood. As children engage in social comparison and care more about peer approval, they must learn to manage negative emotion that threatens their self-esteem.

By age 10, most children have an adaptive set of strategies for regulating emotion. In situations where they have some control over an outcome (an anxiety-provoking test at the end of the week), they view problem solving and seeking social support as the best strategies. When outcomes are beyond their control (having received a bad grade), they opt for distraction or redefining the situation ("Things could be worse. There'll be another test."). Compared with preschoolers, school-age children more often use these internal strategies to manage emotion, due to an improved ability to reflect on their thoughts and feelings.

When emotional self-regulation has developed well, school age children acquire a sense

of *emotional self-efficacy*--a feeling of being in control of their emotional experience. This fosters a favorable self-image and an optimistic outlook, which further help children face emotional challenges. Emotionally well-regulated children are generally upbeat in mood, more empathic and prosocial, and better liked by their peers. In contrast, poorly regulated children are overwhelmed by negative emotion, a response that interferes with prosocial behavior and peer acceptance.

Check Your Progress 1

Write the transformations in self-understanding and emotions that take place in late childhood

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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15.3 PEER RELATIONS

In late childhood, the society of peers becomes an increasingly important context for development. Peer contact, as we have seen, contributes to perspective taking and understanding of self and others. These developments, in turn, enhance peer interaction, which becomes more prosocial over the school years. In line with this change, aggression declines, but the drop is greatest for physical attacks.

15.3.1 Peer Groups

Watch children in the school yard or neighborhood, and notice how groups of three to a dozen or more often gather. The organization of these collectives changes greatly with age. By the end of late childhood, children display a strong desire for group belonging. They form **peer groups**, collectives that generate unique values and standards for behavior and a social structure of leaders and followers. Peer groups organize on the basis of proximity (being in the same classroom) and similarity in sex, ethnicity, and popularity.

The practices of these informal groups lead to a "peer culture" that typically consists of a specialized vocabulary, dress code, and place to "hang out" during leisure hours. Their activities included trading baseball cards, playing video games, and-just as important-keeping girls and adults out. Unfortunately, peer groups often direct their hostilities toward their own members, excluding no-longer "respected" children. The cast-outs are profoundly wounded, and many find new group ties hard to establish. Their previous behavior, including expressed contempt for outsiders, reduces their chances of being included elsewhere. Excluded children often turn to other low-status peers for group belonging.

15.3.2 Friendships

Whereas peer groups provide children with insight into larger social structures, one-to-one friendships contribute to the development of trust and sensitivity. During the school years, friendship becomes more complex and psychologically based. Friendship is no longer just a matter of engaging in the same activities. Instead, it is a mutually agreed-on relationship in which children like each other's personal qualities and respond to one another's needs and desires. And once a friendship forms, *trust* becomes its defining feature. School-age children state that a good friendship is based on acts of kindness that signify that each person can be counted on to support the other. Consequently, older children regard violations of trust, such as not helping when others need help, breaking promises, and gossiping behind the other's back, as serious breaches of friendship.

15.3.3 Peer Acceptance

Peer acceptance refers to **likability** – the extent which a child is viewed by a group of agemates, such as classmates, as a worthy social partner. It differs from friendship in that it is

not a mutual relationship. Rather, it is a one-sided perspective, involving the group's view of an individual. Nevertheless, some social skills that contribute to friendship also enhance peer acceptance. Consequently, better accepted children have more friends and better relationships with them.

Children's peer acceptance likeability reveal four different categories: **popular children**, who get many positive votes**; rejected children**, who are actively disliked; **controversial children**, who get a large number of positive and negative votes; and **neglected children**, who are seldom chosen, either positively or negatively.

Peer acceptance is a powerful predictor of psychological adjustment. Rejected children, especially, are unhappy, alienated, poorly achieving children with low self-esteem. Both teachers and parents rate them as having a wide range of emotional and social problems. Peer rejection in late childhood is also strongly associated with poor school performance, dropping out, antisocial behavior, and delinquency in adolescence and with criminality in young adulthood.

15.3.3a Determinants of Peer Acceptance. What causes one child to be liked and another to be rejected? A wealth of research reveals that social behavior plays a powerful role.

- *Popular Children*. Although most popular children are kind and considerate, a few are admired for their socially adept yet belligerent behavior. The large majority are popular prosocial children, who combine academic and social competence. They perform well in school and communicate with peers in sensitive, friendly, and cooperative ways. In contrast, popular-antisocial children largely consist of "tough" boys who are athletically skilled but poor students. Although they are aggressive, their peers view them as "cool;' perhaps because of their athletic ability and shrewd but devious social skills. Many are low-SES minority children who have concluded that they cannot succeed academically. Although their likability may offer some protection from future maladjustment, their poor school performance and antisocial behavior require intervention.

- *Rejected Children*. Rejected children display a wide range of negative social behaviors. The largest subgroup, **rejected-aggressive children**, show high rates of conflict, hostility, and hyperactive, inattentive, and impulsive behavior. They are also deficient in perspective taking and regulation of negative emotion. For example, they tend to misinterpret the innocent behaviours of peers as hostile, to blame others for their social difficulties, and to act on their angry feelings. In contrast, **rejected – withdrawn children** are passive and socially awkward. These timid children are overwhelmed by social anxiety, hold negative expectations for how peers will treat them, and are very concerned about being scorned and attacked. Because of their inept, submissive style of interaction, rejected-withdrawn children are at risk for abuse by bullies.

- *Controversial and Neglected Children*. Consistent with the mixed peer opinion they engender, controversial children display a blend of positive and negative social behaviors. Like rejected-aggressive children, they are hostile and disruptive, but they also engage in positive, prosocial acts. Even though some peers dislike them, they have qualities that protect them from social exclusion. As a result, they appear to be relatively happy and comfortable with their peer relationships.

   Finally, perhaps the most surprising finding is that neglected children, once thought to be in need of treatment, are usually well adjusted. Although they engage in low rates of in-teraction, the majority are just as socially skilled as average children. They do not report feeling especially lonely or unhappy, and when they want to, they can break away from their usual pattern of playing by themselves.

Check Your Progress 2

State the types of peer relations that are increasingly important for development

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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15.4 GENDER TYPING

Children's understanding of gender roles broadens in late childhood, and their gender-role identities (views of themselves as relatively masculine or feminine) change as well.

15.4.1 Gender-Stereotyped Beliefs

During the school years, children extend the gender-stereotyped beliefs they acquired in early childhood. As they think more about people as personalities, they label some traits as more typical of one gender than the other. For example, they regard "tough;' "aggressive;' "rational;' and "dominant" as masculine and "gentle;' "sympathetic;' and "dependent" as feminine-stereotyping that increases steadily with age. Children derive these distinctions from observing gender differences as well as from adult treatment. Parents, for example, use more directive speech (telling the child what to do) with girls, less often encourage girls to make their own decisions, and less often praise girls for accomplishment.

People *can* cross gender lines does not mean that children always *approve* of doing so. Children and adults are fairly tolerant of girls' violations of gender roles. But they judge boys' violations ("playing with dolls" or "wearing a dress") harshly-as just as bad as a moral transgression.

15.4.2 Gender Identity and Behavior

Boys' and girls' gender-role identities follow different paths in late childhood. From third to sixth grade, boys strengthen their identification with "masculine" personality traits, whereas girls' identification with "feminine" traits declines. Girls begin to describe themselves as having some "other-gender" characteristics. Whereas boys usually stick to "masculine" pursuits, girls experiment with a wider range of options. These changes are due to a mixture of cognitive and social forces. School-age children of both sexes are aware that society attaches greater prestige to "masculine" characteristics than "feminine" occupations. A tomboyish girl can make her way into boys' activities without losing status with her female peers, but a boy who hangs out with girls is likely to be ridiculed and rejected.

15.4.3 Cultural Influences on Gender Typing

Girls are less likely to experiment with "masculine" activities in cultures and subcultures in which the gap between male and female roles is especially wide. And when social and economic conditions make it necessary for boys to take over "feminine" tasks, their personalities and behavior are less stereotyped. In Nyansongo, a small agricultural settlement in Kenya, mothers work 4 to 5 hours a day in the gardens. They assign the care of young children, the tending of the cooking fire, and the washing of dishes to older siblings. Because children of both sexes perform these duties, girls are relieved of total responsibility for "feminine" tasks and have more time to interact with agemates.

Check Your Progress 3

Discuss how gender roles develops during late childhood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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15.5 FAMILY INFLUENCES

As children move into school, peer, and community contexts the parent-child relationship changes. At the same time, children's well-being continues to depend on the quality of family interaction.

15.5.1 Parent-Child Relationships

In late childhood, the amount of time children spend with parents declines dramatically. The child's growing independence means that parents must deal with new issues. Although parents face new concerns, child rearing becomes easier for those who established an authoritative style during the early years. Reasoning works more effectively with school-age children because of their greater capacity for logical thinking and increased respect for parents' expert knowledge. As children demonstrate that they can manage daily activities and responsibilities, effective parents gradually shift control from adult to child. This does not mean they let go entirely. Instead, they engage in **coregulation,** a transitional form of supervision in which they exercise general oversight while permitting children to be in charge of moment-by-moment decision-making.

Coregulation grows out of a cooperative relationship between parent and child-one based on give-and-take and mutual respect. Parents must guide and monitor from a distance and effectively communicate expectations when they are with their children. And children must inform parents of their whereabouts, activities, and problems so parents can intervene when necessary. Coregulation supports and protects children while preparing them for adolescence, when they will make many important decisions themselves.

15.5.2 Siblings

In addition to parents and friends, siblings are important sources of support for school-age children. Yet sibling rivalry tends to increase in late childhood. As children participate in a wider range of activities, parents often compare siblings' traits and accomplishments. The child who gets less parental affection, more disapproval, or fewer material resources is likely to be resentful.

When siblings are close in age and the same sex, parental comparisons are more frequent, resulting in more quarreling, antagonism, and poorer adjustment. This effect is particularly strong when parenting is cold or harsh. It is also strengthens when fathers prefer one child. Perhaps because fathers spend less time with children, their favoritism is more noticeable and triggers greater anger.

Parents can reduce these effects by making an effort not to compare children. Although conflict rises, school-age siblings continue to rely on each other for companionship and assistance. Siblings shared daily activities; older siblings often helped younger siblings with academic and peer challenges. And both offered one another help with family issues. Siblings whose parents are preoccupied and less involved with them sometimes fill in and become more supportive of one another.

15.5.3 Only Children

Contrary to popular belief, only children are not spoiled. Instead, they are as well adjusted as other children and advantaged in some respects. Children in one-child families score higher in self-esteem and achievement motivation. Consequently, they do better in school and attain higher levels of education. One reason may be that only children have somewhat closer relationships with their parents, who exert more pressure for mastery and accomplishment.

15.5.4 Divorce

Children's interactions with parents and siblings are affected by other aspects of family life. Children of divorce spend an average of 5 years in a single parent home, or almost a third of childhood. For many, divorce leads to new family relationships. About two-thirds of

divorced parents marry a second time. Half their children eventually experience a third major change-the end of a parent's second marriage.

These reveal that divorce is not a single event in the lives of parents and children. Instead, it is a transition that leads to a variety of new living arrangements, accompanied by changes in housing, income, and family roles and responsibilities. How well children fare depends on many factors: the custodial parent's psychological health, the child's characteristics, and social supports within the family and surrounding community.

15.5.5 Blended Families

Life in a single-parent family is often temporary. Many parents find a new partner within a few years. Entry into these *blended,* or *reconstituted, families* leads to a complex set of new relationships. For some children, this expanded family network is a positive turn of events that brings greater adult attention. But for most, it presents difficult adjustments. Stepparents often introduce new childrearing practices, and having to switch to new rules and expectations can be stressful. In addition, children often regard step relatives as "intruders:' but how well they adapt is, once again, related to the overall quality of family functioning. This often depends on which parent forms a new relationship and on the child's age and sex.

15.5.6 Maternal Employment and Dual-Earner Families

Today, single and married mothers are in the labor market in nearly equal proportions, and more than three-fourths of those with school-age children are employed. The impact of maternal employment on early development depends on the quality of child care and the continuing parent-child relationship. This same conclusion applies during later years.

- **Maternal Employment and Child Development.** Children of mothers who enjoy their work and remain committed to parenting show very favorable adjustment-higher self-esteem, more positive family and peer relations, less gender-stereotyped beliefs, and better grades in school. Girls, especially, profit from the image of female competence. Daughters of employed mothers perceive women's roles as involving more freedom of choice and satisfaction and are more achievement - and career-oriented.

  However, when employment places heavy demands on the mother's schedule, children are at risk for ineffective parenting. Working long hours and spending little time with school-age children are associated with less favorable adjustment. In contrast, part-time employment and flexible work schedules seem to have benefits for children of all ages, probably because these arrangements prevent work family role conflict, thereby helping parents meet children's needs.

- **Support for Employed Parents and Their Families.** In dual-earner families, the husband's willingness to share responsibilities helps the mother engage in effective parenting. If the father helps very little or not at all, the mother carries a double load, at home and at work, leading to fatigue, distress, and little time and energy for children. Employed mothers and dual-earner parents need assistance from work settings and communities in their child-rearing roles. Reduced work hours, flexible schedules, job sharing, and paid leave when children are ill help parents juggle the demands of work and child rearing. Equal pay and employment opportunities for women are also important.

Check Your Progress 4

Mention the quality of family interaction during late childhood.

Notes: a) Write your answer in the space given below.

　　　b) Check your answer with the one given at the end of this lesson.

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15.6 PROBLEMS OF DEVELOPMENT

There are a variety of stressful experiences that place children at risk for future problems. In the following sections, we touch on areas of concern: school age children's fears and anxieties and the consequences of child sexual abuse and look at the factors that help children cope effectively with stress.

15.6.1 Fears and Anxieties

Although fears of the dark, thunder and lightning, and supernatural beings (often stimulated by movies and television) persist into late childhood, children's anxieties are also directed toward new concerns. As children begin to understand the realities of the wider world, the possibility of personal harm (being robbed, stabbed, or shot) and media events (war and disasters) often trouble them. Other common worries include academic failure, parents' health, physical injuries, and peer rejection.

Most children handle their fears constructively, by talking about them with parents, teachers, and friends and relying on the more sophisticated emotional self-regulation strategies that develop in late childhood. Consequently, fears decline with age, especially for girls, who express more fears than boys throughout childhood and adolescence.

Severe childhood anxieties may arise from harsh living conditions. In inner-city slums and war-torn areas of the world, a great many children live in the midst of constant deprivation, chaos, and violence.

15.6.2 Child Sexual Abuse

Until recently, child sexual abuse was viewed as a rare occurrence. When children came forward with it, adults rarely took their claims seriously. Child sexual abuse is to be recognized as a serious and widespread problem.

- **Characteristics of Abusers and Victims.** Sexual abuse is committed against children of both sexes but more often against girls. Most cases are reported in late childhood, but sexual abuse also occurs at younger and older ages. For some victims, the abuse begins early in life and continues for many years.

  Generally, the abuser is male -a parent or someone the parent knows well. Often it is a father, stepfather, or live-in boyfriend, somewhat less often an uncle or older brother. In a few instances, mothers are the offenders, more often with sons. In the overwhelming majority of cases, the abuse is serious - vaginal or anal intercourse, oral-genital contact, fondling, and forced stimulation of the adult. Abusers make the child comply in a variety of distasteful ways, including deception, bribery, verbal intimidation, and physical force. Child sexual abuse are strongly linked to poverty, marital instability, and the resulting weakening of family ties. Children who live in homes with a history of constantly changing characters-repeated marriages, separations, and new partners-are especially vulnerable. But middle-SES children in stable families are also victims, although their victimization is more likely to remain undetected.

- **Consequences.** The adjustment problems of child sexual abuse victims are often severe. Depression, low self-esteem, mistrust of adults, and feelings of anger and hostility can persist for years after the abusive episodes. Younger children often react with sleep difficulties, loss of appetite, and generalized fearfulness. Adolescents may run away and show suicidal reactions, substance abuse, and delinquency.

15.6.3 Fostering Resiliency in Late childhood

Throughout late childhood-and other phases of development-children are confronted with challenging and sometimes threatening situations that require them to cope with psychological stress.

At the same time, only a modest relationship exists between stressful life experiences and psychological disturbance in childhood. The same is true when we look at school difficulties, family transitions, and child maltreatment. The three broad factors protect against

maladjustment: (1) the child's personal characteristics, including an easy temperament and a mastery-oriented approach to new situations; (2) a warm, well-organized family life; and (3) an adult outside the immediate family who offers a support system and a positive coping model.

Anyone of these ingredients of resiliency can account for why one child fares well and another poorly. Yet most of the time, personal and environmental factors are interconnected. Unfavorable life experiences increase the chances that children will act in ways that expose them to further hardship. And when negative conditions pile up, such as marital discord, poverty, crowded living conditions, neighborhood violence, and abuse, the rate of maladjustment multiplies.

Check Your Progress 5

Bring out the problems of development during late childhood.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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15.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

    i)   Changes in Self-Concept
    ii)   Development of Self-Esteem
    iii)   Emotional Development
    iv)   Peer relations and gender typing
    v)   Family Influences and problems of development

15.8 Check Your Progress: Model Answers

1. The transformations in self-understanding and emotions are:
    i)   Changes in Self-Concept
    ii)   Development of Self-Esteem
    iii)   Self-Conscious Emotions
    iv)   Emotional Understanding
    v)   Emotional Self-Regulation

2. The types of peer relations that are increasingly important for development include:
    i)   Peer Groups
    ii)   Friendships
    iii) Peer Acceptance

3. Gender roles development is affected by:
    i)   Gender-Stereotyped Beliefs
    ii)   Gender Identity and Behavior
    iii)   Cultural Influences on Gender Typing

4. Family interaction during late childhood includes:
    i)   Parent-Child Relationships
    ii)   Siblings
    iii)   Only Children
    iv)   Blended Families
    v)   Maternal Employment and Dual-Earner Families

5. The problems of development during late childhood
    i)   Fears and Anxieties
    ii)   Child Sexual Abuse

15.9 Lesson – End Activities

1. Explain how fear and anxiety influence the development.
2. Write short note on child abuse.

15.10 References

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UNIT IV
LESSON - 16
PUBERTY - BODY CHANGES -GROWTH SPURT - CONSEQUENCES OF ABSTRACT THOUGHT

Contents

16.0 AIMS AND OBJECTIVES

This Lesson will help you understand Puberty and the changes that happen during this period.

After going through this Lesson, you will be able to:

i)   State the characteristics of puberty
ii)   Mention the criteria and causes of puberty
iii)   Understand the changes in the body during puberty
iv)   Discuss the growth spurt
v)   List the consequences of abstract thought during puberty

16.1 INTRODUCTION

Puberty is the period in the developmental span when the child changes from an asexual to asexual being. It is the stage in development during which maturation of the sexual apparatus occurs and reproductive capacity is attained. It is accompanied by changes in somatic growth and psychological perspective.

The word *puberty* is derived from the Latin word *pubertas,* which means "age of manhood." It refers to the physical rather than the behavioral changes which occur when the individual becomes sexually mature and is capable of producing offspring. Most primitive people have, for centuries, recognized puberty as a time of importance in the life span of

every individual. It is customary for them to observe various rites in recognition of the fact that, as their bodies change, children are emerging from childhood into maturity. After successfully passing the tests that are a significant part of all puberty rites, boys and girls are granted the rights and privileges of adulthood and are expected to assume the responsibilities that accompany that state.

16.2 CHARACTERISTICS OF PUBERTY

Puberty is a unique and distinctive period and is characterized by certain developmental changes that occur at no other time in the life span. The most important of these are discussed below.

16.2.1 Puberty is an Overlapping Period

Puberty must be regarded as an overlapping period because it encompasses the closing years of childhood and the beginning years of adolescence. Until they are sexually mature, children are known as "pubescents" or "pubescent children." After they become sexually mature, they are known as "adolescents" or "young adolescents."

16.2.2 Puberty is a Short Period

Considering the many and extensive changes that take place inside the body as well as externally, puberty is a relatively short period, lasting from two to four years. Children who pass through puberty in two years or less are regarded as "rapid maturers," while those who require three to four years to complete the transformation into adults are regarded as "slow maturers." Girls, as a group, tend to mature more rapidly than boys, as a group, but there are marked variations within each sex group.

16.2.3 Puberty Is Divided into Stages

In spite of the fact that puberty is a relatively short period in the life span, it is customary to subdivide it into three stages-the prepubescent stage, the pubescent stage, and the postpubescent stage. When each of these three stages normally occurs and its characteristics are described below.

Stages of Puberty

- **Prepubescent Stage:** This stage overlaps the closing year or two of childhood when the child is regarded as a "prepubescent"-one who is no longer a child but not yet an adolescent. During the prepubescent (or "maturing") stage, the secondary sex characteristics begin to appear but the reproductive organs are not yet fully developed.
- **Pubescent Stage:** This stage occurs at the dividing line between childhood and adolescence; the time when the criteria of sexual maturity appear-the menarche in girls and the first nocturnal emissions in boys. During the pubescent (or "mature") stage, the secondary sex characteristics continue to develop and cells are produced in the sex organs.
- **Postpubescent Stage:** This stage overlaps the first year or two of adolescence. During this stage, the secondary sex characteristics become well developed and the sex organs begin to function in a mature manner.

16.2.4 Puberty is a Time of Rapid Growth and Change

Puberty is one of the two periods in the life span that are characterized by rapid growth and marked changes in body proportions. The other is the prenatal period and the first half of the first year of life. The latter is usually referred to as the "baby growth spurt."

The rapid growth and development that occur during puberty are generally referred to as the "adolescent growth spurt". More correctly, it is the "puberty growth spurt" because it precedes slightly or occurs simultaneously with the other changes of puberty. This growth spurt lasts for a year or two before children become sexually mature and continues for six

months to a year afterward. Thus the entire period of rapid growth lasts, for almost three years, slightly longer than the "baby growth spurt" which lasts for less than a year and a half. The rapid changes that take place during puberty lead to confusion, to feelings of inadequacy and insecurity, and in many cases to unfavorable behavior.

16.2.5 Puberty is a Negative Phase

Many years ago, Charlotte Buhler labeled puberty the *negative phase*. The term *phase* suggests a period of short duration; *negative* suggests that the individual takes an "anti" attitude toward life or seems to be losing some of the good qualities previously developed.

There is evidence that negative attitudes and behavior are characteristic mainly of the early part of puberty and that the worst of the negative phase is over when the individual becomes sexually mature. There is also evidence that the behavior characteristic of the "negative phase" of puberty is more pronounced in girls than in boys.

16.2.6 Puberty Occurs at a Variable Age

Puberty can occur at any time between the ages of five or six and nineteen years. However, the average girl in the Indian culture of today becomes sexually mature at thirteen and the average boy, a year later. There are also variations in the amount of time needed to complete the transformation process of puberty. These range from two to four years with girls, on the average, requiring slightly less time than boys.

Variations in the age at which puberty occurs and in the time needed to complete the transformation process of puberty create many personal as well as social problems for both boys and girls. It is the variations in timing of puberty rather than the changes associated with it that make puberty one of the most difficult, even though one of the shortest, periods in the life span.

Check Your Progress 1

Mention the Characteristics of Puberty.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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16.3 CRITERIA OF PUBERTY

The criteria most often used to determine the onset of puberty and to pinpoint a particular stage of puberty that the child has reached are the menarche, nocturnal emissions, evidence derived from chemical analysis of the urine and x-rays of bone development.

The *menarche,* or the first menstruation, is commonly used as a criterion of sexual maturity among girls, but it is neither the first nor the last of the physical changes that occur during puberty. When the menarche occurs, the sex organs and secondary sex characteristics have all started to develop, but none of them have yet reached a state of maturity. The menarche is more correctly considered a midpoint in puberty.

Among boys, a popularly used criterion of puberty is *nocturnal emissions*. During sleep, the penis sometimes becomes erect, and semen, or the fluid containing sperm cells, is released. This is a normal way for the male reproductive organ to rid itself of excessive amounts of semen. However, not all boys experience this phenomenon, and not all realize what it is. Furthermore, nocturnal emissions, like the menarche, occur after some puberty development has taken place and therefore cannot be used as an accurate criterion of the onset of puberty.

Chemical analysis of the first urine passed by boys in the morning has proved to be an effective technique for determining sexual maturity, as has analysis of girl's urine to see whether the female gonadotropic hormone, estrogen, is present. However, the practical

difficulty of obtaining specimens of the early-morning urine of boys and girls limits the use of this method.

X-rays of different parts of the body, but especially the hands and knees, during the preadolescent growth spurt can reveal whether puberty has begun and the rate at which puberty is progressing. To date, this has proved to be the most dependable method of determining sexual maturity, though it, like the chemical analysis of early-morning urine, involves certain practical difficulties that make its widespread use unfeasible.

16.4 CAUSES OF PUBERTY

Until the turn of the present century, the cause or causes of the physical changes that occur at puberty remained a mystery. With the growth of research in the field of endocrinology, medical science has been able to pinpoint the exact causes of these changes though, to date, endocrinologists have been unable to explain the variations in the age of puberty and in the time needed to complete the changes of puberty.

At the present time, it is known that about five years before children become sexually mature; there is a small excretion of the sex hormones in both boys and girls. The amount of hormones excreted increases as time passes and this eventually leads to the maturing of the structure and function of the sex organs.

It has been established that there is a close relationship between the pituitary gland, located at the base of the brain, and the gonads, or sex glands. The male gonads are the *testes,* and the female gonads are *ovaries*. The roles they play in bringing about the changes of puberty are described below.

16.4.1 Conditions Responsible for Puberty Changes

Role of the Pituitary Gland: The pituitary gland produces two hormones: the *growth hormone*, which is influential in determining the individual's size, and the *gonadotropic hormone*, which stimulates the gonads to increased activity. Just before puberty, there is a gradual increase in the amount of the gonadotropic hormone and an increased sensitivity of the gonads to this hormone; this initiates puberty changes.

*Role of the Gonads***:** With the growth and development of the gonads, the sex organs-the primary sex characteristics-increase in size-and become functionally mature, and the secondary sex characteristics, such as pubic hair, develop.

Interaction of the Pituitary Gland and the Gonads: The hormones produced by the gonads, which have been stimulated by the gonadotropic hormone produced by the pituitary gland, act in turn on this gland and cause a gradual reduction in the amount of growth hormone pro-duced, thus stopping the growth process. The interaction between the gonadotropic hormone and the gonads continues throughout the individual's reproductive life, gradually decreasing as women approach the menopause and men approach the climacteric.

16.5 BODY CHANGES AT PUBERTY

During the puberty growth spurt, four important physical changes occur which transform the child's body into that of an adult: changes in body size, changes in body proportions, the development of the primary sex characteristics, and the development of the-secondary sex characteristics.

16.5.1 Changes in Body Size

The first major physical change at puberty is change in body size in terms of height and weight. Among girls, the average annual increase in the year in the preceding the menarche is 3 inches, though a 5 to 6 –inch increase is not unusual. Two years preceding the menarche, the average increase is 2.5 inches, making a total increase of 5.5 inches in the two years preceding the menarche. After the menarche, the rate of growth slows down to about 1 inch a

year, coming to a standstill at around eighteen years.

For boys, the onset of the period of rapid growth in height comes, on the average, at 12.8 years and ends, on the average, at 15.3 years, with a peak occurring at fourteen years. The greatest increase in height comes in the year following the onset of puberty. After that, growth decelerates and continues at a slow rate until the age of twenty or twenty-one. Because of this longer growth period, boys achieve greater height by the time they are mature than girls do.

Weight gain during puberty comes not only from an increase in fat but also from an increase in bone and muscle tissue. Thus, even though pubescent boys and girls gain weight rapidly, they often look thin and scrawny. Girls experience the greatest weight gain just before and just after the menarche. Only slight increases in weight occur after that. For boys, the maximum gain in weight comes a year or later than for girls and reaches its peak at sixteen years, after which the gain is small.

It is not uncommon for both boys and girls to go through a fat period during puberty. Between the ages of ten and twelve, at or near the onset of the growth spurt, children tend to accumulate fat on the fat on the abdomen, around the nipples, in the hips and thighs, and in the cheeks, neck and jaw. This fat usually disappears-after pubertal maturing and rapid growth in height are well started, though it may remain for two more years during the early part of puberty.

16.5.2 Changes in Body Proportions

The second major physical change at puberty is change in body proportions. Certain areas of the body which, in the early years of life were proportionally much too small now become proportionally too big because they reach their mature size sooner than other areas. This is particularly apparent in the nose, feet, and hands. It is not until the latter part of adolescence that the body attains adult proportions in all areas, although the most pronounced changes take place before puberty is over.

The thin, long *trunk* of the older child begins to broaden at the hips and shoulders, and a waistline develops. This appears high at first because the legs grow proportionately more than the trunk. As the trunk lengthens, the waistline drops, thus giving the body adult proportions. The broadness of the hips and shoulders is influenced by the age of maturing. Boys who mature early usually have broader hips than boys who mature late and girls who mature late have slightly broader hips than early-maturing girls.

Just before puberty, the *legs* are disproportionately long in relation to the trunk and continue to be so until the child is approximately fifteen. In late maturing children, the leg growth continues for a longer time than in early maturers. The result is that the late maturer is a long-legged individual at maturity, while the early maturer is short-legged. The legs of the early maturer tend to be stocky, while those of the late maturer are generally slender.

Much the same pattern occurs in the *arms,* whose growth precedes the rapid spurt of growth in the trunk, thus making them seem disproportionately long. As is true of leg growth, the growth of the arms is affected by the age of maturing. Early maturers tend to have shorter arms than late maturers, just as the early maturer is shorter-legged than the late maturer. Not until the growth of the arms and legs is nearly complete do they seem to be in the right proportion to the hands and feet, both of which reach their mature size early in puberty.

16.5.3 Primary Sex Characteristics

The third major physical change at puberty is the growth and development of the primary sex characteristics, the sex organs. In the case of the male, the gonads or testes, which are located in the scrotum, or sac, outside the body, are only approximately 10 percent of their mature size at the age of fourteen years. Then there is a rapid growth for a year or two, after which growth slows down; the testes are fully developed by the age of twenty or twenty-one.

Shortly after the rapid growth of the testes begins, the growth of the penis accelerates markedly. The first growth is in length followed by a gradual increase in circumference. When the *male* reproductive organs have become mature in function, *nocturnal emissions* generally begin to occur, usually when the boy is having a sexually exciting dream, when he has a full bladder or is constipated, when he is wearing tight pajamas, or when is too warmly covered. Many boys are unaware of what is taking place until they see the telltale spot on their, bedclothes or pajamas.

All part of the *female* reproductive apparatus grows during puberty, though at different rates. The uterus of the average eleven- or twelve-year-old girl, for example, weighs 5.3 grams; by the age of sixteen, the average weight is 43 grams. The Fallopian tubes, ovaries, and vagina also grow rapidly at this time.

The first real indication that a girl's reproductive mechanism is becoming mature is the *menarche,* or first menstrual flow. This is the beginning of a series of periodic discharges of blood, mucus, and broken down cell tissue from the uterus that will occur approximately every twenty –eight days until the girl reaches the menopause, in the late forties or early fifties.

The girl's menstrual periods generally occur at very irregular intervals and vary markedly in length for-the first year or so. This period is known as the *stage of adolescent sterility.* During this time ovulation, or the ripening and release of a ripe ovum from a follicle in the ovary, does not occur, and the girl is therefore sterile. Even after several menstrual periods, it is questionable whether the girl's sex mechanism is mature enough to make conception possible.

The puberty fat period in girls, which usually levels off between sixteen and eighteen years, coincides with the period of adolescent sterility. At this time there is rapid growth in length in the uterus and in the weight of the ovaries.

16.5.4 Secondary Sex Characteristics

The fourth major physical change at puberty is the development of the secondary sex characteristics. These are the physical features which distinguish males from females and which make members of one sex appealing to members of the other sex. They are unrelated to reproduction though indirectly they are related by making males appealing to females and vice versa. That is why they are called "secondary" as compared with the sex organs proper which are called "primary" sex characteristics because they are directly related to reproduction. As long as the body remains childlike in appearance, there is no "sex appeal" This, however, changes when the secondary sex characteristics appear.

As puberty progresses, boys and girls become increasingly dissimilar in appearance. This change is caused by the gradual development of the secondary sex characteristics which, like other developments at puberty, follows a predictable pattern.

16.5.5 Important Secondary Sex Characteristics
Boys

Hair: Pubic hair appears about one year after the testes and penis have started to increase in size. Axillary's and facial hair appear when the pubic hair almost completed its growth, as does body hair. At first, all hair is scanty, lightly pigmented and fine in texture. Later it becomes darker, coarser, more luxuriant, and slightly kinky.

Skin: The skin becomes coarser, less transparent and sallow in colour, and the pores enlarge.

Glands: The sebaceous or oil-producing glands in the skin enlarge and become more active, which may cause acne. The apocrine glands in the armpits start to function, a perspiration increases as puberty progresses.

Muscles: The muscles increase markedly in size and strength, thus giving shape to the arms,

legs, and shoulders.

Voice: Voice changes begin after some pubic hair has appeared. The voice first becomes husky and later drops in pitch, increases in volume, and acquires a pleasanter tone. Voice breaks are common when maturing is rapid.

Breast Knots: Slight knobs around the male mammary glands appear between the ages of twelve and *fourteen.* These last for several weeks and then decrease in number and size.

Girls

Hips: The hips become wider and rounder, as a result of the enlargement of the pelvic bone and the development of subcutaneous fat

Breasts: Shortly after the hips start to enlarge, the breasts begin to develop. The nipples enlarge and protrude and, as the mammary glands develop, the breasts become larger and rounder.

Hair: Pubic hair appears after hip and breast development is well under way. Axillary hair begins to appear after the menarche, as does facial hair. Body hair appears on the limbs late in puberty. All hair except facial hair is straight and lightly pigmented at first and then becomes more luxuriant, coarser, darker, and slightly kinky.

Skin: The skin becomes coarser, thicker, and slightly sallow, and the pores enlarge.

Glands: The sebaceous and apocrine glands become more active as puberty progresses. Clogging of the sebaceous glands can cause acne, while the apocrine glands in the armpits produce perspiration, which is especially heavy and pungent just before and during the menstrual period.

Muscles: The muscles increase in size and strength, especially in the middle of puberty-and toward the end, thus giving shape to the shoulders, arms, and legs.

Voice: The voice becomes fuller and more melodious. Huskiness and breaks in the voice are rare among girls.

16.6 THE PUBERTY GROWTH SPURT

The puberty growth spurt for girls begins between 8.5 and 11.5 years, with a peak coming, on the average, at 12.5 years. From then on, the rate of growth slows down until growth gradually comes to a standstill between seventeen and eighteen years. Boys experience a similar pattern of rapid growth except that their growth spurt starts later and continues for a longer time. For boys, the growth spurt starts between 10.5 and 14.5 years, reaches a peak between 14.5 and 15.5 years, and is then followed by a gradual decline until twenty or twenty-one years, when growth is completed. Increases in height, weight, and strength come at approximately the same time.

The rapid growth and development that occur during puberty depend partly on hereditary factors, as they influence the endocrine glands, and partly on environmental factors, of which nutrition has been found to be the most important. Poor nutrition in childhood causes a diminished production of the growth hormone. Good nutrition, on the other hand, speeds up the production of this hormone. Emotional disturbances can affect growth b causing an over production of the adrenal steroids, which have an adverse effect on the growth hormone.

When the growth spurt of puberty is interfered with illness, poor nutrition, or prolonged emotional tension, there will be delayed fusion of the bones and children will not attain their full height. However, if such disturbances are detected in time and corrected, growth can be speeded up to three or four times its normal rate and continue at that rate until children reach their hereditary potentials. At the present time, there is no completely reliable way of predicting adult height from the percentage of adult height reached when the secondary sex characteristics begin to develop, or at any other time during the puberty growth spurt.

Check Your Progress 2

Explain the body changes during puberty

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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16.7 CONSEQUENCES OF ABSTRACT THOUGHT

The development of formal operations leads to dramatic revisions in the way adolescents see themselves, others, and the world in general. But just as adolescents are occasionally awkward in the use of their transformed bodies, they are initially faltering and clumsy in their abstract thinking. Parents and teachers must be careful not to mistake the many typical reactions of the teenage years-argumentativeness, self-concern, insensitive remarks, and indecisiveness-for anything other than inexperience with new reasoning powers.

16.7.1 Argumentativeness

As adolescents acquire formal operations, they are motivated to use them. The once pliable school-age child becomes a feisty, argumentative teenager who can marshal facts and ideas to build a case. Some parents remark "A simple, straightforward explanation used to be good enough to get a child to obey". Whereas "Now a thousand reasons. And worse yet, the finds a way to contradict them all!" as long as parent-child disagreements remain focused on principles and do not deteriorate into meaningless battles, they can promote development. Through discussions of family rules and practices, adolescents become more aware of their parents' values and the reasons behind them. Gradually, they come to see the validity of parental beliefs and adopt many as their own. Teenagers' capacity for effective argument also opens the door to intellectually stimulating pastimes, such as debate teams and endless discussion sessions with friends over moral, ethical, and political concerns. By proposing, justifying, criticizing, and defending a variety of solutions, adolescents often move to a higher level of understanding.

16.7.2 Self-Consciousness and Self-Focusing

Adolescents' ability to reflect on their own thoughts, combined with the physical and psychological changes they are undergoing, means that they start to think more about themselves. Piaget believed that a new form of egocentrism accompanies this stage: the inability to distinguish the abstract perspectives of self and other. As teenagers imagine what others must be thinking, two distorted images of the relation between self and other appear.

The first is called the imaginary audience, adolescents' belief that they are the focus of everyone else's attention and concern. Young teenagers regard themselves as always on stage. As a result, they become extremely self-conscious, often going to great lengths to avoid embarrassment. Sandhya, for example, woke up one Sunday morning with a large pimple on her chin. "I can't possibly go to temple!" she cried. "Everyone will notice how ugly I look." The imaginary audience helps us understand the hours adolescents spend inspecting every detail of their appearance. It also accounts for their sensitivity to public criticism. To teenagers, who believe that everyone is monitoring their performance, a critical remark from a parent or teacher can be mortifying.

A second cognitive distortion is the personal fable. Because teenagers are so sure that others are observing and thinking about them, they develop an inflated opinion of their own importance. They start to feel that they are special and unique. Many adolescents view themselves as reaching great heights of glory as well as sinking to unusual depths of despair-experiences that others could not possibly understand. As one teenager wrote in her diary, "My parents' lives are so ordinary, so stuck in a rut. Mine will be different. I'll realize my hopes and ambitions.' When combined with a sensation seeking personality, the personal fable seems to contribute to adolescent risk taking by convincing teenagers of their invul-

nerability. In one study, young people with both high personal fable and sensation-seeking scores took more sexual risks; more often used drugs, and committed more delinquent acts than their agemates.

The imaginary audience and personal fable are strongest during the transition to formal operations. They gradually decline as abstract reasoning becomes better established. Yet these distorted visions of the self may not represent a return to egocentrism. Instead, they seem to be an outgrowth of gains in perspective taking, which cause young teenagers to be very concerned with what others think. Adolescents also have emotional reasons for clinging to the idea that others are preoccupied with their appearance and behavior. Doing so helps them maintain a hold on important relationships as they struggle to separate from parents and establish an independent sense of self.

16.7.3 Idealism and Criticism

Because abstract thinking permits adolescents to go beyond the real to the possible, it opens up the world of the ideal and of perfection. Teenagers can imagine alternative family, religious, political, and moral systems, and they want to explore them. Doing so is part of investigating new realms of experience, developing larger social commitments, and defining their own values and preferences.

The idealism of teenagers leads them to construct grand visions of a perfect world-with no injustice, discrimination, or tasteless behavior. They do not make room for the shortcomings of everyday life. Adults, with their longer life experience, have a more realistic outlook. The disparity between adults' and teenagers' world views is often called the "**generation gap**," and it creates tension between parent and child. Aware of the perfect family against which their real parents and siblings do not measure up, adolescents may become fault-finding critics.

Teenage idealism and criticism are advantageous. Once adolescents learn to see others as having both strengths and weaknesses, they have a much greater capacity to work constructively for social change and to form positive and lasting relationships. Parents can help teenagers forge a better balance between the ideal and the real by tolerating their criticism while reminding the young person that all people are blends of virtues and imperfections.

16.7.4 Planning and Decision Making

Adolescents, who think more analytically, handle cognitive tasks more effectively than they did at younger ages. Given a homework assignment, they are far better at *cognitive self regulation*-planning what to do first and what to do next, monitoring progress toward a goal, and redirecting actions that prove unsuccessful. For this reason, study skills improve from middle childhood into adolescence.

But when it comes to planning and decision making in everyday life, teenagers (especially young ones) often feel over whelmed by the possibilities before them. Their efforts to choose among alternatives frequently break down, and they may resort to habit, act on impulse, or not make a decision at all. On many mornings, for example, Sandhya tried on five or six outfits before leaving for school. Often she shouted from the bedroom, "Mom, what shall I wear?" Then, when her mother Fatima made a suggestion, Sandhya rejected it, opting for one of the two or three sweaters she had worn for weeks. Similarly, Lakshman procrastinated about registering for college entrance tests. When Fatima mentioned that he was about to miss the deadline, Lakshman agonized over the forms, unable to decide when or where he wanted to take the test.

Everyday planning and decision making are challenging for teenagers because they have so many opportunities. When they were younger, adults usually specified their options, reducing the number of decisions that had to be made. As adolescents gather more experience, they

make choices with greater confidence.

Check Your Progress 3

Discuss the consequences of abstract thought

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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16.8 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Characteristics of Puberty
ii) Criteria of Puberty
iii) Causes of Puberty
iv) Body Changes at Puberty
v)   The Puberty Growth Spurt
vi) Consequences of Abstract Thought

16.9 Check Your Progress: Model Answers

1. The Characteristics of Puberty includes:
    i)   It is an Overlapping Period
    ii)   It is a Short Period
    iii) It is Divided into Stages
    iv)   It is a Time of Rapid Growth and Change
    v)   It is a Negative Phase
    vi)   It Occurs at a Variable Age
2. The body changes during puberty are:
    i)   Changes in Body Size
    ii)   Changes in Body Proportions
    iii) Primary Sex Characteristics
    iv)   Secondary Sex Characteristics
3. Consequences of abstract thought are in:
    i)   Argumentativeness
    ii)   Self-Consciousness and Self-Focusing
    iii) Idealism and Criticism
    iv)   Planning and Decision Making

16.10 Lesson – End Activities

1. Is it puberty is a negative phase.
2. Mention ways of effective decision making.

16.11 References

1. Symonds, P., The Dynamics of Human Adjustment, new York : Appleton, 1968.
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LESSON – 17
EFFECTS OF PUBERTY CHANGES - DEVIANT MATURING – HAZARDS DURING PUBERTY

Contents

17.0 AIMS AND OBJECTIVES

This Lesson will help you understand effects of puberty changes and the hazards during this period.

After going through this Lesson, you will be able to:

i)   state the effects of puberty
ii)   explain the concept of deviant maturing
iii) list the hazards that happen during puberty

17.1 INTRODUCTION

The physical changes of puberty affect every area of the body, both externally and internally, and thus it is not surprising that they also affect the pubescents physical and psychological well-being. Even though these effects are normally only temporary, they are severe enough while they last to bring about a change in habitual patterns of behavior, attitudes, and personality.

17.1.1 Effects on Physical Well-Being

Rapid growth and body changes are likely to be accompanied by fatigue listlessness, and other unfavourable symptoms. These discomforts are frequently made worse by an increase in duties and responsibilities, just at the time when the individual is least able to cope with them successfully.

Digestive disturbances are frequent, and appetite is finicky. The prepubescent child is upset by glandular changes and changes in the size and position of the internal organs. These changes interfere with the normal functions of digestion. Anemia is common at this period, not because of marked changes in blood chemistry; but because of erratic eating habits, which in turn increase the already present tendency to be tired and listless.

During the early menstrual periods, girls frequently experience headaches, backaches, cramps, and abdominal pain, accompanied by fainting, vomiting, skin irritations, and even swelling of the legs and ankles. As a result, they feel tired, depressed, and irritable at the time of their periods. As menstruation becomes more regular, the physical and psychological

disturbances which accompany its early appearances tend to diminish.

Headaches, backaches, and a general feeling of achiness occur at other times between menstruations. Both boys and girls suffer intermittently from these discomforts, their frequency and severity depending to a large extent upon how rapidly the pubescent changes are occurring and upon how healthy the individuals were when puberty began.

While puberty may be regarded as a "sickly age," when the individual is not up to par, relatively few diseases are characteristic of this period. If pubescent children were actually ill, they would be treated with more sympathy and understanding than they usually are; less would be expected of them, and much of their unsocial behavior would be understood and tolerated, which it rarely is.

17.1.2 Effects on Attitudes and Behavior

It is understandable that the widespread effects of puberty on children's physical well-being would also affect their attitudes and behavior. However, there is evidence that the changes in attitudes and behavior that occur at this time are more the result of social than of glandular changes, though the glandular changes unquestionably play some role through their influence on body homeostasis. The less sympathy and understanding the pubescent child receives from parents, siblings, teachers, and peers and the greater the social expectations at this time, the greater the psychological effects of the physical changes.

Girls, as a general rule, are more seriously affected by puberty than boys, partly because they usually mature more rapidly than boys and partly because more social restrictions begin to be placed on their behavior, just at a time when they are trying to free themselves from such restrictions.

17.1.3 Common Effects of Puberty Changes on Attitudes and Behavior

Desire for Isolation: When puberty changes begin, children usually withdraw from peer and family activities and often quarrel with peers and family member. They spend much time in a daydreaming about how misunderstood and mistreat they are and in experimenting with sex through masturbation. Part of this withdrawal syndrome Includes refusal to communicate with others.

Boredom: Pubescent children are bored with the play they formerly enjoy, with schoolwork, with social activities, and with life in general. As a result, they do as little work as they can, thus developing the habit of underachieving. This habit is accentuated by not feeling up to par physically.

In coordination: Rapid and uneven growth affects habitual patterns of coordination, and the pubescent child is clumsy and awkward for a time. As growth slows own, coordination gradually improves.

Social Antagonism: The pubescent child is often uncooperative, disagreeable, and antagonistic. Open hostility between the sexes, expressed constant criticism and derogatory comments, and is common at this age. As puberty progresses, the child becomes friendlier, more cooperative, and more tolerant of others.

Heightened Emotionality: Moodiness, sulkiness, temper outbursts, and a tendency to cry at the slightest provocation are characteristic of the early part of puberty. It is a time of worry, anxiety, and irritability. Depression, irritability, and negative moods are especially common during the premenstrual and early menstrual periods of girls. As pubescent children become more mature physically, they become less tense and exhibit more mature emotional behavior.

Loss of Self-Confidence: The pubescent child, formerly so self-assured, becomes lacking in self-confidence and fearful of failure. This is due partly to lowered physical resistance and partly to the constant criticism of adults and peers. Many boys and girls emerge from puberty with the foundations of an inferiority complex.

Excessive Modesty: The bodily changes that take place during puberty cause the child to become excessively modest for fear that others will notice these changes and comment on them unfavorably.

Because they reach puberty earlier, girls show signs of disruptive behavior sooner than boys do. However, girls' behavior stabilizes earlier than that of boys, and they begin to act more as they did before the onset of puberty, just as boys will do later.

How seriously puberty changes will affect behavior will be greatly influenced by the ability and willingness of pubescent children to communicate their concerns and anxieties to others and, in that way, get a new and better perspective on them. The affective reaction to change is largely determined by the capacity to communicate. Communication is a means of coping with anxiety which inevitably accompanies stress. Pubescent children who find it difficult or impossible to communicate with others exhibit more negative behavior than those who can and will communicate.

The psychological effects of puberty are also complicated by the social expectations of parents, teachers, and other adults. Boys and girls are expected to act according to certain standards appropriate for their ages. They find this relatively easy if their behavior patterns are at the appropriate developmental levels. However, children who are maturationally unready to fulfill the social expectations for their ages are likely to have problems.

Check Your Progress 1

State the effects of physical changes of puberty.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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17.2 EFFECTS OF DEVIANT MATURING

Children who are most affected by the physical changes that normally occur at puberty are the deviant maturers. A *deviant maturer* is one whose sexual maturation deviates by a year or more from the norm for the individual's sex group, in the time at which sexual maturation occurs, or by a year or more from the norm for the individual's sex group in the time needed to complete the maturation process. Children who mature sexually earlier than their sex group are called "**early maturers**" while those who mature sexually later than their sex groups are called "**late maturers**." When children require less than the normal time for their sex group to complete the maturational process they are known as "**rapid maturers**" while those who need more than the normal time are called "slow maturers."

17.2.1 Early versus Late Maturers

For *boys,* early maturing is advantageous, especially in the area of sports, from which they derive much of their prestige and status in the peer group. It is from the ranks of the early maturers that most of the leaders in *boys group*s *come,* and this gives them added prestige in the eyes of girls also.

By contrast, boys who are late maturers tend to be restless, tense, rebellious, and attention-seeking. Because of these unsocial patterns of behavior, they are less popular with both peers and adults and are far less often selected for leadership roles by their peers than early maturers are. In commenting on the disadvantages of late maturing for boys,

Early maturing is less advantageous *to girls* than it is to boys. Early-maturing girls are more grown-up and sophisticated in their behaviour, but their appearance and actions may lead to a reputation of being **"sexually promiscuous."** In addition, early-maturing girls are more out of step with their peers than early maturing boys, and this adds to their social problems. In commenting on the social problems the early maturing girl is confronted with.

Girls who are late maturers are less damaged psychologically than late-maturing boys. They are less likely to engage in status-seeking behavior than boys, though they are concerned about their normalcy, which they reflect in shy, retiring, diffident behavior. Because this is considered sex appropriate behavior for girls, it is not as damaging to their reputations as similar behavior in boys would be.

A study of social attitudes among members of the peer group toward early- and late-maturing boys and girls revealed that early-maturing boys were mentioned much more often in the school newspaper than late maturers, while the reverse was true for girls.

17.2.2 Rapid versus Slow Maturers

Rapid maturers face certain problems that slow maturers are spared. All of the common effects of puberty changes on attitudes and behavior tend to be exaggerated in rapid maturers. For example, in coordination as shown in clumsiness and awkwardness of behavior is exaggerated in rapid maturers because their bodies change in size so rapidly that they do not have time to learn to control them. By contrast, changes in body size in slow maturers come so slowly that children have time to learn to control their bodies and, as a result, they do not show the pronounced awkwardness and clumsiness so characteristic of rapid maturers.

Similarly, because rapid maturing tends to sap energy, rapid-maturing children become lethargic and perform below their potentials in whatever they do. As a result, they tend to become underachievers, a tendency which can and often does become habitual during the puberty years. Unless steps are taken to correct it, after the worst impact of puberty changes has passed, it is likely to become persistent and the child becomes a lifelong underachiever.

The speed of sexual maturing affects attitudes unfavorably mainly when children are slow maturers. While rapid maturers may be temporarily emotionally disturbed by their awkwardness and clumsiness and while periods of heightened emotionality may occur more frequently and more intensely in rapid than in slow maturers, rapid maturers have no cause for concern about whether they will ever turn into adults. They can almost see themselves doing so from one day to another.

By contrast, slow maturers are plagued by the fear that they will never turn into adults and by the constant reminders of how much more like adults their peers seem to be. They experience the same problems that late maturers experience because they lag behind their age-mates and, as a result, are treated by both adults and age-mates as if they were younger than they actually are.

Check Your Progress 2

Explain the effects of deviant maturing

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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17.3 HAZARDS OF PUBERTY

The hazards of puberty are generally serious mainly in terms of their long-range consequences. This contrasts with the earlier stages of development, when the hazards themselves tend to be more important than their long-term effects.

As is true of late childhood, the psychological hazards of puberty are more numerous and more far-reaching in their effects than the physical ones. Furthermore, only a small percentage of pubescent children are affected by the physical hazards, while all are affected by the psychological ones, though to varying degrees.

17.3.1 Physical Hazards

Even though most pubescent children do not feel up to par physically, actual illness is less

common during this period than at earlier ages. Mortality also occurs infrequently among pubescent children. Since they rarely suffer from illnesses severe enough to lead to death and since they are so inactive and socially withdrawn that accidents-a common cause of death in the years proceeding and following puberty-are infrequent, there is less likelihood of mortality at this time than ill the earlier or even the postpubescent years. Actually, many deaths reported as due to accidents are the result of suicide which pubescent children may attempt if they become severely depressed.

The major physical hazards of puberty are due to slight or major malfunctioning of the endocrine glands that control the puberty growth spurt and the sexual changes that take place at this time.

17.3.2 Effects of Endocrine imbalance at Puberty

Insufficient Growth Hormone: An insufficient amount of growth hormone in late childhood and early puberty causes the individual to be smaller than average at maturity.

Insufficient Gonadal Hormones: If the gonadal hormones are not released in adequate amounts soon enough to check the growth hormone, growth of the limbs continues too long, and the individual becomes larger than average. Insufficient amounts of gonadal hormones also affect the normal development of the sex organs and the secondary sex characteristics, with the result that the individual remains childlike or takes on characteristics of the opposite sex, depending on when the interruption in the developmental cycle occurs.

Excessive Supply of Gonadal Hormones: An imbalance in the functioning of the pituitary gland and the gonads can cause production of an excessive amount of gonadal hormones at a very young age, resulting in the onset of puberty sometimes as early as five or six years of age. This is known as precocious puberty or *Puberty precox.* While such children are sexually mature in that their sex organs have begun to function, they are still small in stature and the secondary sex characteristics are not as well developed as in those who mature at the usual age.

17.3.3 Psychological Hazards

There are many psychological hazards of puberty, the long-term effects of which are even more important than the immediate effects. It is this that makes the psychological hazards so serious. Some of the most important of the psychological hazards of puberty are discussed below.

Unfavorable Self-Concepts: Few children pass through puberty without developing unfavorable self concepts. This is true even of those who, earlier, had good opinions of themselves and who, as a result, had enough self-confidence to play leadership roles in their peer groups.

There are many reasons for the development of unfavorable self-concepts during puberty, some of which may be personal in origin and some environmental. Almost all pubescents have unrealistic concepts about what their appearance and abilities will be when they are grown up, concepts that often trace their origin to childhood days when the ideal self concept is being formed. As pubescents watch their bodies change and as they observe their awkward behavior and their tendencies toward obesity, they become increasingly disillusioned because what they observe is so far removed from what they had anticipated. This affects their self-concepts unfavorably.

Because pubescents tend to be unsocial if not actually antisocial in their behavior, the treatment they receive from others is affected by this. As a result, pubescents do not enjoy the social acceptance they may have had earlier, nor does it come up to their hopes and expectations. Unfavorable treatment from others seriously affects self-concepts, causing them to be colored by negative attitudes toward self.

When children develop unfavorable self-concepts, it is soon revealed in their behavior. They either become withdrawn from others, contributing little in actions or speech to the group, or they become aggressive and defensive, retaliating for what they regard as unfair treatment. Regardless-of what form of expression their unfavorable self-concepts take, pubescent children's behavior is such that it increases ""hat unfavorable social attitudes toward them already existed.

Like most of the psychological hazards of puberty, the long-term effects of unfavorable self-concepts are even more serious than the immediate effects. Children who develop unfavorable self-concepts at puberty are far more likely to reinforce these unfavorable self-concepts with their unsocial behavior than they are to improve them. As a result, the foundations for an inferiority complex are laid and, unless remedial steps are taken to correct it, it will likely become persistent and color the quality of the individual's behavior throughout the remainder of the life span.

Underachievement: With rapid physical growth comes a sapping of energy. This leads to disinclination to work and to attitudes of boredom toward any activities that require effort on the individual's part. While underachievement often begins around the fourth or fifth grade in school, when early enchantment with school gives way to disenchantment, it generally reaches its peak during puberty.

As girls accept the cultural stereotype about themselves, they realize that it is not regarded as "feminine" to be achievers, especially when 'their achievements surpass those of boys. This encourages girls to work below their capacities and increases the tendency to be underachievers caused by the sapping of physical strength which is a normal accompaniment of the rapid physical changes of puberty.

Once the tendency to work below one's capacities develops, it is likely to become habitual as it is reinforced, month after month, by the sapping of physical energy during the rapid growth period of puberty and by the cultural pressures on girls not to surpass boys in their achievements. As a result, many pubescents grow up to be underachievers, not only academically but also vocationally. They develop attitudes toward themselves and their abilities that reinforce their lack of motivation to try to do what they are capable of. Many enter adult life as general underachievers, a tendency to work below their capacities and potentials in whatever they undertake because they learned patterns of behavior and attitudes in puberty which have become habitual. Unless remedial steps are taken to correct them, they will lead to lifelong underachievement.

Lack **of** *Preparation for Puberty Changes*: When pubescent children are not informed about or are psychologically unprepared for both the physical and psychological changes that take place at puberty, undergoing these changes may be a traumatic experience, As a result, they are likely to develop unfavorable attitudes toward these changes-attitudes that are more apt to persist than to disappear. There are many reasons why children are often unprepared for puberty. Parents, for example, may lack adequate knowledge or they may be held back by modesty and embarrassment. Or, the gap that often develops between pubescent children and their parents prevents them from asking questions about the changes that are taking place in their bodies. In addition, to avoid embarrassment, pubescent children may pretend that they already know all they need to know. In that way they rebuff parental attempts to give them the information they want.

Unless the school gives courses in sex hygiene or provides information about puberty in connection with a physical hygiene course, children will not get the information they want at school nor will they be likely to turn to a teacher for help. This is partly because of embarrassment and partly because their attitudes toward school and toward teachers are more likely to be unfavorable than favorable at this time. They are also unlikely to turn to their classmates or friends for information, even if those classmates are better informed than they

are. Pride keeps most pubescent children from admitting that they know less than their friends know.

Regardless of the reason for inadequate preparation for puberty, it is a serious psychological hazard, especially in the case of early or late maturers. The reason for this is that it encourages them to think that something is wrong or that their development is so abnormal that they will never again look like their peers.

Being different is always a concern to children and young adolescents. The more they deviate in ways that are apparent to all, the more concerned they become and the more likely they are to feel abnormal and, consequently, inferior.

Acceptance **of** *Changed Bodies:* One of the important developmental tasks of puberty is acceptance of the changed body. Few pubescents are able to do this. As a result, they are dissatisfied with their appearance. Knowing how important appearance is in social acceptance, they often blame it for their less than-hoped-for acceptance.

There are many reasons why pubescent boys and girls are dissatisfied with their changed bodies and find it difficult to accept them. First, almost all children build up an ideal physical self-concept based on concepts from different sources of the ideal individual of their sex group. Few pubescents ever even remotely approach this ideal physique in real life. Under such conditions, they are dissatisfied with their looks and find it difficult to be self acceptant.

Second, traditional beliefs about a sex-appropriate appearance tend to color pubescent children's attitudes in ways that interfere with their acceptance of their own changed bodies. For example, since being flat-chested is generally considered unattractive and unfeminine in women, pubescent girls whose breasts are developing slowly may not only become concerned about their femininity but also are likely to become self-rejectant. In the same way, boys who accept the traditional belief that well-developed genitalia are a sign of masculinity become concerned and self-rejectant when their penises are long and thin before their final development has been completed.

Acceptance **of** *Socially Approved Sex Roles:* Like acceptance of the changed body, acceptance of the sex roles pubescents are expected to play as near-adults is one of the major developmental tasks of this age level. Throughout childhood, strong pressure is put on boys to play the socially approved masculine sex role which, in most social groups, is the traditional role which emphasizes the superiority of members of the male sex.

Because of the advantages and prestige associated with the traditional male sex role, most boys are not only willing but also eager to play it. Before late childhood is over most boys have not only accepted the stereotype of the traditional male but they have been sex-role typed to the point where their behavior closely conforms to this stereotype. Consequently, during puberty, acceptance of the sex role they are expected to playas near-adults presents no real problem for pubescent boys and, consequently, cannot be regarded as a psychological hazard for them.

This, however, is by no means true of girls. Having been far less strictly sex-role typed during childhood then boys, and having a somewhat blurred concept of the sex role they will be expected to play as adults, girls are now confronted with the problem of accepting the traditional stereotype of the female and of behaving in a manner that conforms to this stereotype.

For some pubescent girls, this presents few problems because they, like boys, have learned to play the traditional sex role throughout the childhood years. For other girls, by contrast, this may be a major psychological hazard to good personal and social adjustments. Not only do they prefer the egalitarian to the traditional sex role but they have, at home and to some extent in the play group, learned to play this role. Being expected, at puberty, to accept a role that is less to their liking and less prestigious than the role they have played

through childhood is a psychological hazard for them.

For many pubescent girls, the psychological hazard of acceptance of the traditional female sex role is intensified by the periodic discomforts they suffer at the time of their menstrual periods. While not all girls are subject to these discomforts, most are during the early months of puberty, while the sex organs are still only partially developed and therefore unready to function in rhythmic manner as they will later.

The realization that boys are not subject to periodic discomforts similar to those they experience at the times of their menstrual periods intensifies the resistance of many girls to accept the traditional female sex role. Unfavorable attitudes toward menstruation are often intensified by the unfavorable social attitudes of older women who often refer to it as the "curse" and who emphasize the role it plays in the traditional female sex role.

It has been reported that, unfortunately, the unfavorable attitudes toward menstruation, developed at puberty, often continue throughout life. As a result, they cause women to become even more depressed at the time of their menstrual periods than would be justified on the basis of the discomforts involved. For example, attempts at suicide among women occur more frequently during menstrual periods than at other times.

Deviations in Sexual Maturing: Unquestionably one of the most serious psychological hazards during puberty is a deviation in the age at which sexual maturing occurs or in the time needed for the maturing. This hazard, of course, affects only those children who are deviant enough from their age-mates in this aspect of their development to be recognized by them as "different."

As is true of the late childhood years, it is difficult for pubescent children to be acceptant about anything that makes them different and thus, in their view, inferior. Deviations in sexual maturing, regardless of what form they take, are a potential psychological hazard. Children who deviate from their age-mates in sexual maturing feel that there is something wrong with them. They are concerned about their normalcy and about their future normalcy. If, for example, children deviate from their age-mates in height at puberty, they worry about their adult height.

Early maturers, There are distinct social advantages in most cultures over late maturing youths, but youths who mature 'too early' may manifest personality difficulties. These dif-ficulties come from the fact that early maturers, who look older than they actually are, are usually expected to act in accordance with their appearance rather than in accordance with their chronological age. If they fail to do so, they are criticized and this leads to resentments as well as feelings of inadequacy and inferiority. Studies of school dropouts have suggested that early maturing is a common cause of dropping out. The reason for this is that teachers, like parents, tend to expect more of early maturers than they are capable of and, as a result, early maturers often see school as hostile and rejecting. There is no question about the fact that all the normal effects of puberty-heightened emotionality, awkwardness, and so forth -are accentuated in early maturers. This intensifies their feelings of inferiority.

Late maturers, who look younger than they are, may be treated accordingly by friends and adults. This makes them doubt their ability to do what their agemates do. *Slow maturers* have more time to adjust to the physical changes of puberty than rapid maturers or those who mature at a normal rate. But concern about whether they will ever grow up counteracts this favorable effect and encourages their belief that they are inferior to their age-mates. In the case of boys, this may and often does lead to the "locker room" syndrome. It means that "In a culture where athletic prowess is often as important, and sometimes more important, than academic and creative achievement, a student's self-image is shaped by his perception of his physical ability in relation to his classmates". Being weaker and less well developed than they causes those who lag behind their age-mates in sexual maturing to feel inferior.

Serious as the immediate effects of deviant sexual maturing are to children's personal

and social adjustments, the *long-term effects* are even more serious. In the case of slow maturers, damage results from the fact that they have longer than average time during which to develop the undesirable patterns of behavior associated with puberty, although this need not necessarily be permanently handicapping.

Some may develop into habitual daydreamers; some may develop a hypercritical, frictional attitude toward others; and some may develop into restless people who find it difficult to concentrate on any task. But if their desire for social acceptance is strong enough and if they are able to achieve a reasonable amount of social acceptance, they will be sufficiently motivated to break these habits and replace them with more socially acceptable patterns of behavior.

Not all those who deviate from the norm-the early and late maturers-are damaged permanently by this. Some, in fact, benefit, not only during puberty, but in later years as well. Although studies of the long-term effects on behavior have so far been limited to boys, evidence from these studies and knowledge of the effects of reinforcement through repetition enable us to hazard a guess concerning what the long-term effects on girls might be.

Early" maturing boys normally become socially active and popular, holding leadership roles in the peer group. They have assets that are valued in the peer group, and as a result of repetition, these develop into habitual patterns of behavior. The early maturers are more successful vocationally and socially as adults, just as they were during adolescence. Their success stems from the fact that they make better impressions on others than the normal or late maturers.

By contrast, middle-aged men who were late maturers were found to cling to the "little-boy" patterns of behavior which caused them to be unpopular when they were younger. Thus late maturers tend to be less active socially, less successful in business, and less likely to be selected for leadership roles than might be expected on the basis of their abilities.

Speculation about the long-term effects of deviant maturing on girls leads one to believe that early maturers who were embarrassed about being larger than their contemporaries and who often developed aggressive patterns of behavior to attract the attention of boys will continue to show similar patterns of behavior as adult women. Late maturers, by contrast, who were better adjusted personally and socially in adolescence, are likely to continue to be so during adulthood, unless conditions unrelated to sexual maturing interfere with this pattern.

Check Your Progress 3

Discuss the hazards during puberty

Notes: a) Write your answer in the space given below.

   b) Check your answer with the one given at the end of this lesson.

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17.4 LET US SUM UP

In this Lesson, we have touched upon the following points:

   i)   Effects on Physical Well-Being
   ii)   Effects on Attitudes and Behavior
   iii)   Common Effects of Puberty Changes on Attitudes and Behavior
   iv)   Effects of Deviant Maturing
   v)   Early versus Late Maturers
   vi)   Hazards of Puberty
   vii)   Physical Hazards
   viii)   Effects of Endocrine Imbalance at Puberty
   ix)   Psychological Hazards

17.5 Check Your Progress: Model Answers

1. The effects of physical changes include:
    i)   The Effects on Physical Well-Being
    ii)   Effects on Attitudes and Behavior
    iii)   Common Effects of Puberty Changes on Attitudes and Behavior
2. The effects of deviant maturing are:
    i)   early maturers
    ii)   late maturers
    iii)   rapid maturers
3. The hazards during puberty include:
    i)   Physical Hazards
    ii)   Effects of Endocrine Imbalance at Puberty
    iii)   Psychological Hazards

17.6 Lesson – End Activities

1. Mention the negative effects of early puberty.
2. Mention few characteristics of early matures.

17.7 References

1. Freud, S. Three Essays on the theory of Sexuality.
2. Freud, S. Beyond the Pleasure Principle, New York : Liverignt, 1968.

LESSON - 18
ADOLESCENCE - CHARACTERISTICS - DEVELOPMENTAL TASKS - PIAGET'S THEORY: THE FORMAL OPERATIONAL STAGE - COGNITIVE DEVELOPMENT

Contents

18.0 AIMS AND OBJECTIVES

This Lesson will help you understand adolescence its characteristics, developmental tasks, the physical changes and the cognitive development during this period.

After going through this Lesson, you will be able to:

vi) State the characteristics of adolescence
vii) Mention the developmental tasks of adolescence
viii) List the physical changes that happen during adolescence
ix) Discuss the Piaget's formal operational stage
x) Explain the cognitive development

18.1 INTRODUCTION

The word *adolescence* comes from the Latin word *adolescere,* meaning **"to grow"** or **"to grow to maturity."** Primitive peoples-as was true also in earlier civilizations--do not consider puberty and adolescence to be distinct periods in the life span; the child is regarded as an adult when capable of reproduction. As it is used today, the term *adolescence* has a broader meaning. It includes mental, emotional, and social maturity as well as physical maturity.

18.2 CHARACTERISTICS OF ADOLESCENCE

Like every important period during the life span, adolescence has certain characteristics that distinguish it from the periods that preceded it and the periods that will follow it. These characteristics are explained briefly below.

18.2.1 Adolescence is an important period

As all periods in the life span are important, some are more important than others because of their immediate effects on attitudes and behavior, whereas others are significant because of their long term effects. Adolescence is one of the periods when both the immediate effects and long-term effects are important. Some periods are important for their physical and some for their psychological effects. Adolescence is important for both. Accompanying these rapid and important physical developments, especially during the early adolescent period, rapid mental developments occur. These give rise to the need for mental adjustments and the necessity for establishing new attitudes, values and interests.

18.2.2 Adolescence is a transitional period

Transition does not mean a break with or a change from what has gone before but rather a passage from one stage of development to another. This means that what has happened before will leave its mark on what happens now and in the future. Children, when they go from childhood to adulthood, must "put away childish things" and they must also learn new patterns of behavior and attitudes to replace those they have abandoned.

However, it is important to realize that what happened earlier has left its mark and will influence these new patterns of behavior and attitudes. The psychic structure of the adolescent has its roots in childhood and many of its characteristics that are generally considered as typical of adolescence appear and are already present during late childhood. The physical changes that take place during the early years of adolescence affect the individual's behavioral level and lead to reevaluations and a shifting adjustment of values.

During any transitional period, the individual's status is vague and there is confusion about the roles the individual is expected to play. The adolescent, at this time, is neither a child nor an adult. If adolescents behave like children, they are told to "act their age." If they try to act like adults, they are often accused of being "too big for their behaviours" and are reproved for their attempts to act like adults. On the other hand, the ambiguous status of today's adolescents is advantageous in that it gives them time to try out different lifestyles and decide what patterns of behavior, values, and attitudes meet their needs best .

18.2.3 Adolescence is a period of change

The rate of change in attitudes and behavior during adolescence parallels the rate of physical change. During early adolescence, when physical changes are rapid, changes in attitudes and behavior are also rapid. As physical changes slow down, so do attitudinal and behavioral changes.

There are five almost universal concomitants of the changes that occur during adolescence. The first is heightened emotionality, the intensity of which depends on the rate at which the physical and psychological changes are taking place. Because these changes normally occur more rapidly during early adolescence, heightened emotionality is generally more pronounced in early than in late adolescence.

Second, the rapid changes that accompany sexual maturing make young adolescents unsure of themselves, of their capacities, and of their interests. They have strong feelings of instability which are often intensified by the ambiguous treatment they receive from parents and teachers.

Third, changes in their bodies, their interests, and in the roles the social group expects them to play create new problems. To young adolescents, these may seem more numerous and less easily solved than any they have had to face before. Until they have solved their

problems to their satisfaction, they will be preoccupied with them and with themselves.

Fourth, as interests and behavior patterns change, so do values. What was important to them as children seems less important to them now that they are near-adults. For example, most adolescents no longer think that a large number of friends is a more important indication of popularity than friends of the type that are admired and respected by their peers. They now recognize quality as more important than quantity.

Fifth, most adolescents are ambivalent about changes. While they want and demand independence, they often dread the responsibilities that go with independence and question their ability to cope with these responsibilities.

18.2.4 Adolescence is a Problem Age

While every age has its problems, those of adolescence are often especially difficult for boys and girls to cope with. There are two reasons for this. First, throughout childhood, their problems were met and solved, in part at least, by parents and teachers. As a result, many adolescents are inexperienced in coping with problems alone. Second, because adolescents want to feel that they are independent, they demand the right of coping with their own problems, rebuffing attempts on the part of parents and teachers to help them.

Because of their inability to cope with problems alone as well as they believe they can, many adolescents find that the solutions do not always come up to their expectations. As Anna Freud has explained, "Many failures, often with tragic consequences in these respects, are due not to the individual's incapacity as such but merely to the fact that such demands are made on him at a time in life when all his energies are engaged otherwise, namely, in trying to solve the major problem created for him by normal sexual growth and development".

18.2.5 Adolescence is a Time of Search for Identity

Throughout the gang age of late childhood, conformity to group standards is far more important to older children than individuality. As was pointed out earlier, in dress, speech, and behavior older children want to be as nearly like their gang-mates as possible. Any deviation from the group standard is likely to be a threat to group belonging.

In the early years of adolescence, conformity to the group is still important to boys and girls. Gradually, they begin to crave identity and are no longer satisfied to be like their peers in every respect, as they were earlier.

However, the ambiguous status of the adolescent in the Indian culture of today presents a dilemma that greatly contributes to the adolescent "identity crisis" or the problem of ego-identity.

The ways adolescents try to establish themselves as individuals is by the use of status symbols in the form of cars, clothes, hand held music systems, mobile phones, net chat and other readily observable material possessions. They hope, in this way, to attract attention to them and to be recognized as individuals while, at the same time, maintaining their identity with the peer group.

18.2.6 Adolescence is a Dreaded Age

Many popular beliefs about adolescents have definite evaluative connotations and, unfortunately, many of them are negative. Acceptance of the cultural stereotype of teenagers as sloppy, unreliable individuals who are inclined toward destructiveness and antisocial behavior has led many adults who must guide and supervise the lives of young adolescents to dread this responsibility and to be unsympathetic in their attitudes toward, and treatment of, normal adolescent behavior.

Popular stereotypes have also influenced the self-concepts and attitudes of adolescents toward themselves. The cultural stereotypes have also functioned as mirrors held up to the adolescent by society reflecting an image of himself that the adolescent gradually comes to regard as authentic and according to which he shapes his behavior. The acceptance of this

stereotype and the belief that adults have poor opinions of them make the transition into adulthood difficult. By so doing, it leads to much friction with their parents and places a barrier between them and their parents which prevents them from turning to their parents for help in solving their problems.

18.2.7 Adolescence is a Time of Unrealism

Adolescents have a tendency to look at life through rose-tinted glasses. They see themselves and others as they would like them to be rather than as they are. This is especially true of adolescent aspirations. These unrealistic aspirations, not only for themselves but also for their families and friends, are, in part, responsible for the heightened emotionality characteristic of early adolescence. The more unrealistic their aspirations are, the more angry, hurt, and disappointed they will be when they feel that others have let them down or that they have not lived up to the goals they set for themselves.

With increased personal and social experiences, and with increased ability to think rationally, older adolescents see themselves, their families and friends, and life in general in a more realistic way: As a result, they suffer less from disappointment and disillusionment than they did when they were younger. This is one of the conditions that contribute to the greater happiness of the older adolescent.

As adolescence draws to a close, it is not uncommon for both boys and girls to be plagued by over idealism of the single, carefree life that they will soon give up as they achieve the status of adults. Feeling that this period of their lives is happier than what they will face in adulthood, with its demands and responsibilities, there is a tendency to glamorize adolescence and to feel that a happy, carefree age has been lost forever.

18.2.8 Adolescence is the Threshold of Adulthood

As adolescents approach legal maturity, they are anxious to shed the stereotype of teenagers and to create the impression that they are near-adults. Dressing and acting like adults, are not always enough. So, they begin to concentrate on behavior that is associated with the adult status-smoking, drinking, using drugs, and engaging in sex, for example. They believe that this behavior will create the image they desire.

18.3 DEVELOPMENTAL TASKS OF ADOLESCENCE

All the developmental tasks of adolescence are focused on overcoming childish attitudes and behavior patterns and preparing for adulthood. The developmental tasks of adolescence require a major change in the child's habitual attitudes and patterns of behavior. Consequently, few boys and girls can be expected to master them during the years of early adolescence. This is especially true of late maturers. The most that can be hoped is that the young adolescent will lay foundations on which to build adult attitudes and behavior patterns.

A brief survey of the important developmental tasks of adolescence will serve to illustrate the extent of the changes that must be made and the problems that arise from these changes. Fundamentally, the necessity for mastering the developmental tasks in the relatively short time that adolescents have, as a result of lowering the age of legal maturity to eighteen, is the reason for much of the stress that plagues many adolescents.

It may be difficult for adolescents to accept their physiques if, from earliest childhood, they have a glamorized concept of what they wanted to look like when they are grown up. It takes time to revise this concept and to learn ways to improve their appearance so that it will conform more to their earlier ideals.

Acceptance of the adult-approved sex role is not too difficult for boys; they have been encouraged in this direction since early childhood. But for girls, who as children were permitted or even encouraged to play an egalitarian role, learning what the adult approved feminine role is and accepting it is often a major task requiring many years of adjustment.

Because of the antagonism toward members of the opposite sex that often develops

during late childhood and puberty, learning new relationships with members of the opposite sex actually means starting from scratch to discover what they are like and how to get along with them. Even developing new, more mature relationships with age-mates of the same sex may not be easy.

Achieving emotional independence from parents and other adults would seem, for the independence-conscious adolescent, to be an easy developmental task. However, emotional independence is not the same as independence of behavior. Many adolescents who want to be independent want and need the security that emotional dependence on their parents or some other adults gives. This is especially true for adolescents whose status in the peer group is insecure or who lack a close tie with a member of the peer group.

Economic independence cannot be achieved until adolescents choose an occupation and prepare for it. If they select an occupation that requires a long period of training, there can be no assurance of economic independence even when they reach legal adulthood. They may have to remain economically dependent for several years until their training for their chosen vocations has been completed.

Schools and colleges put emphasis on developing intellectual skills and concepts necessary for civic competence. However, few adolescents are able to use these skills and concepts in practical situations. Those who are active in the extracurricular affairs of their schools and colleges get such practice, but those who are not active in this way-because they must take after-school jobs or because they are not accepted by their peers-are deprived of this opportunity.

Schools and colleges also try to build values that are in harmony with those held by adults; parents contribute to this development. When, however, the adult-fostered values clash with peer values, adolescents must choose the latter if they want the peer acceptance on which their social life depends.

Closely related to the problem of developing values in harmony with those of the adult world the adolescent is about to enter is the task of developing socially responsible behavior. Most adolescents want to be accepted by their peers, but they often gain this acceptance at the expense of behavior that adults consider socially irresponsible. If, for example, it is the "thing to do" to cheat or to help a friend during an examination, the adolescent must choose between adult and peer standards of socially responsible behavior.

The trend toward earlier marriages has made preparation for marriage one of the most important developmental tasks of the adolescent years. While the gradual relaxing of social taboos on sexual behavior has gone a long way toward preparing adolescents of today for the sexual aspects of marriage, they receive little preparation-at home, in school, or in college-for the other aspects of marriage, and even less preparation for the duties and responsibilities of family life. This lack of preparation is responsible for one of the major pieces of "unfinished business" which the adolescent carries into adulthood.

Check Your Progress 1

Discuss the characteristic of the adolescent period.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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18.4 PHYSICAL CHANGES DURING ADOLESCENCE

Growth is not complete when puberty ends, nor is it entirely complete at the end of early adolescence. However, there is a slowdown of the pace of growth, and there is more marked internal than external development. This cannot be so readily observed or identified as growth in height and weight or the development of the secondary sex characteristics.

18.4.1 Variations in Physical Changes

Like all ages, there are individual differences in physical changes. Sex differences are especially apparent. Even though boys start their growth spurt later than girls, their growth continues longer, with the result that, at maturity, they are usually taller than girls. Because boys' muscles grow larger than girls' muscles, at all ages after puberty boys surpass girls in strength, and this superiority increases with age.

Individual differences are also influenced by age of *maturing.* Late maturers tend to have slightly broader shoulders than those who mature early. The legs of early-maturing boys and girls tend to be stocky; those of late maturers tend to be more slender. Early-maturing girls weigh more, are taller, and have greater weight for their height than do late-maturing girls.

18.4.2 Effects of Physical Changes

As physical changes slow down, the awkwardness of puberty and early adolescence generally disappear. This is because older adolescents have had time to gain control of their enlarged bodies. They are also motivated to use their newly acquired strength and this further helps them to overcome any awkwardness that appeared earlier.

Because strength follows growth in' muscle size, boys generally show their greatest increase in strength after age fourteen, while girls show improvement up to this age and then lag, owing more to changes in interests than to lack of capacity. Girls generally attain their maximum strength at about seventeen, while boys do not attain their maximum strength until they are twenty-one or twenty-two.

18.4.3 Concerns about Physical Changes

Few adolescents experience *body-cathexis* or satisfaction with their bodies. However, they do experience more dissatisfaction with some parts of their bodies than with other parts. This failure to experience body-cathexis is one of the causes of unfavorable self-concepts and lack of self-esteem during the adolescent years.

Some of the concerns adolescents have about their bodies are carry-overs of concerns they experienced during puberty and which, in the early years of adolescence, are based on conditions that still prevail. Concern about *normalcy,* for example, will persist until the physical changes on the surface of the body have been completed and adolescents can be sure that their bodies conform to the norms for their sex groups. Similarly, concern about sex-appropriateness, so all-prevading in puberty, continues until the primary and secondary sex characteristics have completed their growth and development and, thus, give adolescents an opportunity to see if their bodies conform to the cultural standard of sex-appropriateness.

Awareness of social reactions to different *body builds* leads to concern in adolescents whose changing bodies fail to conform to the culturally approved standards. Knowing that social reactions to endomorphic builds in both boys and girls are less favorable than they are to ectomorphic and mesomorphic -builds leads to concern on the part of adolescents whose body builds tend toward endomorphy.

For many girls, *menstruation* is a serious concern. This is because they suffer physical discomforts such as cramps, weight gain, headaches, backaches, swollen ankles, and breast tenderness and experience emotional changes, such as' mood swings, depression, restlessness, depression, and a tendency to cry without apparent reason.

Because menstruation is commonly referred to as "the curse," it is not surprising that this unfavorable social reaction will color girls' attitudes. Furthermore, knowing that boys do not experience any such form of physical discomfort also colors girls' attitudes - unfavorably and encourages them to believe that they are martyrs.

Acne and other skin eruptions are a source of concern to both boys and girls. With the increase in the severity of acne, there is an increase in concern. This concern is often as great for boys as for girls because they realize that acne mars their chances for physical

attractiveness and because they cannot use cosmetics to cover it up as girls can.

The tendency toward *obesity* that plagues most pubescent boys and girls continues to be a source of concern during the early adolescent years. In most cases, however, with increase in height and with efforts to control their appetites and the eating of "junk food," older adolescents start to slim down and look less obese than they did during the puberty fat period. In addition, careful selection of clothing helps to create the illusion that they are more slender than they actually are.

It is unusual for adolescents, boys or girls, not to be concerned about their *physical attractiveness.* Few are satisfied with their appearance and many are concerned about what they can do to improve it.

The reason for concern comes from realization of the role attractiveness plays in social relationships. Adolescents realize, even more than children do, that people treat those who are attractive more favorably than they do those who are less attractive. They are also aware of the important role attractiveness plays in choice for leadership. Consequently, when they feel that they are less attractive than they had hoped to be when their growth was complete or nearly complete, they are concerned about what they can do to improve their looks. Few adolescents escape being "looks-conscious" to the point where they spend proportionally more time and thought on how to improve their looks than most adults consider justified.

18.5 PIAGET'S THEORY: THE FORMAL OPERATIONAL STAGE

According to Piaget, around age 11 young people enter the formal operational stage, in which they develop the capacity for abstract, scientific thinking. Whereas concrete operational children can "operate on reality," formal operational adolescents can "operate on operations." In other words, they no longer require concrete things and events as objects of thought. Instead, they can come up with new, more general logical rules through internal reflection. Let's look at two major features of the formal operational stage.

18.5.1 Hypothetico-Deductive Reasoning

At adolescence, young people first become capable of hypothetico-deductive reasoning; When faced with a problem, they start with a general theory of all possible factors that might affect the outcome and deduce from it specific *hypotheses* (or predictions) " about what might happen. Then they test these hypotheses in an orderly fashion to see which ones work in the real World. Notice how this form of problem solving begins with possibility and proceeds to reality. In contrast, concrete operational children start with reality-with the most obvious predictions about a situation. When these are not confirmed, they cannot think of alternatives and fail to solve the problem.

Adolescents' performance on Piaget's famous *pendulum problem* illustrates this new approach. Suppose we present several school-age children and adolescents with strings of different lengths, objects of different weights to attach to the strings, and a bar from which to hang the strings. Then we ask each of them to figure out what influences the speed with which a pendulum swings through its arc.

Formal operational adolescents come up with four hypotheses: (1) the length of the string, (2) the weight of the object hung on it, (3) how high the object is raised before it is released, and (4) how forcefully the object is pushed. Then, by varying one factor at a time while holding all the others constant, they tryout each possibility. Eventually they discover that only string length makes a difference.

In contrast, concrete operational children experiment unsystematically. They cannot separate the effects of each variable. They may test for the effect of string length without holding weight constant, comparing, for example, a short, light pendulum with a long, heavy one. Also, school-age children fail to notice variables that are not immediately suggested by the concrete materials of the task-the height at which and forcefulness with which the

pendulum is released.

18.5.2 Propositional Thought

A second important characteristic of the formal operational stage is **propositional though**t. Adolescents can evaluate the logic of propositions without referring to real world circumstances. In contrast, children can evaluate the logic of statements only by considering them against concrete evidence in the real world.

In a study of propositional reasoning, a researcher showed children and adolescents a pile of tokens (plastic round coins) and asked whether statements about the tokens were true, false, or uncertain. In one condition, the researcher hid a token in her hand and presented the following propositions:

"Either the token in my hand is green *or* it is not green:' "The token in my hand is green *and* it is not green." In another condition, the experimenter held either a red or a green token in full view and made the same statements.

School-age children focused on the concrete properties of the tokens. When the token was hidden from view, they replied that they were uncertain about both statements. When it was visible, they judged both statements to be true if the token was green and false if it was red. In contrast, adolescents analyzed the logic of the statements. They understood that the "either-or" statement is always true and the "and" statement is always false, regardless of the poker token's color.

Although Piaget did not view language as playing a central role in children's cognitive development, he acknowledged it is more important in adolescence. Abstract thought requires language-based systems of representation that do not stand for real things, such as those in higher mathematics. Secondary school students use these systems in algebra and geometry. Formal operational thought also involves verbal reasoning about abstract concepts.

Check Your Progress 2

A. Write about the implications physical changes during Adolescence

B. State the two major features Piaget's formal operational stage

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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18.6 COGNITIVE DEVELOPMENT

Information-processing theorists agree with the broad outlines of Piaget's description of adolescent cognition. The varieties of specific mechanisms of cognitive change are:

- *Attention* becomes more focused on relevant information and better adapted to the changing demands of tasks.

- *Strategies* become more effective, improving storage, representation, and retrieval of information.

- *Knowledge* increases, easing strategy use.

- *Metacognition* (awareness of thought) expands, leading to new insights into effective strategies for acquiring information and solving problems.

- *Cognitive self-regulation* improves, yielding better moment-by-moment monitoring, evaluation, and redirection of thinking.

- *Processing capacity* increases due to the influence of brain development. As a result, space in working memory is freed so more information can be held at once and

combined into highly efficient, abstract representations.

As we look at some influential findings from an information-processing perspective, some of these mechanisms change in action. Researchers regard *Metacognition*-as central to the development of abstract thought.

18.6.1 Scientific Reasoning: Coordinating Theory with Evidence

The heart of scientific reasoning is coordinating theories with evidence. Deanna Kuhn has conducted extensive research into the development of scientific reasoning, using problems that resemble Piaget's tasks, in that several variables might affect an outcome. In one series of studies, third, sixth, and ninth standard and adults were provided evidence, sometimes consistent with and sometimes conflicting with theories. Then they were questioned about the accuracy of each theory.

For example, participants were given a problem. They were asked to theorize about which of several features of sports balls-size (large or small), color (light or dark), texture (rough or smooth), or presence or absence of ridges on its surface-influences the quality of a player's serve. Next, they were told about the theory of Mr. (or Ms.) S, who believes that the ball's size is important, and the theory of Mr. (or Ms.) C, who thinks color makes a difference. Finally, the interviewer presented evidence by placing balls with certain characteristics in two baskets labeled "good serve" and "bad serve".

The youngest participants often ignored conflicting evidence or distorted it in ways consistent with their preferred theory. Instead of viewing evidence as separate from and bearing on a theory, children often blended the two into a single representation of "the way things are." The ability to distinguish theory from evidence and to use logical rules to examine their relationship in complex, multivariable situations improves from childhood into adolescence and adulthood.

18.6.2 How Scientific Reasoning Develops

What factors support adolescents' skill at coordinating theory with evidence? Greater processing capacity, permitting a theory and the effects of several variables to be compared at once, is vital. Beyond this, *metacognition*-thinking about thought-is especially important. Individuals must be able to represent the theory as an object of thought rather than as a mirror image of reality. And they must also set aside their own theoretical preference and consider what the evidence says as their sole basis for judgment.

How does skill in coordinating theory with evidence increase? Performance is strongly influenced by years of schooling. But even at advanced levels of education, scientific reasoning is rarely taught directly. Instead, in all subject-matter areas, students receive practice in setting aside their own experiences and beliefs to infer conclusions- that follow from information given. Repeated opportunities to pit theory against evidence prompt adolescents to reflect on their current strategies, revise them, and become aware of the nature of logic.

Although adolescents and adults are much better at scientific reasoning than children, they continue to show a self-serving bias in their thinking. They apply logic more effectively to ideas they doubt than to those they favor. Reasoning scientifically, however, requires the metacognitive capacity to be objective rather than self-serving.

Adolescents develop formal operational thinking in a similar, step-by-step fashion on different types of tasks. In each type of task, adolescents mastered component skills in sequential order by expanding their metacognitive awareness. For example, on causal-experimental tasks, they first became aware of the many variables that could "influence an outcome. This enabled them to formulate and test hypotheses. Over time, adolescents combined separate skills into a smoothly functioning system. They constructed a general model that could be applied to many instances of a given type of problem. Young people

seem to form a "hypercognitive system," or supersystem, that understands, organizes, and influences other aspects of cognition.

Piaget underscored the role of metacognition in formal operational thought when he spoke of "operating on operations". However, information-processing findings reveal that scientific reasoning does not result from an abrupt, stagewise change, as Piaget believed. Instead, it develops gradually out of many specific experiences that require children and adolescents to match theories against evidence and reflect on and evaluate their thinking.

Check Your Progress 3

Put forth the Information-processing view of cognition development

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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18.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

vii) Characteristics of Puberty

viii) Criteria of Puberty

ix) Causes of Puberty

x) Body Changes at Puberty

xi) The Puberty Growth Spurt

xii) Consequences of Abstract Thought

18.8 Check Your Progress: Model Answers

2. The Characteristics of Adolescence period includes

i) It is an important period

ii) It is a transitional period

iii) It is a period of change

iv) It is a Problem Age

v) It is a Time of Search for Identity

vi) It is a Dreaded Age

vii) It is a Time of Unrealism

viii) It is the Threshold of Adulthood

2. A. The implications of physical changes during adolescence are:

i) Variations in Physical Changes

ii) Effects of Physical Changes

iii) Concerns about Physical Changes

B. The two major features Piaget's formal operational stages are:

i) Hypothetico-Deductive Reasoning

ii) Propositional Thought

3. The Information-processing view of cognition development:

i) Scientific reasoning - Coordinating theory with evidence

ii) As to how scientific reasoning develops

18.9 Lesson – End Activities

1. Why we describe the adolescent period as a period of change.

2. Adolescent is a Time of unrealisnt – Discuss.

18.10 References

1. Adler, A., Understanding Human nature, London : Alley & Unwin 1948.

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Lesson – 19

EMOTIONALITY - SOCIAL INTERESTS AND MORALITY CHANGES DURING ADOLESCENCE - SEX INTERESTS ERIKSON'S THEORY: IDENTITY VERSUS IDENTITY CONFUSION

Contents

19.0 AIMS AND OBJECTIVES

This Lesson will help you understand the emotionality during adolescence, the social behaviour and social interests during adolescence.

After going through this Lesson, you will be able to:

xi)   State the development of emotions during adolescence

xii)   List the social changes that happen during adolescence

xiii)   Understand the social interests during adolescence

19.1 INTRODUCTION

Adolescence was thought to be of as a period of "storm and stress" -a time of heightened emotional tension resulting from the physical and glandular changes that are taking place. While it is true that growth continues through the early years of adolescence, it does so at a progressively slower rate. What growth is taking place is primarily a completion of the pattern already set at puberty.

19.2 EMOTIONALITY DURING ADOLESCENCE

Adolescent emotionality can be attributed mainly to the fact that boys and girls come under social pressures and face new conditions for which they received little if any preparation during childhood.

Not all adolescents, by any means, go through a period of exaggerated storm and stress. True, most of them do experience emotional instability from time to time, which is a logical consequence of the necessity of making adjustments to new patterns of behavior and to new

social expectations. For example, problems related to romance are very real at this time. While the romance is moving along smoothly, adolescents are happy, but they become despondent when things begin to go wrong. Similarly, with the end of their schooling in sight, adolescents begin to worry about their future.

While adolescent emotions are often intense, uncontrolled, and seemingly irrational, there is generally an improvement in emotional behavior with each passing year. Fourteen-year-olds, are often irritable, are easily excited, and "explode" emotionally instead of trying to control their feelings. Sixteen-year-olds, by contrast, say they "don't believe in worrying." Thus the storm and stress of this period lessens as early adolescence draws to a close.

19. 2.1 Emotional Patterns in Adolescence

The emotional patterns of adolescence, while similar to those of childhood, differ in the stimuli that give rise to the emotions and, even more important, in the degree of control the individuals exercise over the expression of their emotions. For example, being treated "'like a child" or being treated "unfairly" is more likely to make the adolescent angry than anything else.

Instead of having temper tantrums, however, adolescents express their anger by sulking, refusing to speak, or loudly criticizing those who angered them. Adolescents also become envious of those with more material possessions. While they may not complain and feel sorry for themselves, as children do, they are likely to take a part-time job to earn money for the material possessions they crave or even drop out of school to get these things.

19.2.2 Emotional Maturity

Boys and girls are said to have achieved emotional maturity if, by the end of adolescence, they do not "blow up" emotionally when others are present, but wait for a convenient time and place to let off emotional steam in a socially acceptable manner. Another important indication of emotional maturity is that the individual assesses a situation critically before responding to it emotionally instead of reacting to it unthinkingly as would a child or an immature person. This results in adolescents ignoring many stimuli that would have caused emotional outbursts when they were younger. Finally, emotionally mature adolescents are stable in their emotional responses and they do not swing from one emotion or mood to an-other, as they did earlier.

To achieve emotional maturity, adolescents must learn to get a perspective on situations which otherwise would lead to emotional reactions. They can do this best by discussing their problems with others. Their willingness to disclose their attitudes, feelings, and personal problems is influenced partly by how secure they feel in their social relationships, partly by how much they like the "target person" (the person to whom they are willing to make the disclosure), and by how much the target person is willing to disclose to them.

In addition, if adolescents are to achieve emotional maturity, they must learn to use *emotional* ca*tharsis* to clear their systems of pent-up emotional energy. This they can do by strenuous physical exercise, in play or work, by laughing or by crying. While all of these provide an outlet for pent-up emotional energy that accompanies control over emotional expressions, social attitudes toward crying are unfavorable, as they are toward laughing, unless the laughter is held in check and occurs only when the social group approves.

Check Your Progress 1

Discuss the Adolescent emotionality

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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19.3 SOCIAL CHANGES DURING ADOLESCENCE

The most difficult developmental tasks of adolescence relates to social adjustments. These adjustments must be made to members of the opposite sex in a relationship that never existed before and to adults outside the family and school environments.

To achieve the goal of adult patterns of socialization, the adolescent must make many new adjustments, the most important-and, in many respects, the most difficult-of which are those to the increased influence of the peer group, changes in social behavior, new social groupings, new values in friendship selection, new values in social acceptance and rejection, and new values in the selection of leaders.

19.3.1 Increased Peer-Group Influence

Because adolescents spend most of their time outside the home with members of the peer group, it is understandable that peers would have a greater influence on adolescent attitudes, speech, interests, appearance, and behavior than the family has. Most adolescents, for example, discover that if they wear the same type of clothes as popular group members wear, their chances of acceptance are enhanced. Similarly, if members of the peer group experiment with alcohol, drugs, or tobacco, adolescents are likely to do the same, regardless of how they feel about these matters.

As adolescence progresses, peer-group influence begins to wane. There are two reasons for this. First, most adolescents want to become individuals in their own right and to be recognized as such. The search for identity, discussed earlier in this chapter, weakens the influence of the peer group on the adolescent. The second reason for waning of peer-group influence is the result of the adolescent's choice of peers as companions. No longer are adolescents interested in large group activities, as was true during their childhood days. In adolescence there is a tendency to narrow down friendships to smaller numbers though most adolescents want to belong to larger social groups for social activities. Because these social activities are less meaningful to adolescents than close, personal friendships, the influence of the larger social group becomes less pronounced than the influence of friends.

19.3.2 Changes in Social Behavior

Of all the changes that take place in social attitudes and behavior, the most pronounced is in the area of heterosexual relationships. In a short period of time, adolescents make the radical shift from disliking members of the opposite sex to preferring their companionship to that of members of their own sex. Social activities, whether with members of the same sex or with the opposite sex, usually reach their peak during the high-school years.

As a result of broader opportunities for social participation, *social* insight improves among older adolescents. They are *now* able to judge members of the opposite sex as well as members of their own sex better than they could when they were younger. As a result, they make better adjustments in social situations and they quarrel less.

The greater the social participation of adolescents, the greater their *social* competency, as seen in their ability to dance, to carryon conversations, to play sports and games that are popular with agemates, and to behave correctly in different social situations. As a result, they gain self-confidence which is expressed in poise and ease in social situations.

Whether *prejudice* and *discrimination* will increase or decrease during adolescence will be greatly influenced by the environment in which adolescents find themselves and by the attitudes and behavior of their friends and associates. Because adolescents, as a group, tend to be more "choosey" in the selection of associates and friends than they were as children, they find adolescents of different racial, religious, or socioeconomic backgrounds less congenial than those with similar backgrounds. However, they are more likely to ignore those they find uncongenial than to treat them in a way that expresses their feelings of superiority, as older children do.

19.3.3 New Social Groupings

The gangs of childhood gradually break up *at* puberty and during early adolescence as the individual's interest's shift from the strenuous play activities of childhood to the less strenuous and more formal social activities of adolescence. In their place come new social groupings. The social groupings of boys as a rule are larger and more loosely knit while those of girls are smaller and more sharply defined. The most common social groupings during adolescence are described below.

Close Friends: The adolescent usually has two or three close friends, or confidants. They are of the same sex and have similar interests and abilities. Close friends have a marked influence on one another, though they may quarrel occasionally.

Cliques: Cliques are usually made up of groups of close friends. At first they consist of members of the same sex, but later include both boys and girls.

Crowds: Crowds, made up of cliques and groups of close friends, develop as interest in parties and dating grows. Because crowds are large, there is less congeniality of interest among the members and thus a greater social distance between them.

Organized Groups: Adult-directed youth groups are established by schools and community organizations to meet the social needs of adolescents who belong to no cliques or crowds. Many adolescents who join such groups feel regimented and lose interest in them by the time they are sixteen or seventeen.

Gangs: Adolescents who belong to no cliques or crowds and who gain little satisfaction from organized groups may join a gang. Gang members are usually of the same sex, and their main interest is to compensate for peer rejection through antisocial behavior.

There are changes in some of these social groupings as adolescence progresses. Interest in *organized groups,* whose activities are planned and to a large extent controlled by adults, wanes rapidly as independence-conscious adolescents present being told what to do. Only if the control of the activities of these groups is turned over to them, with minimum of adult advice and interference, will interest continue.

Crowds tend to disintegrate in late adolescence and are replaced by loosely associated groups of couples. This is especially true of adolescents who go to work at the completion of high school. At work they are in contact with people of all ages, most of whom have friends and families of their own outside their jobs. Unless non college older adolescents have friends from their school days who live and work near enough to make contacts possible they may find themselves limited to a few friends connected with their work and out of touch with any group large enough to form a crowd.

By contrast, the influence of the gang tends to increase as adolescence progresses. This influence is often expressed in violent behavior committed by gang members. Adolescents want as friends those whose interests and values are similar to theirs, who understand them and make them feel secure, and in whom they can confide problems and discuss matters they feel they cannot share with parents or teachers.

Most adolescents claim they want "someone to be trusted, someone to talk to, and some one who is dependable". Because of these changed values, childhood friends will not necessarily be friends in adolescence. Nor are adolescents interested only in friends of their own sex. Interest in the opposite sex becomes increasingly stronger as adolescence progresses. As a result, by the end of adolescence there is often a preference for friends of the opposite sex, though both boys and girls continue to have a few intimate friends of their own sex with whom they associate constantly.

To most young adolescents, popularity means having a large number of friends. As they grow older, the *kind* of friends they have, becomes more important than the number. However, adolescent values regarding the "right" kind of friends tend to change from one

year to another, depending on the values of the group with which they are identified at that time.

Because adolescents know what they want in their friends, they insist upon the right to select them without adult interference. This often leads to two consequences that interfere with the stability of adolescent friendships. First, as a result of their inexperience-especially with members of the opposite sex-they may choose friends who turn out to be less congenial than they had thought they would be; quarreling often occurs then and friendships are broken.

Second, as in other areas of their lives, adolescents tend to be unrealistic concerning the standards they set up for their friends. They then become critical of them if they do not come up to these standards and try to reform them. This again usually leads to quarreling and the break-up of friendships. In time, most adolescents become more realistic about other people, just as they do about themselves. As a result, they are less critical and more acceptant of their friends.

19.3.4 New Values in Social Acceptance

Just as adolescents have new values concerning their friends, so they have new values concerning acceptable or unacceptable members of different peer groups, such as cliques, crowds, or gangs, for example. These values are based largely on peer-group values which are used to judge members of the group. Adolescents soon discover that they are judged by the same standards by which they judge others.

No one trait or characteristic pattern of behavior will guarantee social acceptance during adolescence. Instead, acceptance depends upon a constellation of traits and behavior patterns-the *acceptance syndrome-*all of which make adolescents fun to be with and add to the prestige of the clique or crowd with which they are identified. Similarly, no one trait or behavior pattern alienates adolescents from their peers. Instead, there is a grouping of traits-the *alienation syndrome* -that makes others dislike and reject them.

19.3.5 New Values in Selection of leaders

Because adolescents feel that the leaders of their peer groups represent them in the eyes of society, they therefore want leaders of superior ability who will be admired and respected by others and who, in turn, will reflect favorably on them. Because there are so many different kinds of groups in adolescence - athletic, social, intellectual, religious, and class or community groups-the leader of one group will not necessarily have the ability to be the leader of another. Leadership is now a function of the situation as it is in adult life.

In general, however, adolescents expect their leaders to have certain qualities. While a good physique, in and of itself, does not makes leaders, it gives them prestige and, at the same time, contributes favorably to their self concepts. The adolescent leader is in excellent health and thus is energetic and eager to do things, both of which contribute to the quality of initiative.

The clothes-conscious adolescent expects leaders to be attractive and well groomed. The characteristic leader will also be slightly above average in intelligence, academic achievement, and level of maturity. As a rule, leaders in adolescent social activities come from families of higher socioeconomic status than non leaders. This not only gives them prestige in the eyes of their peers but also makes possible better dressing and grooming, the possession of social know-how, opportunities for entertaining, and participation in group activities.

Because leaders, as a rule, are more active participants in social life than non leaders, they develop social insight and self-insight. They can judge themselves realistically and can size up the interests and wishes of the members of the groups they lead. Leaders are not "self-bound" in the sense that they are so concerned with their personal interests and problems that they cannot direct their energies outward and concern themselves with the interests and

problems of the other members of their groups.

Perhaps the most important single factor that contributes to leadership is personality. Leaders have been found to be more responsible, more extroverted, more energetic, more resourceful, and more able to take initiative than non leaders. They are emotionally stable, well-adjusted, happy individuals with few neurotic tendencies

Check Your Progress 2

Explain the changes in social behavior during adolescence

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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19.4 SOCIAL INTERESTS

There is no such thing as a universal adolescent interest as of today. The reason for this is that the interests of adolescents depend upon their sex, their intelligence, the environment in which they live, the opportunities they have had for developing interests, what their peers are interested in, and their status in the social group, their innate abilities, and the interests of their families, and many other factors. Since girls are expected to behave in a feminine way and boys in a masculine way, it is not surprising that girls' interests during adolescence are usually very different from boys' interests.

As adolescence progresses, many of the interests that were carried over from childhood wane and are replaced by more mature interests. Also, because of the greater responsibilities older adolescents are expected to assume and the consequent decrease in time to spend as they wish, many older adolescents a re forced to limit the range of their interests. This is especially true of recreational interests.

Furthermore, with experience most adolescents acquire a different and more mature sense of values. This is reflected in a shift in emphasis on different interests. Interests that were of major importance in early adolescence, such as clothes and appearance, become less important, while interest in a career now becomes dominant.

In spite of variations, certain adolescent interests are fairly universal as of today, though they may vary from one part of the country to another and with the different social classes within each area. All young adolescents possess these interests to a greater or lesser extent, and I they all have certain specific interests that fall within the different categories, the most important of which are recreational interests, social interests, personal interests, educational interests, vocational interests, religious interests, and interest in status symbols.

19.4.1 Recreational Interests

As adolescence progresses, there is a breaking away from recreations that require much expenditure of energy and the development of a preference for recreations in which the adolescent is a passive spectator. In early adolescence, there is a carry-over of some of the play activities of the early years and the introduction of new and more mature forms of recreation. Gradually, the childish forms of play disappear, and when early adolescence comes to a close, the individual's recreational pattern is much the same as it will be during the latter part of adolescence and the early years of adulthood.

Because of the pressures of schoolwork, home duties, extracurricular activities, and after-school or weekend jobs, most adolescents have far less time for recreation than they did when they were younger. As a result, they select the kinds of activities that they enjoy most or in which they excel. This limits the number of their activities.

The number of recreations adolescents engage in is also greatly influenced by how popular they are. Because many of the recreations of adolescents require participants from the

peer group, the adolescent who does not belong to a clique and who has few friends is forced to concentrate on solitary forms of recreation.

19.4.2 Social Interests

Social interests depend partly on what opportunities adolescents have to develop such interests and partly on how popular they are with members of the peer group. An adolescent whose family's socioeconomic status is low, for example, will have fewer opportunities to develop an interest in parties and dancing than adolescents from more favorable home backgrounds. Similarly, an adolescent who is unpopular will have a limited repertoire of social interests.

19.4.3 Personal Interests

Interest in themselves is the strongest interest young adolescents have, partly because they realize that their social acceptance is markedly influenced by their general appearance, and partly because they know the social group judges them in terms of their material possessions, independence, and school and social affiliations, as well as the amount of spending money they have. These are "status symbols" that will enhance young adolescents' prestige in the eyes of peers and hence increase their chances for greater social acceptance.

Interest in Appearance: Interest in appearance covers not only clothes but personal adornment, grooming, attractive and sex-appropriate physical features. Cross and Cross have explained why appearance is so important that it becomes a dominant personal interest. According to them, "Beauty and physical attractiveness are of great practical importance for human beings. Social acceptance, popularity, mate selection and careers are all affected by an individual's physical attractiveness". As children develop, the appearance they present-especially to their peers-is a strong indicator of their interest in socialization. The reason is that it is a proof of their togetherness with their peers.

Interest in Clothes: Because their personal and social adjustments are greatly influenced by their age-mates' attitudes toward their clothes, most adolescents are anxious to conform to what the group approves of in the matter of dress. As Ryan has pointed out, "One of the primary requirements of clothing for the young adolescent is that their clothing meets the approval of the peer group".

While boys claim not to be interested in clothes, grooming, or appearance, their behavior indicates that their interest is greater than they will admit like girls, they recognize that appearance plays an important role in social acceptance. This interest is heightened when they reach the end of their schooling and prepare to enter the world of work. They realize that an attractive appearance facilitates their getting and holding a job.

Interest in Achievements: Achievements bring personal satisfaction as well as social recognition. That is why achievements, whether in sports, school work, or social activities become such a strong interest as adolescence progresses.

However, if achievements are to bring satisfaction to adolescents, they must be in areas that are important to their peers and carry prestige in the eyes of the peer group. If their peers are interested in academic success, for example, good grades will be a satisfactory achievement. If, on the other hand, little prestige is associated with good grades and much prestige with athletic success, academic achievements will bring little satisfaction to the adolescent. Adolescents tend to aspire unrealistically high. Therefore they often do not get the satisfaction from their achievements that they would get if their aspirations were more realistic. When they fail to reach their goals, their achievements bring them little satisfaction.

Interest in Independence: A strong desire for independence develops in early adolescence

and reaches a peak as this period draws to a close. This leads to many clashes with parents and other adults in authority. Because girls are expected to conform more to parental wishes than boys are, they rebel more against home restraints. Much of the radicalism of young adolescents can be traced to their attempts to think and act independently. If, however, adult authority is relaxed gradually, so that adolescents can see themselves reaching their goals, there is far less rebellion with its accompanying friction.

Interest in Money: Every adolescent sooner or later discovers that money is the key to independence. As long as parents pay their bills and give them spending money, parents call control adolescents' behavior. When, on the other hand, adolescents have money, they can enjoy independence. Interest in money therefore becomes an important element in independence. This interest centers mainly on how to earn the most money possible, regardless of the kind of work done.

19.4.4 Educational Interests

Typically, *young adolescents* complain about school in general and about restrictions, homework, required courses, food in the cafeteria, and the way the school is run. They are critical of their teachers and the way they teach. This is the "thing to do." Young adolescents who want to be popular with their peers must avoid creating the impression that they are "brains." This is even more important for girls than for boys because less prestige is associated with academic achievement among girls than among boys. However, in spite of their stated attitudes, most young adolescents get along well both academically and socially in school and they secretly like it.

The attitudes of *older adolescents* toward education are greatly influenced by their vocational interests. If they are aspiring to occupations which require education beyond high school, they will regard education as a stepping-stone. They will be interested in the courses they feel will be useful to them in their chosen field of work. As is true of the younger adolescent, the older adolescent considers success in sports and social life as important as academic work as a stepping-stone to future success. Many factors influence the younger as well as the older adolescent's attitude toward education.

There are three types of adolescents who have little interest in education and who usually dislike school. They are, first, adolescents whose parents have unrealistically high aspirations for their academic, athletic, or social achievements and who are constantly prodding them to come up to these goals. The second type are those who find little acceptance among their classmates and who, as a result, feel that they are missing out on the fun their age-mates are having in extracurricular activities. Third, early maturers who feel conspicuously large among their classmates and who, because they look older than they actually are, are often expected to do better academic work than they are capable of.

Adolescents who have little interest in education usually show their lack of interest in the following ways. They become *underachievers,* working below their capacities in all school subjects or in the subjects they lack interest in. Others who are disinterested in education become truants and try to gain parental permission to withdraw from school before the legal age for leaving. Still others become dropouts as soon as they reach the legal age of school leaving, regardless of whether they have finished the present standard. This is especially true of early maturers who find school not only uninteresting but often a humiliating experience.

19.4.5 Vocational Interests

Boys and girls of high school age begin to think seriously about their futures. Boys are usually more seriously concerned about an occupation than girls, many of whom regard a job as just a stopgap until marriage.

Boys, typically, want glamorous and exciting jobs, regardless of the ability required or the chances that such jobs will be available for them. They also want jobs with high prestige,

even if they pay less than those with lower prestige. Many boys from low status families hope to achieve higher social status through their occupations. Girls, as a rule, show a preference for occupations with greater security and less demand on their time. In their vocational choices, they usually stress service to others, such as teaching or nursing.

By late adolescence, interest in a life career has often become a source of great concern. At this time, adolescents learn to distinguish between vocational choice, vocational preference, and vocational aspirations. Older adolescents are concerned about what they would like to do and what they are capable of doing. The more they hear and talk about different lines of work, the-less sure they are of what they would like to do. They are also concerned about how they can get the kind of jobs they want.

Furthermore, older adolescents have a growing realization of how much it costs to live and they also know what young people, just out of school, can expect to earn. As a result of this greater realism, they approach the choice of their careers with a more practical and more realistic attitude than they had when they were younger.

During childhood and early adolescence, many boys and girls judge different lines of work, such as engineering and medicine, in terms of the stereotypes presented in the mass media. As near-adults, they begin to judge them in terms of their abilities and of the time and money required for training for these lines of work. While prestige is still an important factor in vocational selection, the older adolescent is more concerned about the autonomy, authority, and security the occupation will give.

Because their attitudes toward vocations have gradually become more realistic, most adolescents change their minds often about their future occupations. They are in an "exploratory stage" and may take after-school or summer jobs in fields they think might interest them as a lifetime career. This experience gives them more information on which to base their final decisions.

19.4.6 Religious Interests

Contrary to popular opinion, adolescents of today are interested in religion and feel that it plays an important role in their lives. They talk about religion, take courses in it in school and in college, visit churches/temples/mosques, and join various religious cults.

Many boys and girls begin to question the religious concepts and beliefs of their childhood and this had led adolescence to be called the *period of religious doubt.* However, Wagner maintains that what is often interpreted as "religious doubt" is, in reality, *religious questioning.*

On the other hand, adolescents now attend church, Sunday school, and church social events far less than adolescents of previous generations. This suggests that many of them are disillusioned with organized religion, but not uninterested in religion per se, Jones has explained, "There is more a decrease in enthusiasm and in positive feeling for the church than an increase in antagonism *against* it." He say further, that the change in interest in religion in adolescence reflects not a lack of belief but "a disillusionment with the church establishment and the use of its beliefs and preachments in the solution of current social, civic, and economic problems".

The changes in religious interest during adolescence are even more radical than the changes in vocational interests. Like childhood vocational interests, childhood concepts of religion are basically unrealistic, and the adolescent may become critical of earlier beliefs.

19.4.7 Interest in Status Symbols

Status symbols are prestige symbols that tell others that the person who has them is superior or has a higher status in the group than other group members. During adolescence, status symbols serve four important functions: they tell others that the adolescent has a high or even a higher socioeconomic status than other members of the peer group; that the ado-

lescent is superior in some achievement that is valued by the group; that the adolescent is affiliated with the group and is an accepted member of it because of appearance or actions similar to those of other group members; and that the adolescent has a near-adult status in society.

If, for example, adolescents have cars of their own as soon as they are legally able to drive; if their families have large homes in prestigious neighborhoods; and if they have money to spend without having to work for it, these proclaim the superior socioeconomic status of the adolescent.

Because being grown up or near-adult means so much to almost all adolescents of today, a new type of status symbol has become popular among them. It is known as engaging in *tabooed pleasures* - forms of recreation that are thought of as symbolic of adults, and which parents and teachers maintain adolescents are "too young" to engage in. The most common tabooed pleasures adolescents engage in to symbolize their near-adult status and their identity with the peer group are premarital sex, smoking, drinking, and use of different types of drugs.

Check Your Progress 3

Mention the adolescent social interest as of today

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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19.5 LET US SUM UP

In this Lesson, we have touched upon the following points:

      i)   Emotionality during adolescence
      ii)   Social Changes during adolescence
      iii)   Increased Peer-Group influence
      iv)   Changes in Social Behavior
      v)   Social Interests during adolescence
      vi)   Recreational Interests
      vii)   Educational Interests
      viii)   Vocational Interests
      ix)   Religious Interests
      x)   Interest in Status Symbols

19.6 Check Your Progress: Model Answers

1. The Adolescent emotionality depends on:

      iv)   Patterns of emotional during adolescence
      v)   The emotional maturity of the adolescence

2. The changes in social behavior during adolescence are:

      a.   Due to peer-group influence
      b.   The formation of new social groupings
      c.   Due to new values in social acceptance
      d.   Due to new values in selection of leaders

3. The adolescent social interest as of today are:

      i)   Recreational Interests
      ii)   Personal Interests
      iii)   Educational Interests
      iv)   Vocational Interests
      v)   Religious Interests
      vi)   Interest in Status Symbols

19.7 Lesson – End Activities

1. Briefly explain the influence of emotional skills on social development.
2. Recreational Interest leads to positive energy – Discuss.

19.8 References

1. Erickson, E., Childhood and Society, New York : Norton, 1960.
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LESSON – 20
CHANGES IN MORALITY DURING ADOLESCENCE – SEX INTERESTS - ERIKSON'S THEORY: IDENTITY VERSUS IDENTITY CONFUSION

Contents

20.0 AIMS AND OBJECTIVES

This Lesson will help you understand changes in morality, sex interest during adolescence.

After going through this Lesson, you will be able to:
   i)   state the changes that happen during adolescence in morality
   ii) discuss the interest in sex during adolescence
   iii) understand the identity and identity confusion

20.1 INTRODUCTION

One of the important developmental tasks adolescents must master is learning what the group expects of them and then being willing to mold their behavior to conform to these expectations without the constant guidance, supervision, prodding's, and threats of punishment they experienced as children. They are expected to replace the specific moral concepts of childhood with general moral principles and to formulate these into moral code which will act as a guide to their behaviour. Equally important, they must now exercise control over their behaviour, a responsibility that was formerly assumed by parents and teachers.

20.2 FUNDAMENTAL CHANGES IN MORALITY DURING ADOLESCENCE

- The individual's moral outlook becomes progressively more abstract and less concrete
- Moral convictions become more concerned with what is right and less concerned with what is wrong. Justice emerges as a dominant moral force
- Moral judgment becomes increasingly cognitive. This encourages the adolescent to analyze social and personal codes more vigorously than during childhood and to decide on moral issues
- Moral judgment becomes less egocentric
- Moral judgment becomes psychologically expensive in the sense that it takes an emotional toll and creates psychological tension.

By adolescence boys and girls have reached what Piaget has called the stage of **formal operation**s in cognitive ability. They are now capable of considering all possible ways of solving a particular problem and can reason on the basis of hypotheses or propositions. Thus they can look at their problems from several points of view and can take many factors into account when solving them.

According to Kohlberg, the third level of moral development, *post conventional morality,* should be reached during adolescence. This is the level of self accepted principles, and it consists of two stages. In the first stage, the individual believes that there should be flexibility in moral beliefs to make it possible to modify and change moral standards if this will be advantageous to group members as a whole. In the second stage, individuals conform to both social standards and to internalized ideals to avoid self condemnation rather than to avoid social censure. In this stage, morality is based on respect for others rather than on personal desires.

Even with the best foundations, the three major tasks in achieving adult morality-replacing specific concepts with general moral concepts, formulating these newly developed concepts into a moral code as a guideline for behavior, and assuming control over one's own behavior-are difficult for many adolescents. Some fail to make the shift to adult morality during adolescence and must finish this task in early adulthood. Others not only fail to make the shift but they build a moral code on socially unacceptable moral concepts.

20.2.1 Changes in Moral Concepts

Two conditions make the replacement of specific moral concepts with generalized concepts of right and wrong more difficult than it should be. The first is lack of guidance in learning how to generalize specific concepts. Believing that adolescents have already learned the major principles of right and wrong, parents and teachers frequently put little emphasis on teaching them to see the relationship between the specific principles they learned earlier and the general principles that are essential to control over behavior in adult life. Only in new areas of behavior, such as relationships with members of the opposite sex, do adults feel that there is any real need for further moral training.

The second condition that makes the replacement of specific moral concepts with generalized ones difficult has to do with the kind of discipline the adolescent is subjected to at home and in school. Because parents and teachers assume that adolescents know what is right, their major emphasis in discipline is on punishment for what they regard as intentional misbehavior. Little emphasis is placed on explaining to the adolescent why certain things are right and others wrong, and even less is placed on rewarding the adolescent for doing the right thing.

20.2.2 Building a Moral Code

When they reach adolescence, children will no longer accept in an unquestioning way a moral code told to them by parents, teachers, or even their contemporaries. They now want to build their own moral codes on the basis of concepts of right and wrong which they have changed and modified to meet their more mature level of development and which they have supplemented with laws and rules learned from parents and teachers. Some adolescents even supplement their moral codes with knowledge derived from their religious teaching.

Building a moral code is difficult for adolescents because of inconsistencies in standards of right and wrong they encounter in daily life. These inconsistencies confuse them and impede their progress in building a moral code which is not only satisfactory to them but which will also lead to socially approved behavior. Sooner or later, most adolescents discover, for example, that peers of different socioeconomic, religious, or racial backgrounds have different codes of right and wrong; that their parents' and teachers' codes are often stricter than those of their contemporaries; and that in spite of the breaking down of the

traditional sex-approved roles, there is still a "double standard" which is far more lenient for boys than for girls.

While older children may condemn lying on moral grounds, many adolescents feel that "social lies," or lies told to avoid hurting other people's feelings, are sometimes justified. Much the same sort of confusion is apparent in high school and college students' attitudes toward cheating. Many feel that since it is so widespread, their contemporaries must condone it, and they also claim that it is justified when they are pressured to get good grades in order to be accepted by a college and thus succeed socially and economically in later life. As interest in members of the opposite sex increases, adolescents discover that certain patterns of behavior are not only approved but even applauded for boys while they are harshly condemned for girls.

20.2.3 Inner Control of Behavior

Because parents and teachers cannot watch adolescents as closely as they did when they were children, adolescents must now assume responsibility for control over their own behavior. While it was formerly believed that fear-either of punishment or of social disapproval-was the best deterrent to wrongdoing, today it is recognized that "outer-controlled" sources of motivation are effective only when there is possiblity that others will find out about the misbehavior and punish those responsible for it.

In the case of juvenile delinquents, punishment not only does not deter willful wrongdoing but also often contributes to it. There is also evidence that fear of being shamed loses its effectiveness as a deterrent to misbehavior when there is little likelihood that others will know of the misbehavior, or if individuals feel they will be able to rationalize their actions or project the blame for them on others, and thus avoid punishment or social disapproval.

Studies of moral development have emphasized that the only effective way people of any age can control their own behavior is through the development of a conscience-an inner force that makes external controls unnecessary. When children or adolescents learn to associate pleasant emotions with group-approved behavior, and unpleasant emotions with group-disapproved behavior, they will have the necessary motivation to behave in accordance with group standards. Under such conditions, individuals feel guilty when they realize that their behavior is falling below social expectations, while shame is aroused only when they are aware of unfavorable judgments of their behavior by members of the social group. Behavior that is controlled by guilt is thus inner-controlled while that controlled by shame is outer-controlled.

In morally mature individuals, both guilt and shame are present. However, guilt plays a more important role than shame in controlling the individual's behavior in the absence of external control. Relatively few adolescents reach this level and, as a result, they cannot correctly be called "**morally mature**" people.

Check Your Progress 1

Discuss the fundamental changes in morality that happen during Adolescence

Notes: a) Write your answer in the space given below.

    b) Check your answer with the one given at the end of this lesson.

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20.3 SEX INTERESTS DURING ADOLESCENCE

To master the important developmental tasks of forming new and more mature relationships with members of the opposite sex, and of playing the approved role for one's

own sex, young adolescents must acquire more mature and more complete concepts of sex than they had as children. The motivation to do so comes partly from social pressures but mainly from the adolescent's interest in and curiosity about sex.

Because of their growing interest in sex, adolescent boys and girls seek more and more information about it. Few adolescents feel that they can learn all they want to know about sex from their parents. Consequently they take advantage of whatever sources of information are available to them-sex hygiene courses in school or college, discussions with their friends, books on sex, or experimentation through masturbation, petting, or intercourse. By the end of adolescence, most boys and girls have enough information about sex to satisfy their curiosity.

Interest of adolescents are primarily in knowing about sex, girls are especially curious about birth control, the "Pill," abortion, and pregnancy. Boys, on the other hand, want to know about venereal diseases, enjoyment of sex, sexual intercourse, and birth control. Their major interest is in sexual intercourse, its context and its consequences.

20.3.1 Development of Heterosexuality

The first developmental task relating to sex adolescents must master is forming new and more mature relationships with members of the opposite sex. This is far from easy for both boys and girls, after the years during late childhood when members of the two sexes had their own gangs and interests, and during puberty when both boys and girls developed attitudes of resentment against members of the opposite sex.

Now that they are sexually mature, both boys and girls begin to have new attitudes toward members of the opposite sex, and to develop an interest not only in members of the opposite sex but also in activities in which they are involved. This new interest, which begins to develop when sexual maturation is complete, is romantic in nature and is accompanied by a strong desire to win the approval of members of the opposite sex. Gradually, this desire takes the place of the desire that dominated in childhood-the desire to win the approval and acceptance of members of the same sex.

Development of interest in members of the opposite *sex* – **heterosexuality** - follows a predictable pattern. However, there are variations in ages at which the adolescent reaches different stages in this development, partly because of differences in age of sexual maturing and partly because of differences in opportunities to develop this interest. Interest in members of the opposite sex is also markedly influenced by patterns of interest among the adolescent's friends. If they are interested in activities involving members of both sexes, the adolescent must also be able to retain status in the peer group.

There are two separate and distinct elements in the development of heterosexuality. The first is the development of patterns of behavior involving members of the two sexes and the second is the development of attitudes relating to relationships between members of the two sexes.

In past generations, these two aspects of heterosexuality were rigidly prescribed by tradition and little leeway was given to adolescents to deviate from these prescribed patterns of behavior and attitudes. There was, for example, a socially approved pattern of behavior known as "courtship," and any deviation from this pattern, either in behavior or in timing, was frowned upon. Those involved were subjected to social disapproval or scorn.

It was not, for example, considered proper for boys to kiss girls on their first dates (in certain cultures). When girls permitted or encouraged this, boys often regarded them as "easy marks"-a label that did not encourage them to consider the girls seriously as future mates.

Similarly, there were socially approved attitudes both boys and girls were expected to have toward members of the opposite sex and toward their relationships with each other. These attitudes were colored by unrealism and were highly romanticized. Instead of seeing boys as boys, similar in some respects and different in others from girls, boys were ro-manticized to the point where they were not recognizable as boys but rather were thought of

as "**conquering heroes.**" The tendency to romanticize girls was even more pronounced. It used to be said that boys in love put their girls on pedestals and literally worshiped them.

These highly romanticized attitudes were also present in activities in which both sexes were involved. In the past, a date with a girl meant getting dressed up, taking her a gift of candy, flowers, or a book, seeing her under the parental roof, and leaving at a prescribed time. Attitudes toward what young people did on dates were also carefully prescribed. Kissing and petting were considered in bad taste if not actually wrong unless the couple was engaged. Even then, petting was very limited and within the bounds of what was regarded as "proper" and "safe."

New social attitudes toward sex, the ready availability of contraceptive devices and the legalization of abortion in many states have brought about radical changes in sexual behavior during adolescence and in attitudes toward sex and sexual behavior. While these changes are by no means universal, they are widespread enough to be regarded as "typical" of adolescents today in urban and suburban centers and, to a lesser extent, in small towns and rural communities.

20.3.2 *New Patterns of Heterosexuality*

There are two features that distinguish adolescent heterosexuality today from that of past generations. These are the telescoping of stages in heterosexual behavior, and greater permissiveness. For the most part, adolescents now follow a pattern of development in their heterosexual behavior similar to the traditional pattern, though they pass from one stage of the pattern to another far more quickly than in the past. Kissing on the first date today, for example, is common. In the past, this might readily jeopardize a beginning relationship between a boy and a girl.

When adolescents prefer alternate lifestyles, especially in the later stages of heterosexual behavior, they often have negative attitudes toward marriage, due to unfavorable parent-child relationships or negative perceptions of marriage, based on their parents' marriage. "Many youths turn to alternate life styles in an attempt to find the close relationship which they have not found in their own families".

Dating (not all cultures or religions permit this practice) starts earlier today than in past generations and it quickly develops into a going-steady relationship. It is not unusual, for example, for dating to begin when girls are thirteen years old and the going steady stage to occur before they are fourteen. Dating serves many purposes in the lives of today's adolescents, the most common of which are explained below. Because dating serves different purposes, it is understandable that adolescents want different types of partners for different types of dating.

Many young adolescents prefer going steady to playing the field because it gives them a feeling of security to know that they have an available partner for all social activities. Larson et al., after studying boys and girls in high school, concluded that those who were going steady not only feel personally insecure but also have lower educational-occupational aspirations than those who were not going steady at so early an age.

Going steady does not necessarily involve plans for the future or a commitment to marry. It does, however, sanction advanced forms of sexual behavior. Learning the accepted dating code of the peer group is part of adolescent socialization. It is an accepted form of behavior, for example, to kiss on the first date and to begin petting then or on a subsequent date. Since adolescents begin to date and go steady earlier today than in the past, they engage in different forms of sexual intimacy at earlier ages, and intercourse is common among couples who go steady.

With the trend toward coeducational dormitories in many colleges and universities in western countries, the relaxing of restrictions on visiting hours in segregated dormitories and

of requirements for residence in campus dormitories, and the widespread practice among adolescents of traveling together in groups composed of members of both sexes, living together in a premarital relationship is becoming an accepted pattern among older adolescents in college. This is also true of older adolescents who go to work after completing high school and live apart from their parents in order to enjoy a freedom they would not otherwise have. There is also a growing trend toward communal living, patterned after the lifestyle of the so-called Hippie culture.

The changed pattern of sexual behavior among today's adolescents is not regarded by them as wrong or as promiscuous because usually they have only one sexual partner at a time and in most cases, they expect to marry at some time in the future. Even when parents object to these relationships, many adolescents continue to maintain them.

There are many reasons for this new pattern of sexual behavior. Among these are the belief that it is the "thing to do" because everyone else does it; that girls and boys who are still virgins by the time they reach senior year in high school are "different," and to adolescents this means "inferior"; that they must comply with pressures from the peer group if they wish to maintain their status in the group; and that such behavior is an expression of a meaningful relationship which fills the need every adolescent has for a close association with others, especially when this need is not filled by family relationships.

20.3.3 Common Reasons for Dating During Adolescence

Recreation: When dating is for recreation, adolescents want their partners to have the social skills members of the peer group consider important: to be good sports and pleasant companions. In the case of boys, having a car or access to one and money to spend are essential.

Socialization: When peer-group members divide into dating couples, boys and girls must date if they are to be accepted members of the peer group and enjoy its social activities. Dating partners must want to participate in social activities and have the social skills, time, money, and independence needed for participation in these activities.

Status: Dating for both boys and girls, especially when it takes the form of going steady, gives them status in the peer group. The more popular the dating partner is with members of the peer group and the more prestigious the socioeconomic status of the dating partner's family in the community, the more this will reflect favorably on the adolescent. Dating under such conditions is primarily a steppingstone to higher status in the peer group.

Courtship: In the courtship pattern of adolescence, dating plays a dominant role. Because adolescents are in love and hope and plan to marry eventually, they give serious thought to the suitability of the dating partner as a future mate.

Mate Selection: Adolescents who want to marry when they complete high school and have no plans for higher education look upon dating as an opportunity to tryout different dating partners to see if they have the qualities they want in their future mates. Major emphasis is put on compatibility of interests and temperament and on ways of showing affection. This justifies, in their minds, heavy petting and coitus. Many adolescents who are interested in early marriage regard dating as a trial-and-error way to pick out their future mates.

20.3.4 New Attitudes toward Sexual Behavior

Marked as changes in sexual behavior are, changes in sexual attitudes are even more pronounced. Behavior which, scarcely a generation age, would shock adolescents if it occurred among their peers, and give them feelings of guilt and shame if it occurred in their own lives, now are taken for granted as right and normal, or at least permissible. Even premarital intercourse is regarded as "right" if the individuals involved are deeply in love and

committed to each other. Coitus with affection is more acceptable than petting without affection.

In the past, girls who are engaged in heavy petting and intercourse lost the respect of boys even though they may have been more popular as dating partners than girls who refused to engage in these forms of sexual behavior. Today, adolescent boys maintain that marrying a virgin is unimportant to them, though they tend to lose respect for girls who are too promiscuous and too permissive. Thus, the "double standard" is gradually giving way to a single standard which holds for girls as well as for boys.

Accompanying these changed attitudes are strong ideas about right and wrong in regard to sexual behavior. Behavior which adolescents feel is "right" is accompanied by favorable attitudes, while behavior they feel is "wrong" is accompanied by unfavorable attitudes.

Adolescents of today feel that expressions of love, regardless of the form the expression takes, are good, provided both partners feel strongly about each other. On the other hand, if love is missing and sexual behavior is engaged in only because others do it, or because it is the way for a girl to ensure having a date for social events, or for excitement, they regard this as wrong. They also regard it as wrong for a boy to force a girl to engage in intercourse if she is unwilling or for a girl to use intercourse as a way to force a boy into marriage.

There are also new social attitudes toward pre-marital pregnancy and toward keeping the child, even when there is no intention on the part of the parents to marry. Today, some parents accept daughters with illegitimate children and share in the care and expenses involved in the care. Other adolescents, when they become aware of pregnancy, marry even though they are still students and have no independent source of support.

Older adolescents in urban and suburban communities have a more permissive attitude toward living together without *marriage-cohabitation* -than those in small towns or rural districts. Older adolescents in college tend to cohabit more frequently than those who go to work when they finish high school. Living together without marriage is also more common and more condoned by peers among older adolescents than among younger adolescents who are still living under the parental roof and have not yet reached the legal age of school leaving.

20.4 ERIKSON'S THEORY: IDENTITY VERSUS IDENTITY CONFUSION

Erikson was the first to recognize identity as the major personality achievement of adolescence and as a crucial step toward becoming a productive, happy adult. Constructing an identity involves defining who you are, what you value, and the directions you choose to pursue in life. One expert described it as an explicit theory of oneself as a rational agent-one who acts on the basis of reason, takes responsibility for those actions, and can explain them. This search for what is true and real about the self is the driving force behind many new commitments-to a sexual orientation; a vocation; interpersonal relationships; community involvement; ethnic group membership; and moral, political, religious, and cultural ideals.

Erikson called the psychological conflict of adolescence **identity versus identity confusion**. Successful outcomes of earlier stages pave the way to its positive resolution. Young people who reach adolescence with a weak sense of *trust* have trouble finding ideals to have faith in. Those with little *autonomy* **or** *initiative* do not engage in the active exploration required to choose among alternatives. And those who lack a sense of *industry* fail to select a vocation that matches their interests and skills.

Although the seeds of identity formation are planted early, not until adolescence do young people become absorbed in this task? According to Erikson, in complex societies, teenagers experience an *identity crisis*--a temporary period of confusion and distress as they experiment with alternatives before settling on values and goals. Adolescents who go through a process of inner soul-searching eventually arrive at a mature identity. They sift through characteristics that defined the self in childhood and combine them with new commitments.

Then they mold these into a solid inner core that provides a sense of stability as they move through different roles in daily life. Once formed, identity continues to be refined in adulthood as people reevaluate earlier commitments and choices.

Current theorists agree with Erikson that questioning of values, plans, and priorities is necessary for a mature identity, but they no longer refer to this process as a **"crisis"**. For some young people, identity development is traumatic and disturbing, but for most it is not. *Exploration* better describes the typical adolescent's gradual, uneventful approach to identity formation. By trying out various life possibilities and moving toward making enduring decisions, young people forge an organized self-structure.

Erikson described the negative outcome of adolescence as *identity confusion*. Some young people appear shallow and directionless, either because earlier conflicts have been resolved negatively or because society restricts their choices to ones that do not match their abilities and desires. As a result, they are unprepared for the psychological challenges of adulthood. For example, individuals find it difficult to risk the self-sharing involved in Erikson's young adult *stage-intimacy-*if they do not have a firm sense of self (an identity) to which they can return.

Check Your Progress 2
    A. Mention the development of Sex interests during adolescence
    B. Explain the psychological conflict of adolescence as stated by Erikson
    Notes: a) Write your answer in the space given below.
        b) Check your answer with the one given at the end of this lesson.

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20.5 LET US SUM UP

In this Lesson, we have touched upon the following points:
    i)   Fundamental Changes in Morality during Adolescence
    ii)   Changes in Moral Concepts
    iii)   Building a Moral Code
    iv)   Inner Control of Behavior
    v)   Sex Interests during Adolescence
    vi)   Development of Heterosexuality
    vii)   New Patterns of Heterosexuality
    viii) Common Reasons for Dating During Adolescence
    ix)   New Attitudes toward Sexual Behavior
    x)   Erikson's - Identity versus Identity Confusion

20.6 Check Your Progress: Model Answers
1. The effects of physical changes include:
    i)   Changes in Moral Concepts
    ii)   Building a Moral Code
    iii)   Inner Control of Behavior
2. A. The development of sex interests during adolescence are:
    i)   Development of Heterosexuality
    ii)   New Patterns of Heterosexuality
    iii)   Common Reasons for Dating During Adolescence
    iv)   New Attitudes toward Sexual Behavior
    B. The psychological conflict of adolescence as stated by Erikson is:
    i)   autonomy or initiative
    ii)   identity crisis

iii)   exploration
iv)   identity confusion
v)   stage- intimacy

20.7 Lesson – End Activities
1. Briefly describe the role of teacher in moral development.
2. Discuss the influence of peers on moral development of adolescences.

20.8 References
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UNIT V
Lesson – 21
EARLY ADULTHOOD - CHARACTERISTICS - SEX - ROLE ADJUSTMENT - ERIKSON'S THEORY: INTIMACY VERSUS ISOLATION – FAMILY LIFE CYCLE

Contents

21.0 AIMS AND OBJECTIVES

This Lesson will help understand the characteristics of early adulthood, sex role adjustments made during this period and the family life cycle of early adulthood.

After going through this Lesson, you will be able to:

      i)   understand the characteristics of early adulthood

      ii)   mention the sex-role adjustment and concept of adult sex roles

      iii)   differentiate between the intimacy and isolation stated by Erikson

      iv)   state the family life cycle of the early adulthood

21.1 INTRODUCTION

The word *adult* comes from the same Latin verb as the term *adolescence-adolescere-which* means "**to grow to maturity**." However, the word adult is derived from the past participle of that *verb-adultus* -which means **"grown to full size and strength" or "matured."** Adults are, therefore, individuals who have completed their growth and are ready to assume their status in society along with other adults.

Various cultures have different ages at which children reach the adult status or the age of legal maturity, in most of the older cultures, they reached this status when their puberty growth was complete or nearly complete and when their sex organs had developed to the point where they were capable of procreation. Until recently, children were not considered legally adults until they reached the age of twenty-one years. Today, adulthood is legally

reached at the age of eighteen. With a gradual increase in longevity, adulthood is now by far the longest period in the total life span.

During the long period of adulthood, certain physical and psychological changes occur at predictable times. Like childhood and adolescence-also long periods during which certain physical and psychological changes occur at predictable times adulthood is customarily subdivided on the basis of the times at which these changes take place together with the adjustment problems and cultural pressures and expectancies stemming from them.

It is important to note that these subdivisions are not fixed and rigid. Instead, they indicate only the ages at which the *average* man or woman can be expected to begin to show some changes in appearance, bodily functions, interests, attitudes, or behavior and at which certain environmental pressures in our culture give rise to adjustment problems which few men or women escape. As Gould emphasized, "The precise ages at which changes occur are a product of an individual's total personality, life style and subculture".

21.2 CHARACTERISTICS OF EARLY ADULTHOOD

Early adulthood is a period of adjustments to new patterns of life and new social expectations. The young adult is expected to play new roles, such as that of spouse, parent, and breadwinner, and to develop new attitudes, interests, and values in keeping with these new roles. These adjustments make early adulthood a distinctive period in the life span and also a difficult one. It is especially difficult because, until now, most boys and girls have had someone parents, teachers, friends or others-to help them make the adjustments they are faced with. Now, as adults, they are expected to make these adjustments for themselves. To avoid being considered "immature," they hesitate to turn to others for advice and help when they find the adjustments too difficult to cope with successfully alone.

21.2.1 Early Adulthood is the "Settling-down Age"

Childhood and adolescence are the periods of "**growing up**" and that adulthood is the time for "**settling down**:" In past generations, it was assumed that when boys and girls reached the age of legal maturity, their days of carefree freedom were over and the time had come to settle down and assume the responsibilities of adult life. That meant settling into a line of work that would be the man's career for the rest of his life, while the young Woman was expected to assume the responsibilities of homemaker and mother-responsibilities that would be hers for the remainder of her life.

Today, it is recognized that "settling down" too early is often laying the foundations for discontent because of too early choices of careers or life-mates. Consequently, many young men tryout different lines of work to see which meets their needs best and which will bring them lifelong satisfaction. While trying out different lines of work, many young men also tryout different women to find out if they have the qualities they want for a lifelong spouse.

This trying out of different life patterns and different individuals to share their life patterns takes time. Consequently, young adults today usually start to settle down late than their parents did and much later than their grandparents did. The average adult of today has chosen a lifestyle and an individual to share that lifestyle by the early thirties, though many do so before then.

When adults of today start to settle down depends upon two factors. First, how soon they are able to find a lifestyle that meets their needs then and which they believe will meet their needs throughout life. A woman, who, since the days she played with dolls always wanted to be a wife and mother, will not need long after completing her education to choose these occupations as her life roles. Similarly, a man who never wanted to be anything but a doctor will not have to go through the trial-and-error process to find a career that meets his needs as will his friends who frankly claimed, as boys, that they did not know what they wanted to do when they reached the end of their schooling.

The second condition that determines when young adults will settle down is the responsibilities they must assume before doing so. The man who has selected medicine as a life career certainly cannot start to settle down to the practice of medicine until the late twenties at the earliest because he must complete college, medical school, internship, and residency before he can hang out his shingle as a full-fledged doctor. By contrast, age-mates who decide they want to go into overall or blue-collar jobs can start to settle down shortly after they complete college because they will not need a period of formal training for these jobs. The woman who wants to spend her life as wife and mother may have to delay one or both of these roles should she decide to marry a man who must delay marriage because of financial responsibilities related to his education or to the care of aging parents.

21.2.2 Early Adulthood Is the "Reproductive Age"

Parenthood is one of the most important roles in the lives of most young adults. Those who were married during the latter years of adolescence concentrate on the role of parenthood during their twenties and early thirties; some become grandparents before early adulthood ends.

Those who do not marry until they have completed their education or have started their life careers, do not become parents until they feel they can afford to have a family. This is often not until the early thirties. Also, if women want to pursue careers after marriage, they may put off having children until the thirties. For them, then, only the last decade of early adulthood is the "**reproductive age**." For those who begin to have children early in adulthood or even in the closing years of adolescence and have large families, all of early adulthood is likely to be a reproductive age.

21.2.3 Early Adulthood is a "Problem Age"

The early adult years present many new problems, different in their major aspects, from the problems experienced in the earlier years of life. With the lowering of the age of legal maturity to eighteen years, young adults have been confronted with many problems they are totally unprepared to cope with. While they are now able to vote, to own property, to marry without parental consent, and to do many things young people could not do when the age of legal maturity was twenty-one years, there is no question about the fact that "this new-found freedom is creating unforeseen problems for the youthful adults, and often for their parents, too".

There are many reasons why adjustment to the problems of adulthood is so difficult. Three are especially common. First, very few young people have had any preparation for meeting the types of problems they are expected to cope with as adults. Education in high school and college provides only limited training for jobs, and few schools or colleges give courses in the common problems of marriage and parenthood. Even those who have had baby-sitting experience have limited preparation for parenthood because most baby-sitters are hired only for short times when parents are out of the home and their major responsibility is to keep the children safe and happy until the parents return.

Second, just as trying to learn two or more skills simultaneously usually results in not learning anyone of them well, so trying to adjust to two or more new roles simultaneously usually results in poor adjustment to all of them. It is difficult for a young adult to deal with the choice of a career and the choice of a mate simultaneously. Similarly, adjustment to marriage and parenthood makes it difficult for young adults to adjust to work if they marry while they are still students.

Third, and perhaps most serious of all, young adults do not have the help in meeting and solving their problems that they had when they were younger. This is partly their own fault and partly that of their parents and teachers. Most young adults are too proud of their new status to admit that they cannot cope with it. So, they do not seek the advice and help in

meeting the problems this new status gives rise to. Similarly, most parents and teachers, having been rebuffed by adolescents who claimed they were capable of handling their own affairs, hesitate to offer help unless they are specifically asked to do so. That is why, as was stressed earlier, the shortening of adolescence has made the transition to adulthood especially difficult.

21.2.4 Early Adulthood is a Period of Emotional Tension

When people are trying to get the lay of a new land in which they find themselves, they are likely to be emotionally upset. By the early or mid-thirties, most young adults have solved their problems well enough to become emotionally stable and calm. Should the heightened emotionality characteristic of the early years of adulthood persist into the thirties, it suggests that adjustments to adult life have not been satisfactorily made. When emotional tension persists into the thirties, it is generally expressed in worries. What young adults worry about will depend on what adjustment problems they are facing at the time and how much success or failure they are experiencing in meeting these problems. Their worries may be mainly concentrated on their work, because they feel they are not advancing as rapidly as they had hoped to, or their worries may be concentrated on marital or parent hood problems. When adults feel that they have not been able to cope with the problems in the major areas of their lives, they are often so emotionally disturbed that they contemplate or attempt suicide.

21.2.5 Early Adulthood is a Period of Social Isolation

With the end of formal education and the entrance into the adult life pattern of work and marriage, associations with the peer groups of adolescence wane and, with them, opportunities for social contacts outside the home. As a result, for the first time since babyhood even the most popular individual is likely to experience social isolation, or what Erikson has referred to as an **"isolation crisis".**

Many young adults, having become accustomed throughout childhood and adolescence to depending on peers for companionship, experience loneliness when responsibilities at home or at work isolate them from groups of their peers. Those who were most popular during their school and college days, and who devoted much of their time to peer activities, find the adjustment to social isolation in adulthood especially difficult. Whether the loneliness that comes from this isolation will be temporary or persistent depends on how quickly and how satisfactorily the young adult can establish new social contacts to replace those of school and college days.

Isolation is intensified by a competitive spirit and a strong desire to rise on the vocational ladder. To achieve success, they must compete with others thus replacing the friendliness of adolescence with the competitiveness of the successful adult-and they must also devote most of their energies to their work, which leaves them little time for the socialization that leads to close relationships. As a result, they become self-centered, which contributes to loneliness.

21.2.6 Early Adulthood is a time of commitments

As young adults change their role from that of student and dependent, characteristic of adolescence, to that of independent adult, they establish new patterns of living, assume new responsibilities, and make new commitments. While these new patterns of living, new responsibilities, and new commitments may change later, they form the foundations on which later patterns of living, responsibilities, and commitments will be established.

21.2.7 Early Adulthood is often a Period of Dependency

In spite of achieving the status of legal adulthood at age eighteen, with the independence this status carries, many young adults are partially or totally dependent on others for varying lengths of time. This dependency may be on parents; on the educational institution they attend on part or total scholarship, or on the government for loans to finance their education.

Other young adults, while rebelling against the dependency a prolonged career training necessitates, become so accustomed to depending on others for financial support that they question their own ability to become economically independent. As a result, they often become **"perpetual students**," going from one training center to another for more and more training for their careers. To compensate for any feeling of guilt or shame they may have for playing the perpetual student role, they try to convince themselves and others that the more training they get, the greater their chances for reaching the top of the ladder in their chosen careers. As a result, their state of dependency is often prolonged into the late twenties or early thirties.

21.2.8 Early Adulthood is a Time of Value Change

Many of the values developed during childhood and adolescence change as experience and social contact with people of different ages broaden and as values are considered from a more mature standpoint. Adults who used to consider school a necessary evil may now recognize the value of education as a stepping-stone to social and vocational success and to personal fulfillment. As a result of such changed values, many adults who dropped out of school or college decide to finish their education. Some find studying so stimulating that they continue to take courses even after receiving high school or college degrees.

There are many reasons for value changes in early adulthood, three of which are very common. First, if young adults want to be accepted by members of the adult group, they must accept the values of the adult group just as, during childhood and adolescence, they had to accept the values of their peer group to win acceptance. Many young adults discover that the "sloppy Joe" appearance of their school and college days and rebellious attacks on the establishment must give way to adult-approved appearance and behavior if they want to be accepted in adult economic and social groups.

Second, young adults soon discover that most social groups hold conventional values about beliefs and behavior, just as they do about appearance. While the adolescent peer culture may have regarded premarital sex as acceptable behavior, most adults do not and demand more conventional courtship and marriage as the price of acceptance into the social group.

Third, young adults who become parents not only tend to change their values earlier and more radically than those who are unmarried or childless, but they also shift to more conservative and traditional values. In general, the values of most young adults change from egocentric to social. Members of the "me" generation - those who think mainly of their own happiness and desire for self-indulgence gradually become more socially conscious and concerned as they assume the roles of spouse and parent.

21.2.9 Early Adulthood is the Time of Adjustment to New lifestyles

While lifestyles have been in a state of flux since the turn of the present century, at no period in the life span is this truer than in early adulthood. And in no area of early adult life are new lifestyles more prevalent than in the areas of marriage and parenthood. Instead of the traditional courtship of the past, many young adults regard premarital sex as an accepted part of the courtship pattern. Similarly, use of contraceptives and resort to abortion when contraception fails are so widespread among young adults, especially those who are in colleges, that they also are regarded as part of the courtship pattern. Nor is marriage after pregnancy regarded as the "hush hush" matter it formerly was. Instead, many young couples want as large and as elaborate weddings as they had hoped for before the bride became pregnant.

Of the many adjustments young adults must make to new lifestyles the most common are adjustments to egalitarian rather than traditional sex roles, new family-life patterns, including divorce and one parent families, and new vocational patterns, especially large and impersonal

work units in business and industry.

21.2.10 Early Adulthood is a Creative Age

What form creativity will take in adulthood will depend upon individual interests and abilities, opportunities to do what they want to do, and activities that give the greatest satisfaction. Some young adults find a creative outlet in hobbies while others choose vocations in which they can express their creativity.

Even though interest in creative activities starts in the twenties creative achievements often do not reach their peak until middle age. This is due to the fact that creativity is more often discouraged than encouraged in the early years of life. Thus it is that during early adulthood men and women must not only discover where their creative interests and talents lie but they must also develop their capacities which, in many cases, remained dormant while the patterns of their lives were prescribed by parents and teachers. As they approach middle age, however, men and women should have overcome these obstacles sufficiently to achieve the maximum of which they are capable.

As adolescents, girls are given more opportunity to be creative than boys-since creativity is regarded as more sex-appropriate for females than for males. Therefore, as young women, they tend to be more creative in whatever they do-in their dress, their home decorations, or their hobbies-than men. However, home duties and child-care responsibilities often hamper expressions of creativity. As a result, when they reach middle age, women's creative achievements often lag behind those of men who, earlier in adulthood, were less creative than they.

Check Your Progress 1

Discuss the characteristics of early adulthood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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21.3 SEX-ROLE ADJUSTMENTS IN EARLY ADULTHOOD

Sex-role adjustments during early adulthood are extremely difficult. Long before adolescence is over, boys and girls are well aware of the approved adult sex roles but this does not necessarily lead to acceptance. Many adolescent girls want to play the role of wife and mother when they reach adulthood, but they do not want to be wives and mothers in the traditional sense-being subordinate to their husbands, devoting most of their time to their homes and children, and having few or no outside interests.

The hope of many of today's young women for an egalitarian marriage is based not on wishful thinking but on the realization that there have been marked changes in the adult pattern of living. For example, wives often work until their husbands finish their education or become established in business or they take jobs in order to acquire various status symbols that the family would otherwise be unable to afford. Most important of all, young women are aware of the breakdown of the "double standard," not only in sexual and moral behavior, but also in social, business, and professional life.

In fact, the traditional concepts are gradually being modified or even replaced by new, more egalitarian ones-concepts that stress similar behavior patterns for members of the two sexes. These egalitarian concepts have found acceptance among all social groups, even those which formerly held firmly to traditional concepts of the male and female roles. The traditional and egalitarian concepts of adult sex roles are given below.

Many young women recognize the low prestige associated with the traditional role of wife and mother, and consequently they have little motivation to learn this role. When they

become wives and mothers, they see little opportunity for escape from this role into one they previously found more satisfying and personally rewarding. Conflict between what they would like to do and what they know they must do further weakens their motivation to play the traditionally prescribed sex role. The conflicts and frustrations many young women in the American culture experience are heightened by the constant bombardment of advice from the mass media to play a role other than that of the traditional wife and mother.

21.3.1 Concepts of Adult Sex Roles
Traditional Concepts
Traditional concepts of sex roles emphasize a prescribed pattern of behavior, regardless of individual interests or abilities. They emphasize masculine supremacy and intolerance toward any trait that hints of femininity or any work that is considered "**woman's work."**

Men: Outside the home the man holds positions of authority and prestige in the social and business worlds; in the home he is the wage earner, decision maker, adviser and disciplinarian of the children, and model of masculinity for his sons.

Women: Both in the home and outside, the role of the woman is other-oriented in that she gains fulfillment by serving others. She is not expected to work outside the home except in cases of financial necessity, and then she does only work that serves others, such as nursing, teaching, or secretarial work.

Egalitarian Concepts
Egalitarian concepts of sex roles emphasize individuality and the egalitarian status of men and women. Roles should lead to personal fulfillment and not be considered appropriate for only one sex.

Men: In the home and outside, the man works with the woman in a companionship relationship. He does not feel "henpecked" if he treats his wife as an equal, nor does he feel ashamed if she has a more prestigious or remunerative job than he does.

Women: Both in the home and outside, the woman is able to actualize her own potentials. She does not feel guilty about using her abilities and training to give her satisfaction, even if this requires employing someone else to take care of the home and children.

21.4 ERIKSON'S THEORY: INTIMACY VERSUS ISOLATION
Erikson's contributions have energized the study of adult personality development. His vision has influenced all contemporary theories. According to Erikson, adults move through three stages, each bringing both opportunity and risk-"a turning point for better or worse". The psychological conflict of early adulthood is intimacy versus isolation, reflected in the young person's thoughts and feelings about making a permanent commitment to an intimate partner.

In his definition of intimacy, Erikson stated that it should include

1. Mutuality of orgasm

2. with a loved partner

3. of the other sex

4. With whom one is able and willing to share a mutual trust

5. and with whom one is able and willing to regulate the cycles of

a. work
b. procreation
c. recreation
6. so as to secure to the offspring, too, all the stages of a satisfactory development

Erikson pointed out, that sexual intercourse should not be assumed to be the most

important aspect of intimacy between individuals. He was speaking here of far more than sexual intimacy. He was talking about the ability to relate one's deepest hopes and fears to another person and to accept another's need for intimacy in turn.

Those who have achieved the stage of **intimacy** are able to commit themselves to concrete affiliations and partnerships with others and have developed the "ethical strength to abide by such commitments, even though they may call for significant sacrifices and compromises". This leads to **solidarity** between partners.

Erikson was found quoting Freud's response when asked what he thought a normal person should be able to do well: *"Lieben und arbeiten'* - "to love and to work." To Freud, then sharing responsibility for mutual achievements and the loving feelings that result from them are the essence of adulthood. Erikson fully agreed with this. Thus when Freud uses the term *genitality* to describe this same period he does not merely mean sexual intercourse; he is referring rather to the ability to share one's deeply held values, needs, and secrets with another through the generosity that is so important in intimacy.

The counterpart of intimacy is **distantiation**. This is the readiness all of us have to distance ourselves from others when we feel threatened by their behavior. Distantiation is the cause of most prejudices and discrimination. Propaganda efforts mounted by countries at war are examples of attempts to increase distantiation. It is what leads to isolation.

Most young adults vacillate between their desires for intimacy and their need for distantiation. They need social distance because they are not sure of their identities. They are always vulnerable to criticism, and since they can't be sure whether the criticisms are true or not, they protect themselves by a "lone wolf" stance.

Although intimacy may be difficult for some males today, Erikson believed that it used to be even more difficult for females. "All this is a little more complicated with women, because women, at least in yesterday's cultures, had to keep their identities incomplete until they knew their man". Now that less emphasis occurs in the female gender role on getting married and pleasing one's husband, and more emphasis is on being true to one's own identity, Erikson believed that both sexes have a better chance of achieving real intimacy.

Erikson believed that successful resolution of intimacy versus isolation prepares the individual for the middle adulthood stage, which focuses on *Generativity*-caring for the next generation and helping to improve society. In sum, both intimacy and Generativity emerge in early adulthood, with shifts in emphasis that differ among young people.

Check Your Progress 2

    A. Mention the concepts of Adult Sex Roles

    B. State the Erikson's intimacy vs. isolation theory

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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21.5 THE FAMILY LIFE CYCLE

For the majority of young people, the quest for intimacy leads to marriage. Their life course takes shape within the family life cycle-a sequence of phases that characterizes the development of most families around the world. In early adulthood, people typically live on their own, marry and bear and rear children. As they become middle-aged and their children leave home, their parenting responsibilities diminish. Late adulthood brings retirement, growing old, and (mostly for women) death of one's spouse.

21.5.1 Leaving Home

Departure from the parental home is a major step toward assuming adult responsibilities. The average age of leaving has decreased in recent years as more young people live independently before marriage.

Timing of departure varies with the reason for leaving. Departures for education tend to occur at younger ages, those for full-time work and marriage later. Some young people who want to escape family friction also depart early. And those from divorced, single-parent homes tend to be early leavers, perhaps because of family stress. Compared with the previous generation, fewer young people leave home to marry, and more do so just to be "independent" -to express their adult status. But a difficult job market and high housing costs mean that many must take undesirable jobs or remain financially dependent on their parents.

21.5.2 Joining of Families in Marriage

Young adults delay marriage more today than a half-century ago. The number of first and second marriages has declined over the last few decades as more people remain single, cohabit, or do not remarry after divorce. Marriage is often regarded as the joining of two individuals. In actuality, it requires that two entire systems--the husband's and wife's families-adapt and overlap to create a new subsystem. Consequently, marriage presents couples with complex challenges. This is especially so today because husband-wife roles have only begun to move in the direction of a true partnership educationally, occupationally, and in emotional connectedness.

21.5.2a Marital Roles: After wedding and honeymoon are over, Couples turn to a multitude of issues that they had previously decided individually or that their families of origin had prescribed. They considered everyday matters when and how to eat, sleep, talk, work, relax, have sex, and spend money. They also discussed which family traditions and rituals to retain and which to work out for themselves. And as they related to their social world as a couple, they modified relationships with parents, siblings, extended family, friends, and co-workers.

Despite progress in the area of women's rights, **traditional marriages**, involving a clear division of husband's and wife's roles, still exist. The man is the head of household; his primary responsibility is the economic wellbeing of his family. The woman devotes herself to caring for her husband and children and to creating a nurturant, comfortable home. However, traditional marriages have changed in recent decades. Although women make motherhood the top priority while their children are young, many return to the work force at a later date.

In **egalitarian marriages**, husband and wife relate as equals, and power and authority are shared. Both partners try to balance the time and energy they devote to their occupations, their children, and their relationship. The majority of well-educated, career-oriented women expect this form of marriage. But women's employment has not had much impact on household division of labor. Men in dual-earner families participate more than those in single-earner families.

21.5.2b Marital Satisfaction: Despite its rocky beginnings, most marriages grew to be happy. Many postponed having children until careers were under way and build a sense of togetherness that allowed each to thrive as an individual. Patience, caring, shared values, enjoyment of each other's company, and good conflict-resolution skills contributed to couples compatibility.

There are factors differentiate troubled from that of gratifying marital relationships. More men than women report being happily married. Simply being married is associated with gains in men's mental and physical health-an outcome that stems from enhanced feelings of attachment, belonging, and social support.

21.5.2c Marital Expectations and Myths: When fifty happily married couples were interviewed about their marriages, each participant reported good times and bad; none was

happy all the time. Many admitted that there were moments when they wanted out, when they felt they had made a mistake. Clearly, marital happiness did not signify a "rose garden." Instead, it was grounded in mutual respect, pleasure and comfort in each other's company, and joint problem solving. All couples emphasized the need to reshape their relationship in response to new circumstances and to each partner's changing needs and desires.

21.5.3 Parenthood

In the past, the issue of whether to have children was, for many adults, "a biological given or an unavoidable cultural demand". Now it is a matter of true individual choice. Effective birth control techniques enable adults to avoid having children in most instances. And changing cultural values allow people to remain childless with less fear of social criticism and rejection than was the case a generation or two ago.

21.5.3a The Decision to Have Children: The choice of parenthood is affected by a complex array of factors, including financial circumstances, personal and religious values, and health conditions. Women with traditional gender identities usually decide to have children. Whether a woman is employed has less impact on childbearing than her occupation. Women with high-status, demanding careers less often choose parenthood and, when they do, more often delay it than women with less time-consuming jobs. When asked about their desire to have children, couples mention a variety of disadvantages, like loss of freedom, financial strain, role over load, worries and risk of children, loss of privacy etc.

21.5.3b Transition to Parenthood: The early weeks after a baby enters the family are full of profound changes: disrupted sleep schedules, new caregiving and household tasks, less time for couples to devote to each other, and added financial responsibilities. For most new parents, however, the arrival of a baby does not cause significant marital strain. Marriages that are gratifying and supportive tend to remain so and resemble childless marriages in overall happiness. In contrast, troubled marriages usually become more distressed after a baby is born.

21.5.3c Additional Births: There are factors that influence the family size. Besides more effective birth control, a major reason that couples in industrialized nations have fewer children today than in the past is women's increased career orientation. Overall, a smaller family size enhances parent-child interaction. Parents of fewer children are more patient and less punitive. They also have more time to devote to each child's activities, schoolwork, and other special needs. Furthermore, in smaller families, siblings are more likely to be widely spaced (born more than 2 years apart), which adds to the attention and resources parents can invest in each other and in each child.

21.5.3d Parent Education: In the past, family life changed little from one generation to the next, and adults learned what they needed to know about parenting through modeling and direct experience. Contemporary parents eagerly seek information on child rearing through popular books. New mothers regard these sources as particularly valuable, second in importance only to their doctors. Special parent education courses have also emerged, designed to help parents clarify child-rearing values, improve family communication, under-stand how children develop, and apply more effective parenting strategies. Yet another benefit is social support-opportunities to discuss concerns with experts and other dedicated parents, who share the view that no job is more important to the future of society than child rearing.

Check Your Progress 3

Write about the sequence of phases that characterizes the development of family cycle

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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21.5 LET US SUM UP

In this Lesson, we have touched upon the following points:
- vi) Characteristics of Early Adulthood
- vii) Sex-Role Adjustments in Early Adulthood
- viii) The Erikson's intimacy vs. isolation theory
- ix) The sequence of phases that characterizes the development of family cycle

21.6 Check Your Progress: Model Answers

11. The characteristics of early adulthood include:
- i) Early Adulthood is the "Settling-down Age"
- ii) It is the "Reproductive Age"
- iii) It is a "Problem Age"
- iv) It is a Period of Emotional Tension
- v) It is a Period of Social Isolation
- vi) It is a time of commitments
- vii) It is often a Period of Dependency
- viii) It is a Time of Value Change
- ix) It is the Time of Adjustment to New lifestyles
- x) It is a Creative Age

12. A. The concept of adult sex role are:
- i) Traditional Concepts
- ii) Egalitarian Concepts

   C. The Erikson's intimacy vs. isolation theory suggests:
- i) intimacy
- ii) solidarity
- iii) distantiation
- iv) isolation

13. The sequence of phases that characterizes the development of family cycle are:
- i) Leaving Home
- **ii)** Joining of Families in Marriage
- iii) Marital Roles
- iv) Marital Satisfaction
- v) Marital Expectations and Myths
- vi) Parenthood
- vii) The Decision to Have Children
- viii) Transition to Parenthood
- ix) Additional Births
- x) Parent Education

21.7 Lesson – End Activities

1. Briefly describe the concept social isolation and its impact on development.
2. Describe the concept creativity in relation to emotional unbalance.

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LESSON – 22

DIVERSITY OF ADULT LIFESTYLES - CAREER DEVELOPMENT -MIDDLE ADULTHOOD - ERIKSON'S THEORY: GENERATIVITY VERSUS STAGNATION

Contents

22.0 AIMS AND OBJECTIVES

This Lesson will help understand the life styles and career success of early adulthood and the Characteristics of middle adulthood

After going through this Lesson, you will be able to:

xxiv) understand the different common life styles found among early adulthood

xxv) state as to how career development occurs during early adulthood

xxvi) list the characteristics of middle adulthood

xxvii) discuss the Erikson's theory on Generativity and Stagnation

22.1 INTRODUCTION

The present adult lifestyles are different from that of the past, young people question the conventional wisdom of previous generations. Many want to find happiness. The kind of

commitments one should make to live a full and rewarding life. As the public became more accepting of diverse lifestyles, choices seemed more available-among them, staying single, cohabiting, remaining childless, and divorcing.

22.2 DIVERSITY OF ADULT LIFESTYLES

Today, nontraditional family options have penetrated. Many adults experience not just one, but several options. Some adults make a deliberate decision to adopt a lifestyle, whereas others drift into it. The lifestyle may be imposed by society, as is the case for cohabiting homosexual couples, who cannot marry legally. Or people may decide on a certain lifestyle because they feel pushed away from another, such as a marriage gone sour. In sum, the adoption of a lifestyle can be within or beyond the person's control.

22.2.1 Singlehood

Singlehood-not living with an intimate partner-has increased in recent years, especially among young adults. Besides more people marrying later or not at all, divorce has added to the numbers of single adults. In view of these trends, it is likely that most will spend a substantial part of their adult lives single.

Because they marry later, more young adult men than women are single. But women are far more likely than men to remain single for many years or their entire life. With age, fewer men are available with characteristics that most women seek in a mate-the same age or older, equally or better educated, and professionally successful. Men find partners more easily, since they can select from a large pool of younger unmarried women. Because of the tendency for women to "marry up" and men to "marry down," men in blue-collar occupations and women in prestigious careers are over represented among singles after age 30.i

Of the various advantages of singlehood, those mentioned most are freedom and mobility. But singles also recognize drawbacks-loneliness, the dating grind, limited sexual and social life, reduced sense of security, and feelings of exclusion from the world of married couples. Single men have more physical and mental health problems than single women, who usually come to terms with their lifestyle. The greater social support available to women through intimate same-sex friendships is partly responsible. In addition, never-married men are more likely to have conflict-ridden family backgrounds and personal characteristics that contribute to both their singlehood and their adjustment difficulties.

22.2.2 Cohabitation

Cohabitation refers to the lifestyle of unmarried couples who have an intimate, sexual relationship and share a residence. Until the 1960s, cohabitation in Western nations was largely limited to low-SES adults. Since then, it has increased in all groups, with an especially dramatic rise among well-educated, economically advantaged young people. Young adults are much more likely than those of a generation ago to choose cohabitation as a way of forming their first conjugal union. Among people in their twenties, cohabitation is now the preferred mode of entry into a committed intimate partnership, with more than 50 percent of couples choosing it. Rates of cohabitation are even higher among adults with failed marriages. Half of cohabiting relationships involve at least one partner who is separated or divorced; one-third of these households include children.

Like singlehood, cohabitation has different meanings. For some, it serves as *preparation for marriage*-a time to test the relationship and get used to living together. For others, it is an *alternative to marriage*--an arrangement that offers the rewards of sexual intimacy and companionship along with the possibility of easy departure if satisfaction declines. In view of this variation, it is not surprising that cohabiters differ greatly in the extent to which they share money and possessions and take responsibility for each other's children.

Certain couples who cohabit after separation or divorce often test a new relationship carefully to prevent another failure, especially when children are involved. As a result, they

cohabit longer and are less likely to move toward marriage. Many regard their earning power as too uncertain for marriage and continue living together, sometimes giving birth to children and marrying when their financial status improves. Finally, homosexual couples report strong commitment-as intense as that of married people. When their relationships become difficult, they end more often than marriages only because there are fewer barriers to separating, including children in common, financial dependence on a partner, and concerns about the costs of divorce.

22.2.3 Childlessness

Some people are *involuntarily* childless because they did not find a partner with whom to share parenthood or their efforts at fertility treatments did not succeed.

There are couples who choose not to have children as a matter of fact that voluntary childlessness is not always a permanent condition. A few people decide early that they do not want to be parents and stick to these plans. But most make their decision after they are married and have developed a lifestyle they do not want to give up. Later, some change their minds.

Besides marital satisfaction and freedom from child-care responsibilities, common reasons for not having children include the woman's career and economic security. Consistent with these motives, the voluntarily childless are usually college educated, have prestigious occupations, and are highly committed to their work. Many were only or first-born children whose parents encouraged achievement and independence. In cultures that negatively stereotype childlessness, it is not surprising that voluntarily childless women are more self-reliant and assertive.

22.2.4 Divorce and Remarriage

Divorce rates have increased as financial stability increased and marital satisfaction has decreased. Divorces are also common during the transition to midlife, when people have teenage children-a period of low marital satisfaction. About three-fourths of divorced people remarry. But marital failure is even greater during the first few years of second marriages.

22.2.4a Factors Related to Divorce: The most obvious reason for failure of marriage is a disrupted husband-wife relationship. The problem-solving style could be ineffective. Another typical style involves little conflict, but partners increasingly lead separate lives because they have different expectations of family life and few shared interests, activities, or friends.

Wives reported more problems than husbands, with the gender difference largely involving the wife's emotions, such as anger, hurt feelings, and moodiness. Husbands seemed to have difficulty sensing their wife's distress, which contributed to her view of the marriage as unhappy. Regardless of which spouse reported the problem or was judged responsible for it, the strongest predictors of divorce were infidelity, spending money foolishly, drinking or using drugs, expressing jealousy, engaging in irritating habits, and moodiness.

Younger age at marriage, being previously divorced, and having parents who had divorced increased the chances of divorce, in part because these background factors were linked to marital difficulties. Economically disadvantaged couples who suffer multiple life stresses are especially likely to split up. Women are twice as likely as men to initiate divorce.

22.2.4b Consequences of Divorce: Immediately after separation, both men and women are depressed and anxious and display impulsive behavior. For most, these reactions subside within 2 years. Women who were in traditional marriages and who organized their identities around their husbands have an especially hard time. No custodial fathers often feel disoriented and rootless as a result of decreased contact with their children. Others distract themselves through a frenzy of social activity.

Finding a new partner contributes most to the life satisfaction of divorced adults. But it is

more crucial for men, who are better adjusted in the context of marriage than on their own. Despite loneliness and reduced income, most divorced women prefer their new life to an unhappy marriage. However, a few women--especially those who are anxious and fearful or who remain strongly attached to their ex-spouses-show a drop in self-esteem, become depressed, and tend to form repeated unsuccessful relationships. Job training continued education, career advancement, and social support from family and friends play vital roles in the economic and psychological wellbeing of divorced women.

22.2.4c Remarriage: On average, people remarry within 4 years of divorce, men somewhat faster than women. For several reasons, remarriages are especially vulnerable to breakup. First, although people often remarry for love, practical matters-financial security, help in rearing children, relief from loneliness, and social acceptance-figure more heavily into a second marriage than a first. These concerns do not provide a sound footing for a lasting partnership. Second, some people transfer the negative patterns of interaction and problem solving learned in their first marriage to the second. Third, people who have already had a failed marriage are more likely to view divorce as an acceptable solution when marital difficulties resurface. And finally, remarried couples experience more stress from step family situations.

Divorce and remarriage, like other adult lifestyles, lead to diverse outcomes. It generally takes 3 to 5 years for blended families to develop the connectedness and comfort of intact biological families. Family life education, couples counseling, and group therapy can help divorced and remarried adults adapt to the complexities of their new circumstances.

22.2.5 Variant Styles of Parenthood

Diverse family forms result in varied styles of parenthood. Among these are a growing number of cohabiting and remarried parents, never-married parents, and gay and lesbian parents. Each type of family presents unique challenges to parenting competence and adult psychological well-being.

22.2.5a Stepparents: Whether stepchildren live in the household or visit only occasionally, stepparents are in a difficult position. Since the parent-child tie predates the blended family, the stepparent enters as an outsider. Too often, stepparents move into their new role too quickly. Because they do not have a warm attachment bond to build on, their discipline is usually ineffective. Stepparents frequently criticize the biological parent for being too lenient. The parent, in turn, tends to view the stepparent as too harsh. These differences can divide the couple. Remarried parents typically report higher levels of tension and disagreement than first marriage parents, most centering on child-rearing issues. Because of more opportunities for conflict, relationship quality is poorer when both adults have children from prior marriages than when only one does.

Stepmothers, especially, are likely to experience conflict. Expected to be in charge of family relationships, they quickly find that stepparent-stepchild ties do not develop instantly. Often mothers are jealous, uncooperative, and possessive of their children following divorce. Even when their husbands do not have custody, stepmothers feel stressed. As stepchildren go in and out of the home, stepmothers compare life with and without resistant children, and many prefer life without them. No matter how hard a stepmother tries to build a close parent-child bond, her efforts are probably doomed to failure in the short run.

Stepfathers with children of their own have an easier time. They establish positive ties with stepchildren relatively quickly, perhaps because they are experienced in building warm parent-child ties and feel less pressure than stepmothers to plunge into parenting.

22.2.5b Never-Married Single Parents: Single adults occasionally decide to become parents on their own. Births to women in high-status occupations who have not married by their

thirties have increased. However, they are still few in number, and little is known about how these mothers and their children fare.

In the United States, the largest group of never-married parents is African-American young women. African-American women postpone marriage more and childbirth less than women in other American ethnic groups. Job loss, persisting unemployment, and consequent inability of many black men to support a family have contributed to the number of African-American never-married, single-mother families.

Never-married mothers tap the extended family, especially their own mothers, for help in caring for children. For just over one-third, marriage occurs within 9 years after birth of the first child, not necessarily to the child's biological father. These couples function much like other first-marriage parents. Their children are often unaware that the father is a stepfather, and parents do not report the child-rearing difficulties typically associated with blended families.

Children of never-married mothers who lack the involvement of a father are poor in school and display more antisocial behavior than children in low-SES, first-marriage families. These adjustment problems make life more difficult for mothers. Strengthening social support, education, and employment opportunities for low-SES parents would encourage marriage as well as help unmarried-mother families.

22.2.5c Gay and lesbian Parents: Several million American gay men and lesbians are parents, most through previous heterosexual marriages, a few through adoption or reproductive technologies. In the past, laws assuming that homosexuals could not be adequate parents led those who divorced a heterosexual partner to lose custody of their children. Today, sexual orientation is irrelevant to custody. In others, fierce prejudice against homosexual parents still prevails.

Gay and lesbian parents are as committed to and effective at child rearing as heterosexual parents. Some evidence suggests that gay fathers are more consistent in setting limits and more responsive to their children's needs than heterosexual fathers, perhaps because gay men's less traditional gender identity fosters involvement with children. In lesbian families, quality of mother-child interaction is as positive as in heterosexual families. And children of lesbian mothers regard their mother's partner as very much a parent. Whether born to or adopted by their parents or conceived through donor insemination, children in homosexual families are as well adjusted as other children. Also, the large majority are heterosexual.

When extended-family members have difficulty accepting them, homosexual mothers and fathers often build "families of choice" through friends, who assume the roles of relatives. But most of the time, parents of gays and lesbians cannot endure a permanent rift. With time, interactions between homosexual parents and their families of origin become more positive and supportive.

Check Your Progress 1

Write about the diverse life styles found during the early adulthood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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22.3 CAREER DEVELOPMENT

Besides family life, vocational life is a vital domain of social development in early adulthood. After choosing an occupation, young people must learn how to perform its tasks well, get along with co-workers, respond to authority, and protect their own interests. When

work experiences go well, adults develop new competencies, feel a sense of personal accomplishment, make new friends, and become financially independent and secure.

22.3.1 Establishing a Career

Not all people embark on the vocation of their dreams. For example, although half of young people aspire to professional occupations, only 20 percent attain them. Even for those who enter their chosen field, initial experiences can be discouraging. Adjusting to unanticipated disappointments in salary, supervisors, and co-workers is difficult. As new workers become aware of the gap between their expectations and reality, resignations are common. On average, people in their twenties move to a new job every 2 years; five or six changes are not unusual.

After a period of evaluation and adjustment, young adults generally settle into their work. In careers with opportunities for promotion, high aspirations must often be revised downward, since the structure of most work settings resembles a pyramid, with few high-level executive and supervisory jobs. For men who advanced very little, "work disengagement" occurred early; family, recreation, and community service assumed greater importance by the early thirties. Men with average levels of career success emphasized non work roles at a later age. In contrast, men who were highly successful became more involved in their jobs over time. Although the desire for advancement tends to decline with age, most people still seek challenges and find satisfaction in their work roles.

Besides opportunity, personal characteristics affect career progress. A *sense of self - efficacy*-belief in one's own ability to be successful-affects career choice and development. Young people who are very anxious about the possibility of making mistakes or failing tend to set career aspirations that are either too high or too low. When they encounter obstacles, they quickly conclude that career tasks are too hard and give up. As a result, they achieve far less than their abilities would permit.

Access to an effective mentor-a person with advanced experience and knowledge who is emotionally invested in the junior person's development and who fosters a bond of trust-is jointly affected by the availability of willing people and the individual's capacity to select an appropriate individual. Interestingly, the best mentors usually are not top executives, who tend to be preoccupied and therefore less helpful and sympathetic. Most of the time, young adults fare better with a mentor lower on the corporate ladder.

22.3.2 Combining Work and Family

Women work because they want to or have to (or both). The dominant family form today is the **dual-earner marriage**, in which both husband and wife are employed. Most dual-earner couples are also parents, since the majority of women with children are in the work force. In about one-third of these families, moderate to severe conflict occurs over trying to meet both work and family responsibilities.

The main sources of strain in dual-earner marriages are, when women returns to job after her children were born, she could feel a sense of *role overload,* or conflict between work and family responsibilities. Not only did they have a demanding career, but (like most employed women) women shoulder most of the household and child-care tasks. Role overload is linked to a rise in psychological stress, poorer marital relations, less effective parenting, and child behavior problems.

Having two careers in one family usually means that certain career decisions become more complex. A move to a new job can mean vocational sacrifices for one partner. Usually this is the wife, since a decision in favor of the husband's career (typically further along and better paid) is more likely to maximize family income. One solution to the geographical limitations of the dual-earner marriage is to live apart. Although more couples are doing this, the strain of separation and risk of divorce are high.

When couples cooperate to surmount these, they profit greatly from involvement in both work and family roles. Besides higher earnings and a better standard of living, a major advantage is women's self-fulfillment and improved well-being. Multiple roles also granted both young people expanded contexts for experiencing success and greater similarity in everyday experiences, which fostered gratifying communication.

Check Your Progress 2

Mention the career development during early adulthood

Notes: a) Write your answer in the space given below.

   b) Check your answer with the one given at the end of this lesson.

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22.4 CHARACTERISTICS OF MIDDLE ADULTHOOD

As Middle Adulthood is a long period in the life span, it is customarily subdivided into *early Middle Adulthood*, which extends from age **forty** to age **fifty**, and *advanced Middle Adulthood*, which extends from age **fifty** to age **sixty**. During advanced Middle Adulthood, physical and psychological changes that first began during the early forties become far more apparent.

Like every period in the life span, Middle Adulthood is associated with certain characteristics that make it distinctive. Ten of the most important of these characteristics are listed below.

22.4.1 Middle Adulthood is a Dreaded Period

It is a dreaded period in the life span. It is recognized that, next to old age, it is the most dreaded period in the total life span and the one adult will not admit that they have reached until the calendar and the mirror force them to do so. As Desmond has pointed out, "Middle Adulthood people slump into Middle Adulthood grudgingly, sadly and with a tinge of fear".
 There are many unfavorable stereotypes about middle-aged people, the traditional beliefs concerning the mental and physical deterioration that are believed to accompany the cessation of the reproductive life, and the emphasis on the importance of youth in the as compared with the reverence for age found in many other cultures. These influence adult attitudes unfavorably as they approach this period in their lives. While dreading Middle Adulthood, most adults become nostalgic about their younger years and wish that they could turn back the hands of the clock.

22.4.2 Middle Adulthood is a Time of Transition

Just as puberty is a time of transition from childhood to adolescence and then to adulthood, so Middle Adulthood is the time when men and women leave behind the physical and behavioral characteristics of adulthood and enter a period of life when new physical and behavioral characteristics will prevail. It is the time when men undergo a change in virility and women a change in fertility.

The pattern of role changes for both men and women there must be a change to a pair-centered relationship as compared with the family-centered relationship during the early years of adulthood when the main roles of men and women in the home are those of parents.

In addition to role changes in the home, men must adjust to the changes that impending retirement and physical conditions necessitate in their work. For women, the adjustments must be either to changing the role of housewife and mother for that of a worker in business, industry, or one of the professions or of an "isolate" in a formerly busy home as the "**empty nest**" period in home life sets in.

There are three common developmental crises which are as follows. First, the parenthood crisis characterized by the "Where did we go wrong?" syndrome. This crisis occurs when

children fail to come up to parental expectations and the parents then question whether they have used the right methods of child training, blaming themselves for their children's failures to come up to their expectations. Second, the crisis arising from dealing with aging parents, and "I hate to put Mother there" reaction. Many middle-aged parents, in trying to cope with the problems of aging parents, feel guilty when they either cannot or do not want to have their aging parents live in their homes.

Third, the crisis that comes from trying to deal with death, especially that of a spouse. This is characterized by a "How can I go on?" attitude which colors the individual's personal and social adjustments unfavorably until the crisis can be solved to the individual's satisfaction.

22.4.3 Middle Adulthood is a Time of Stress

Radical adjustments to changed roles and patterns of life, especially when accompanied by physical changes, always tend to disrupt the individual's physical and psychological homeostasis and lead to a period of stress-a time when a number of major adjustments must be made in the home, business, and social aspects of their lives.

Categories of Stress in Middle Adulthood are:

- *Somatic stress,* which is due to physical evidences of aging
- *Cultural* stress, stemming from the high value placed on youth, vigor, and success by the cultural group
- *Economic stress,* resulting from the financial burden of educating children and providing status symbols for all family members
- *Psychological* stress, which may be the result of the death of a spouse, the departure of children from the home, boredom with marriage, or a sense of lost youth and approaching death.

Most women, experience a disruption in homeostasis during their forties, when normally they go through the menopause and their *last children leave home,* thus forcing *them* to make radical readjustments in the pattern of their entire lives. For men, by contrast, the climacteric comes later-generally in the fifties-as does the imminence of retirement with its necessary role changes.

22.4.4 Middle Adulthood is a "Dangerous Age"

The usual way of interpreting **"dangerous age"** is in terms of the male who wants to have a last fling in life, especially in his sex life, before old age catches up with him. It is a time when individuals break down physically as a result of overwork, over worry, or careless living. The incidence of mental illness rises rapidly in Middle Adulthood among both men and women, and it is also a peak age for suicides, especially among men.

The threats to good adjustment that make Middle Adulthood dangerous are intensified by sex differences in the time when upsets in physical and psychological homeostasis occur. The so-called "**middle-age revolt**" of men usually coincides with the upsets in homeostasis caused by the menopause in women. This not only strains the husband-wife relationship, sometimes leading to separation or divorce, but it often predisposes both men and women to physical and mental illness, alcoholism, drug addiction, and suicide.

22.4.5 Middle Adulthood is an "Awkward Age"

Just as adolescents are neither children nor adults, so middle-aged men and women are no longer "young" nor are they yet "old." The middle-aged person "stands between the younger **'Rebel Generation'** and the **'Senior Citizen Generation**'-both of which is continuously in the spotlight and suffers from the discomforts and embarrassments associated with both age groups.

Feeling that they have no recognized place in society, middle-aged people try to be as inconspicuous as possible. The desire of middle-aged men and women to be inconspicuous is reflected in their clothing. Most middle-aged people try to dress as conservatively as possible and yet adhere to the prevailing styles. This conservatism rules their choice of material possessions, such as homes and cars, and their patterns of behavior-whether it is the way they entertain or the way they dance. The more inconspicuous they are, the less out of place they feel in a society that worships youth.

22.4.6 Middle Adulthood is a Time of Achievement

According to Erikson, it is a crisis age in which either **"Generativity**" -the tendency to produce-or **"stagnation**" -the tendency to stand still- will dominate. People either become more and more successful or they stand still and accomplish nothing more. If middle-aged people have a strong desire to succeed, they will reach their peak at this time and reap the benefits of the years of preparation and hard work that preceded it.

Women, like men, who have worked throughout the years of early adulthood, generally reach their peak during Middle Adulthood. However, this peak, until very recently, was far below that of male workers. Women who spent their early adulthood in homemaking and reentered the vocational world after their children were grown and on their own, find that they, too, are forced to reach their peak in Middle Adulthood because employers regard them as "**too old**" as they approach the sixties.

Normally, men reach their peak between forty and fifty years, after which they rest on their laurels and enjoy the benefits of their hard-won successes until they reach the early sixties when they are regarded as "too old" and usually must relinquish their jobs to younger and more vigorous workers. Earnings normally reach a peak in Middle Adulthood.

Because leadership roles are *generally held by* middle-aged persons, they regard themselves as the "**command generation**." The successful middle-aged person often describes himself as no longer 'driven' but as now the '**driver'** - in short, in command.

22.4.7 Middle Adulthood is a Time of Evaluation

As it is the peak age of achievement, it is logical that it also would be the time when they would evaluate their accomplishments in light of their earlier aspirations and the expectations of others, especially family members and friends. As a result of this self-evaluation, Archer has pointed out, "The mid-years seem to require the development of a different, generally more realistic sense of who one is. . . . In growing up, everyone nurtures fantasies or illusions about what one is, and what one will do. A major task of the mid-life decade involves coming to terms with those fantasies and illusions".

22.4.8 Middle Adulthood is evaluated by a Double Standard

The eighth characteristic of Middle Adulthood is that it is evaluated by a double standard, a standard for men and a standard for women. In spite of the growing trend toward egalitarian roles for men and women in the home, in business, industry, the professions, and in social life, there still exists a double standard regarding aging. While this double standard affects many aspects of the lives of middle-aged men and women, two are especially common.

The first relates to physical changes. When men's hair becomes gray, when they develop lines and wrinkles on their faces and a middle-aged pouch in place of a once-slender waistline, they are usually regarded as "**distinguished."** Similar physical changes in women are judged as unattractive with major emphasis on the "**middle-age spread.**"

The second area in which the double standard is apparent is in the approved way for members of the two sexes to age. There are two different philosophies about how people should adjust to Middle Adulthood: one, that they should stay young and active and, two, that they should grow old gracefully, deliberately slowing down and taking life comfortably-this is the "**rocking-chair"** philosophy. Women, on the whole, are more likely to adopt the

rocking-chair philosophy than men, though this holds true more for women of the lower class than for the upper-middle and upper classes.

22.4.9 Middle Adulthood is the Time of the Empty Nest

The time when the children no longer want to live under the parental roof. Except in cases where men and women marry later than the average age, or postpone having their children until they are well established in their careers, or have large families spread out over a decade or more of time, Middle Adulthood is the "**empty nest**" stage in marital lives.

After years of living in a family-centered home, most adults find it difficult to adjust to a pair-centered home. This is because, during the child-rearing years, husbands and wives often grew apart and developed individual interests. As a result, they have little in common after mutual interests in their children wane and when they are thrown together to adjust to each other the best they can. Unquestionably, the empty-nest period of Middle Adulthood is far more traumatic for women than for men.

This is especially true of women who have devoted their adult years to homemaking and who have few interests or resources to fill their time when their homemaking jobs lessen or come to an end. Many experience a "**retirement shock**" similar to that experienced by men when they retire.

22.4.10 Middle Adulthood is a Time of Boredom

Many, if not most, men and women experience boredom during the late thirties and forties. Men become bored with the daily routine of work and with a family life that offers little excitement. Women, who have spent most of their adulthood caring for the home and raising children, wonder what they will do for the next twenty or thirty years. The unmarried woman who has devoted her life to a job or career is bored for the same reason\ men are.

22.5 ERIKSON'S THEORY: GENERATIVITY VERSUS STAGNATION

Erikson's psychological conflict of midlife is called **generativity versus stagnation**. Generativity involves reaching to others in ways that give to and guide the next generation. Generativity is under way in early adulthood, typically through child bearing and child rearing and establishing a niche in the occupational world. It expands greatly in midlife. At this stage, commitment extends beyond oneself (identity) and one's life partner (intimacy) to a larger group-family, community, or society. The generative adult combines the need for self-expression with the need for communion, integrating personal goals with the welfare of the larger social world. The resulting strength is the capacity to care for others in a broader way than in previous stages.

Erikson selected the term *generativity* to encompass everything generated that can outlive the self and ensure society's continuity and improvement: children, ideas, products, and works of art. Although parenting is a major means of realizing generativity, some people, because of misfortune or special gifts, do not express it through their own children. Adults can be generative in other family relationships as mentors in the workplace, in volunteer endeavors, and through many forms of productivity and creativity.

Generativity brings together personal desires and cultural demands. On the personal side, middle-aged adults feel a need to be needed; they want to attain *symbolic immortality*-that is, make a contribution that will survive their death. On the cultural side, society imposes a social clock for generativity in midlife, requiring adults to take responsibility for the next generation through their roles as parents, teachers, mentors, leaders, and coordinators. And according to Erikson, a culture's "belief in the species" -the conviction that life is good and worthwhile, even in the face of human destructiveness and deprivation-is a major motivator of generative action. Without this optimistic world view, people would not have any hope of improving humanity.

The negative outcome of this stage is *stagnation*. Erikson recognized that once people

attain certain life goals, such as marriage, children, and career success, they may become self-centered and self-indulgent. Adults with a sense of stagnation cannot contribute to society's welfare because they place their own comfort and security above challenge and sacrifice. Their self-absorption is expressed in many ways through lack of involvement with and concern for young people (including their own children), -through a focus on what they can get from others rather than what they can give, and through taking little interest in being productive at work, developing their talents, or bettering the world in other ways.

Just as Erikson's theory suggests, highly generative people appear especially well adjusted-low in anxiety and depression and high in self-acceptance and life satisfaction. They are also more open to differing viewpoints, possess leadership qualities, desire more from work than financial rewards, and care greatly about the welfare of their children, their partner, their aging parents, and the wider society. Furthermore, generativity is associated with greater involvement in political activities, including voting, campaigning, and contacting public officials, especially among adults for whom political participation was central to identity in earlier years.

Having children seems to foster men's generative development more than women's. Fathers are found to have high generativity than childless men. In contrast, motherhood is unrelated to women's generativity. Perhaps parenting awakens in men a tender, caring attitude toward the next generation that women have opportunities to develop in other ways.

Check Your Progress 3
Discuss the characteristics of middle adulthood
Notes: a) Write your answer in the space given below.
        b) Check your answer with the one given at the end of this lesson.

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22.6 LET US SUM UP
In this Lesson, we have touched upon the following points:
  v)   Diverse life styles of early adulthood
  vi)   Career development during early adulthood
  vii)   Characteristics of Middle adulthood
  viii)   Erikson's comparison of generativity and stagnation

22.7 Check Your Progress: Model Answers
1. The diverse life styles found during the early adulthood   include:
  i)   Singlehood
  ii)   Cohabitation
  iii)   Childlessness
  iv)   Divorce and Remarriage
  v)   Variant Styles of Parenthood
2. The career development during early adulthood could include:
  i)   Establishing a Career
  ii)   Combining Work and Family during early adulthood
3. The Characteristics of Middle Adulthood are the following ten:
    i)   It is a Dreaded Period
    ii) It is a Time of Transition
    iii) It is a Time of Stress
    iv) It is a "Dangerous Age"
    v)   It is an "Awkward Age"

vi) It is a Time of Achievement
vii) It is a Time of Evaluation
viii) It is evaluated by a Double Standard
ix) It is the Time of the Empty Nest
x) It is a Time of Boredom

22.8 Lesson – End Activities

1. Write short notes on the following
   a) Role overload
   b) Dual – earner.
2. Justify the statement "Middle Adulthood is a Time of Boredoms".

22.9 References

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LESSON – 23
CHANGES IN MENTAL ABILITIES - ADAPTING TO PHYSICAL CHANGES IN MIDLIFE - RELATIONSHIP AT MIDLIFE - VOCATIONAL LIFE

Contents

23.0 AIMS AND OBJECTIVES

This Lesson will help you understand the changes in mental and physical abilities and relationship patterns during midlife.

After going through this Lesson, you will be able to:

    i)   State the changes that happen in the mental abilities

    ii)   Understand the adjustments to the physical challenges during midlife

    iii)   List the kind of relationships during midlife

    iv)   Mention the vocational life during midlife

23.1 INTRODUCTION

At age 50, when one occasionally couldn't recall a name or had to pause in the middle of a lecture or speech to think about what to say next, this could be the first signs of an aging mind. Majority of aging research has focused on deficits-because they are cause for concern-while neglecting cognitive stability and gains.

Different aspects of cognitive functioning show different patterns of change. Although decline occurs in some areas, most people display cognitive competence, especially in familiar contexts, and some attain outstanding accomplishment. Overall, the evidence supports an optimistic view of adult cognitive potential.

23.2 CHANGES IN MENTAL ABILITIES

The changes we are about to consider bring into bold relief core assumptions of the lifespan perspective: development as *multidimensional,* or the combined result of biological, psychological, and social forces; development as *multidirectional,* or the joint expression of growth and decline, with the precise mix varying across abilities and individuals; and development as *plastic,* **or open to change**, depending on how a person's biological and environmental history combines with current life conditions.

23.2.1 Crystallized and Fluid Intelligence

There are consistent age-related trends in two broad mental abilities. Each includes a diverse array of specific intellectual factors tapped by intelligence tests.

The first of these broad abilities is **crystallized intelligence**. It refers to skills that depend on accumulated knowledge and experience, good judgment, and mastery of social conventions. Together, these capacities represent abilities acquired because they are valued by the individual's culture. On intelligence tests, vocabulary, general information, verbal analogy, and logical reasoning items measure crystallized intelligence.

In contrast, **fluid intelligence** depends more heavily on basic information- processing skills - the ability to detect relationships among stimuli, the speed with which we can analyze information, and the capacity of working memory. Fluid intelligence often works with *crystallized* intelligence to support effective reasoning, abstraction, and problem solving. But fluid intelligence is believed to be influenced more by conditions in the brain and learning unique to the individual, less by culture. Intelligence test items that reflect fluid abilities include number series, spatial visualization, and picture sequencing.

Crystallized intelligence increases steadily though middle adulthood, whereas fluid intelligence begins to decline in the twenties. These trends have been found repeatedly in cross-sectional comparisons in which the education and health status of younger and older participants are similar, thereby largely correcting for cohort effects (individuals born in the same time period are influenced by a particular set of historical and cultural conditions). The rise in crystallized abilities makes sense, since adults are constantly adding to their knowledge and skills at work, at home, and in leisure activities. In addition, many crystallized skills are practiced almost daily.

Some theorists believe that a general slowing of central nervous system functioning underlies nearly all age-related declines in cognitive performance. Research reveals gains followed by stability in crystallized abilities, despite a much earlier decline in fluid intelligence, or basic information processing skills. First, the decrease in basic processing, while substantial after age 45, may not be great enough to affect many well-practiced performances until quite late in life. Second, adults often find ways to compensate for cognitive weaknesses by drawing on their cognitive strengths. Finally as people discover that they are no longer as good as they once were at certain tasks, they accommodate, shifting to activities that depend less on cognitive efficiency and more on accumulated knowledge. The basketball player becomes a coach, the quick-witted salesperson a manager.

23.2.2 Individual and Group Differences

Hidden beneath the age trends just described are large individual differences. Some adults, because of illness or unfavorable environments, decline intellectually much earlier than others. And a considerable number show full functioning, even in fluid abilities, at an advanced age.

Adults who use their intellectual skills seem to maintain them longer. Declines can be delayed for people with above-average education, highly complex occupations, and stimulating leisure pursuits that included reading, traveling, attending cultural events, and participating in clubs and professional organizations. People with flexible personalities,

lasting marriages (especially to a cognitively high-functioning partner), and absence of cardiovascular and other chronic diseases were also likely to maintain mental abilities well into late adulthood. And being economically well off was linked to favorable cognitive development, undoubtedly because SES is associated with many of the factors just mentioned.

Several sex differences also emerged, consistent with those obtained in childhood and adolescence. In early and middle adulthood, women outperformed men on verbal tasks and perceptual speed. In contrast, men excelled at spatial skills. Overall, however, changes in mental abilities over the adult years were remarkably similar for the two sexes.

Furthermore, cohort effects were evident. For example, when the baby boom generation, currently middle-aged, was compared with the previous generation at the same age, the baby boom cohort performed substantially better on verbal memory, inductive reasoning, and spatial orientation. These generational gains reflect advances in education, technology, environmental stimulation, and health care. They are expected to continue in the twenty-first century because today's children also attain higher mental test scores than children of past generations. The recent generation's *reliance* on *calculators* and computers seems to have compromised its calculation skills.

Check Your Progress 1

Explain the Changes in Mental Abilities during midlife

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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23.3 ADAPTING TO THE PHYSICAL CHALLENGES OF MIDLIFE

Middle adulthood is often a productive period in which people attain their greatest accomplishments and life satisfactions. Nevertheless, it takes considerable stamina to cope with the full array of changes this phase can bring.

23.3.1 Stress Management

There are negative consequences of psychological stress on the cardiovascular, immune, and gastrointestinal systems. As adults encounter problems at home and at work, daily hassles can add up to a serious stress load. Stress management is important at any age for a more satisfying life. In middle adulthood, it can limit the age-related rise in illness and, when disease strikes, reduce its severity.

Although many stressors cannot be eliminated, people can change how they handle some and view others. People use two general strategies to cope with stress. In *problem-centered coping*, they appraise the situation as changeable, identify the difficulty, and decide what to do about it. If problem solving does not work, people engage in *emotion-centered coping*, which is internal, private, and aimed at controlling distress when there is little we can do about a situation. Adults who effectively reduce stress use a mixture **of** *problem-centered* and **emotion-centered techniques**, depending on the situation. And their approach is deliberate, thoughtful, and respectful of both themselves and others. In contrast, ineffective coping is largely emotion-centered and either impulsive or escapist.

Constructive approaches to anger reduction are a vital health intervention. In terms of problem-centered coping, teaching people to be assertive rather than hostile and to negotiate rather than explode interrupts the intense physiological response that intervenes between psychological stress and illness. If reasonable communication is not possible, it is best to delay responding by leaving a provocative situation.

People tend to cope with stress more effectively as they move from early to middle adult-hood. Many are more realistic about their ability to change situations than they were earlier. And mid lifers may be more skilled at anticipating stressful events and taking steps to avoid them. Furthermore, when middle-aged adults surmount a highly stressful experience, they often report lasting personal benefits. Some describe a sense of disbelief at what they accomplished under extremely trying conditions and a greater sense of mastery. And after a serious illness and brush with death, changed values and perspectives-such as rediscovery of the importance of health-promoting behaviors and of family relationships-are common. In this way, managing intense stress can serve as a context for positive development.

23.3.2 Exercise

Regular exercise has a wide variety of physical and psychological benefits-among them, equipping adults to handle stress more effectively. A person beginning to exercise in midlife must overcome initial barriers and obstacles along the way, such as lack of time and energy, inconvenience, and work conflicts**. *Self-effi*cacy**-belief in one's ability to succeed-is just as vital in adopting, maintaining, and exerting oneself in an exercise regimen as it is in career progress. An important outcome of starting an exercise program is that it leads sedentary adults to gain in self-efficacy, which promotes physical activity all the more. Enhanced physical fitness, in turn, prompts middle-aged adults to feel better about their physical selves. Over time, their physical self-esteem-sense of body conditioning and attractiveness rises.

23.3.3 Optimistic Outlook

Our ability to handle the inevitable changes of life depends in part on personality strengths. What type of individual is likely to cope with stress adaptively, thereby reducing its impact on illness and mortality? Searching for answers to this question, researchers have studied a set of three personal qualities - control, commitment, and challenge - that, together, they call hardiness.

First, many regard most experiences as ***controllable***. "You can't stop all bad things from happening; but you can try to do something about them." Second, a *committed,* involved approach to daily activities, finding interest and meaning in almost all of them. Finally, viewing change as a challenge – a normal part of life and a chance for personal growth.

Research shows that hardiness influences the extent to which people appraise stressful situations as manageable, interesting and enjoyable. These positive appraisals, in turn, predict health-promoting behaviors, tendency to seek social support and fewer physical symptoms. Furthermore, high-hardy individuals are likely to use active, problem-centered coping strategies in situations they can control. In contrast, low-hardy people more often use emotion-centered and avoidant-coping Strategies - for example, saying, "I wish I could change how I feel denying that the stressful event occurred, or eating and drinking to forget about it. Many factors act as stress-resistant resources-heredity, diet, exercises, social support, coping strategies, and more. Research on hardiness adds yet another ingredient: a generally optimistic outlook and zest for life.

23.3.4 Gender and Aging: A Double Standard

Negative stereotypes of aging lead many middle-aged adults to fear physical changes. These stereotypes are more likely to be applied to women than to men, yielding a double standard. Despite the fact that many women in midlife say they have "**hit their stride**"-feel assertive, confident, versatile, and capable of reviving life's problems-people often rate them as less attractive and as having more negative characteristics than middle aged men. Aging men actually gain slightly in positive judgments of appearance, maturity, and power, whereas aging women show a decline.

The ideal of a sexually attractive woman-smooth skin, good muscle tone, and lustrous hair-is at the heart of the double standard of aging. Women prefer same-age or slightly older

sexual partners, whereas men prefer younger partners. To explain why, evolutionary theory points to sex differences in reproductive capacity, whereas social learning theory emphasizes gender roles. Some evidence suggests that the end of a woman's ability to bear children contributes to negative judgments, especially by men. Media ads include middle-aged people; they usually are male executives, fathers, and grandfathers, who are images of competence and security. And the cosmetics industry offers many products designed to hide signs of aging for women, but far fewer for men.

At one time in our evolutionary history, a double standard of aging may have been adaptive. Today, as many couples limit childbearing and devote more time to career and leisure pursuits, it has become irrelevant. Consequently, the double standard of aging is declining-that more people are viewing middle age as a potentially upbeat, satisfying time for both genders. Models of older women, whose lives are full of intimacy, accomplishment, hope, and imagination, are promoting acceptance of physical aging and a new vision of growing older-one that emphasizes gracefulness, fulfillment, and inner strength.

Check Your Progress 2

State the full array of changes that takes place in midlife

Notes: a) Write your answer in the space given below.

   b) Check your answer with the one given at the end of this lesson.

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23.4 RELATIONSHIPS AT MIDLIFE

The emotional and social changes of midlife take place within a complex web of family relationships and friendships. Although a few middle-aged people live alone, the vast majority-9 out of 10 live in families, most with a spouse.

The middle adulthood phase of the family life cycle is often referred to as **"launching children and moving on".** At one time it was called the **"empty nest,"** but this phrase implies a negative transition, especially for women. When adults devote themselves entirely to their children, the end of active parenting can trigger feelings of emptiness and regret. But for many people, middle adulthood is a liberating time, offering a sense of completion and an opportunity to strengthen existing ties and build new ones.

A century ago, most parents reared children for almost all of their active adulthood. Due to a declining birthrate and a longer life expectancy, contemporary parents launch children about 20 years before retirement and then seek other rewarding activities. Because of the lengthening of this period, it is marked by the greatest number of exits and entries of family members. As adult children leave home and marry, middle aged people must adapt to new roles of parent-in-law and grandparent. At the same time, they must establish a different type of relationship with their aging parents, who may become ill or infirm and die. Let's see how ties within and beyond the family change during this time of life.

23.4.1 Marriage and Divorce

Although not all couples are financially comfortable, middle-aged households are well off economically compared with other age groups. Partly because of increased financial security, and because the time between, departure of the last child and retirement is so long, the con-temporary social view of marriage in midlife is one of expansion and new horizons.

These forces strengthen the need to review and adjust the marital relationship. By middle age, the marriage gives them satisfaction of family and individual needs, endured many changes, and culminated in deeper feelings of love.

Marital satisfaction is a strong predictor of midlife psychological well-being. Middle-aged men who have focused only on career often realize the limited nature of their pursuits.

At the same time, their wives may insist on a more gratifying relationship. In addition, children fully engaged in adult roles remind middle-aged parents that they are in the latter part of their lives, so many decide that the time for improving their marriages is now.

As in early adulthood, divorce is one way of resolving an unsatisfactory marriage in midlife. Most divorces occur within 5 to 10 years of marriage. Divorce at any age takes a heavy psychological toll, but mid lifers seem to adapt more easily than younger people. Midlife gains in practical problem solving and effective coping strategies may reduce the stressful impact of divorce.

Marital breakup, in midlife and earlier, is a strong contributor to the **feminization of poverty**, a trend in which *women who support themselves or their fam*ilies have become the majority of the adult poverty population, regardless of age and ethnic group. Because of weak public policies safeguarding families, the gender gap in poverty is higher.

23.4.2 Changing Parent-Child Relationships

Parents' positive relationships with their grown children are the result of a gradual process of "letting go:' starting in childhood, gaining momentum in adolescence, and culminating in children's independent living. Most middle-aged parents adjust well to the launching phase of the family life cycle. Investment in non parental relationships and roles, children's characteristics, parents' marital and economic circumstances, and cultural forces affect the extent to which this transition is expansive and rewarding or sad and distressing.

Parents who have developed gratifying alternative activities typically welcome their children's adult status. A strong work orientation, especially, predicts gains in life satisfaction after children depart from the home. Regardless of whether they reside with parents, adolescent and young adult children who are "off-time" in development-not showing expected signs of independence and accomplishment-can prompt parental strain..

Although the parental role changes, its continuation is important to middle-aged adults. Departure of children is a relatively minor event when parent-child contact and affection are sustained. When it results in little or no communication, parents' life - satisfaction declines. Parents who had been warm and supportive in middle childhood and adolescence were more likely to experience contact and closeness with their child in early adulthood.

Throughout middle adulthood, parents continue to give more assistance to children than they receive, especially while children are unmarried or when they face difficulties, such as marital breakup or unemployment. Providing emotional and financial support while children get their lives under way is related to midlife psychological wellbeing.

When children marry, parents face additional challenges in enlarging the family network to include in-laws. When warm, supportive, relationships endure, intimacy between parents and children increases over the adult years, with great benefits for parents', life satisfaction. Once young adults strike out on their own, members of the middle generation, especially mothers, usually take on the role of **kin-keeper**, gathering the family for celebrations and making sure everyone stays in touch.

23.4.3 Grandparenthood

Although the stereotypical image of grandparents as very elderly persists, on average many adults become grandparents in their mid to late forties. A longer life expectancy means that adults will spend as much as one-third of their lifespan in the grandparent role.

23.4.3a Meanings of Grand parenthood: Grandparenthood is a highly significant milestone to most who experience it. When asked about its meaning, people generally mention one or more of the following gratifications:

- Valued elder-being perceived as a wise, helpful person
- Immortality through descendants-leaving behind not just one but two generations after

death
- Reinvolvement with personal past-being able to pass family history and values to a new generation
- Indulgence-having fun with children without major child-rearing responsibilities

23.4.3b Grandparent-Grandchild Relationships: Grandparents' styles of relating to grandchildren vary as widely as the meanings they derive from their new role. The grandparent's and grandchild's age and sex make a difference. Typically, relationships are closer between grandparents and grandchildren of the same sex and, especially, between maternal grandmothers and granddaughters- a pattern found in many countries. Grandmothers also report higher satisfaction with the grandparent role than grandfathers, perhaps because it is an important means through which middle-aged women satisfy their kin keeping function.

Grandparents who live far from young grandchildren usually have more distant relationships with them, appearing mainly on holidays, birthdays, and other formal occasions but otherwise having little contact. And even when grandparents reside far away, a strong desire to affect the development of grandchildren can motivate them to become involved in grandchildren's lives. As grandchildren get older, distance has less impact. Instead, the extent to which the adolescent or young adult grandchild believes the grandparent values contact is a good predictor of a close bond. SES and ethnicity are additional influences on grandparent-grandchild ties. In higher-income families, the grandparent role is not central to family maintenance and survival.

23.4.4 Middle-Aged Children and Their Aging Parents

Compared with earlier generations, today's adults spend more years not only as parents and grandparents, but also as children of aging parents. A longer life expectancy means that adult children and their parents are increasingly likely to grow old together. What are middle-aged children's relationships with their aging parents like? And how does life change for adult children when an aging parent's health declines?

23.4.4a Frequency and Quality of Contact: A widespread myth is that adults of past generations were more devoted to their aging parents than are adults of the present generation. Although adult children spend less time in close proximity to their parents, the reason is not neglect or isolation. Fewer aging adults live with younger generations now than in the past because of a desire to be independent, made possible by gains in health and financial security. Proximity increases with age. Elders who move usually do so in the direction of kin, and younger people tend to move in the direction of their aging parents.

Middle age is a time when adults reassess relationships with their parents, just as they rethink other close ties. Many adult children become more appreciative of their parents' strengths and generosity.

The closer family ties were when children were growing up, the more help given and received. Also, parents give more to unmarried children and to children with disabilities. Similarly, children give more to widowed parents and parents in poor health. At the same time, a shift in helping occurs over the adult years. Parent-to-child advice, household aid, gift giving, and financial assistance decline, whereas child-to-parent help of various kinds increases. Even when the early parent-child relationship was emotionally distant, adult children offer more support as their parent's age, out of a sense of altruism and family duty.

23.4.4b Caring for Aging Parents: The burden of caring for aging parents can be great. The family structure has become more "top-heavy;' with more generations alive, but fewer younger members as birthrates have declined. This means that more than one older family member is likely to need assistance, with fewer younger adults available to provide it.

Today's middle-aged adults with ill or frail parents often face competing demands of children (some of whom are under age 18 and still at home) and employment. They are called the **sandwich generation** because they are "sandwiched" or squeezed, between the needs of aging parents and financially dependent children.

When an aging parent's spouse cannot provide care, adult daughters are the next most likely relatives to do so. Even when the spouse is available, adult children-again, usually daughters-often pitch in as needed. Men make a substantial contribution to care of aging parents-one that should not be overlooked.

As adults move from early to later middle age, the sex difference in parental caregiving declines. Perhaps as men reduce their vocational commitments and feel less need to conform to a "**masculine**" gender role, they grow more able and willing to provide basic care. At the same time, parental caregiving may contribute to men's greater openness to the **"feminine**" side of their personalities.

23.4.5 Siblings

Siblings contact and support decline from early to middle adulthood, rebounding only after age 70 for siblings living near one another. Decreased midlife contact is probably due to the demands of middle-aged adults' diverse roles. However, most adult siblings report getting together or talking on the phone at least monthly.

Despite reduced contact, many siblings feel closer in midlife, often in response to major life events. Launching and marriage of children seem to prompt siblings to think more about one another. Parental illness can have a profound impact on sibling ties. Brothers and sisters who previously had little to do with one another find themselves in touch about parental care. When parents die, adult children realize they have become the oldest generation and must look to one another to sustain family ties. As in early adulthood, sister-sister relationships are closer than sister-brother and brother-brother ties, a trend apparent in many industrialized nations.

In industrialized nations; sibling relationships are voluntary. In village societies, they are generally involuntary and basic to family functioning. For example, among Indians, family social life is organized around strong brother sister attachments. A brother-sister pair is often treated as a unit in exchange marriages with another family. After marriage, brothers are expected to protect sisters, and sisters serve as spiritual mentors to brothers. Families not only include biological siblings but also grant other relatives, such as cousins, the status of brother or sister. This leads to an unusually large network of sibling support throughout life.

In village societies, cultural norms reduce sibling conflict, thereby ensuring family cooperation. In industrialized nations, promoting positive sibling interaction in childhood is vital for warm, supportive sibling bonds in later years.

23.4.6 Friendships

As family responsibilities declined there will be more time to spend with friends in middle age. At all ages, men are less expressive with friends than are women. Men tend to talk about sports, politics, and business, whereas women focus on feelings and life problems. Women report a greater number of close friends and say they both receive and provide their friends with more emotional support.

Nevertheless, for both sexes, number of friends declines with age, probably because people become less willing to invest in non family ties unless they are very rewarding. As selectivity of friendship increases, older adults express more complex ideas about friendship. They also try harder to get along with friends. Having chosen a friend, middle-aged people attach great value to the relationship and take extra steps to protect it.

By midlife, family relationships and friendships support different aspects of psychological well-being. Family ties protect against serious threats and losses, offering

security within a long-term time frame. In contrast, friendships serve as current sources of pleasure and satisfaction, with women benefiting somewhat more than men. As middle-aged couples renew their sense of companionship, they may combine the best of family and friendship. Indeed, research indicates that viewing a spouse as a best friend contributes greatly to marital happiness.

23.5 VOCATIONAL LIFE

Midlife transition typically involves vocational adjustments. Work continues to be a salient aspect of identity and self esteem in middle adulthood. More so than in earlier or later years, people attempt to increase the personal meaning and self direction of their vocational lives. At the same time, certain aspects of job performance improve. Older employees have lower rates of absenteeism, turnover, and accidents and show no change in work productivity. Consequently, the value of an older employee ought to be equal to, and possibly even greater than, that of a younger employee.

A favorable transition from adult worker to older worker is hindered by negative stereotypes of aging-incorrect beliefs about limited learning capacity, slower decision making, and resistance to change and supervision. Furthermore, gender discrimination continues to restrict the career attainments of many women.

23.5.1 Job Satisfaction

Job satisfaction has both psychological and economic significance. If people are dissatisfied at work, the consequences include strikes, grievances, absenteeism, and turnover, all of which are costly to employers.

Job satisfaction increases in midlife at all occupational levels, from executives to hourly workers. The relationship is weaker for women than for men, probably because women's reduced chances for advancement result in a sense of unfairness. It is also weaker for blue-collar than for white-collar workers, perhaps because blue-collar workers have less control over their own work schedules and activities. When different aspects of jobs are considered, intrinsic satisfaction-happiness with the work itself-shows a strong age-related gain. Extrinsic satisfaction contentment with supervision, pay, and promotions changes very little.

Key characteristics that predict job well-being include involvement in decision making, reasonable workloads, and good physical working conditions. Older people may have greater access to jobs that are attractive in these ways. Finally, having fewer alternative positions into which they can move, older workers generally reduce their career aspirations. As the perceived gap between actual and possible achievements declines, work involvement increases.

23.5.2 Career Development

Career development is vital throughout work life especially during mid life.

23.5.2a Job Training

It is all too common among managers-even some who are older themselves that training and on the-job career counselling are less available to older workers. And when career development activities are offered, older employees may be less likely to volunteer for them.

On the person side, the degree to which an individual wants to change is important. With age, growth needs decline somewhat in favor of security needs. Consequently, learning and challenge may have less intrinsic value to many older workers. Perhaps for this reason, older employees depend more on co-worker and supervisor encouragement for vocational development. Yet we have just seen that they are less likely to have supportive supervisors. Furthermore, negative stereotypes of aging reduce older workers' self-efficacy, or confidence that they can renew and expand their skills-another reason they may not volunteer for training experiences. Self-efficacy is a powerful predictor of employees' efforts to improve career

relevant skills.

Unfortunately, older workers sometimes receive more routine tasks than younger workers. Therefore, some of their reduced motivation to engage in career-relevant learning may be due to the type of assignments they receive. Interaction among co-workers can also have a profound impact. Within project teams, people similar in age communicate more often. Age-balanced work groups (with more than one person in each age range) foster on-the-job learning because communication is a source of support as well as a means of acquiring job-relevant information.

23.5.2b Gender and Ethnicity

The Glass Ceiling. Women and ethnic minorities rarely move into high-level management jobs. Women and ethnic minorities face a **glass ceiling**, or **invisible barrier** to advancement up the corporate ladder. Contrary to popular belief, their low numbers cannot be attributed to poor management skills. Compared to men, women managers were rated as more effective and satisfying to work for and as more likely to motivate extra effort. Characteristics that distinguished them from their male counterparts were charisma, inspiration, and considerateness. Modern businesses realize that the best managers must not only display "masculine" authority and decisiveness but also build consensus through broad participation in decision making-an approach that requires "feminine" qualities of caring and collaboration.

23.5.3 Career Change at Midlife

Although most people remain in the same vocation through middle age, career change does occur. Midlife career changes are usually not radical; they typically involve leaving one line of work for a related one. Most people move in the reverse direction-to careers that are more relaxing, free of painful decisions, and less demanding in terms of responsibility for others. The decision to change is often difficult. The individual must weigh years invested in one set of skills, current income, and job security against present frustrations and hoped-for gains from a new vocation.

When an extreme career shift occurs, it usually signals a personal crisis. Professionals who abandoned their well-paid, prestigious positions for routine, poorly paid, semiskilled work, non work problems influenced the break with an established career.

23.5.4 Unemployment

As companies downsize and jobs are eliminated, the majority of people affected are middle-aged and older. Although unemployment is difficult at any time, middle-aged workers show a sharper decline in physical and mental health than their younger counterparts. Older workers affected by layoffs remain without work for a longer time, suffering substantial income loss. In addition, people over age 40 who must reestablish occupational security find themselves "off-time" in terms of the social clock. Consequently, job loss can disrupt major tasks of midlife, including generativity and reappraisal of life goals and accomplishments. Finally, having been more involved in and committed to an occupation, the older employed worker has also lost something of greater value.

23.5.5 Planning for Retirement

Most workers report looking forward to retirement and an increasing number are leaving full-time work in midlife. The average age of retirement declined during the past 2 decades. Retirement is a lengthy, complex process that begins as soon as the middle-aged person first thinks about it. Planning is important, since retirement leads to a loss of two important work-related rewards-income and status-and to change in many other aspects of life. Like other life transitions, retirement is often stressful.

Retirement planning helps one to evaluate one's options, learn about the availability of resources, and prepare emotionally for the changes ahead. Planning results in better

retirement adjustment and satisfaction.

Unfortunately, less educated people with lower lifetime earnings are least likely to attend retirement preparation programs, yet they stand to benefit the most. And compared with men, women do less planning for retirement, often depending on their husband's preparations-a finding that may change as women increasingly become equal, rather than secondary, family earners.

Check Your Progress 3

    A. Discuss the change in family relationship during midlife

    B. Briefly mention the midlife transition in vocational adjustments.

    Notes: a) Write your answer in the space given below.

        b) Check your answer with the one given at the end of this lesson.

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23.6 LET US SUM UP

In this Lesson, we have touched upon the following points:

    xv)   The Changes in Mental Abilities

    xvi)   Adapting to the Physical Challenges of Midlife

    xvii)   Relationships at Midlife

    xviii) Vocational Life

23.7 Check Your Progress: Model Answers

1. Your answer may include the following

    i)   Crystallized and Fluid Intelligence

    ii)   Individual and Group Differences

2. The physical challenges could be

    i)   Stress Management

    ii)   Exercise

    iii)   Optimistic Outlook

    iv)   A Double Standard in gender and aging

3. A. The change in family relationship during midlife is in

    i)   Marriage and Divorce

    ii)   Changing Parent-Child Relationships

    iii)   Grandparenthood

    iv)   Middle-Aged Children and Their Aging Parents

    v)   Siblings

    vi)   Friendships

   B. The midlife transitions in vocational adjustments are in

    i)   Job Satisfaction

    ii)   Career Development

    iii)   Career Change at Midlife

    iv)   Unemployment

    v)   Planning for Retirement

23.8 Lesson – End Activities

1. What are the major factors which distract job satisfaction.

2. Career change loads to personal crisis.

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LESSON – 24
LATE ADULTHOOD - LIFE EXPECTANCY - PHYSICAL   CHANGES - MEMORY - ERIKSON'S THEORY: EGO INTEGRITY VERSUS DESPAIR

Contents

24.0 AIMS AND OBJECTIVES

This Lesson will help you understand characteristics of late adulthood, the life expectancy, physical changes, and Memory during this period.

After going through this Lesson, you will be able to:
- i)   Mention the characteristics of late adulthood
- ii)   State the variations in life expectancy
- iii)   List the physical changes during late adulthood
- iv)   Discuss the significance of memory during late adulthood

24.1 INTRODUCTION

Late adulthood is the closing period in the life span. It is a period when people "**move away**" from previous, more desirable periods-or times of **"usefulness**." As people move away from the earlier periods of their lives, they often look back on them, usually regretfully, and tend to live in the present, ignoring the future as much as possible.

Age sixty is usually considered the dividing line between middle and late adulthood. However, it is recognized that chronological age is a poor criterion to use in marking off the beginning of late adulthood because there are such marked differences among individuals in the age at which aging actually begins.

Because of better living conditions and better health care, most men and women today do not show the mental and physical signs of aging until the mid sixties or even the early seventies. For that reason, there is a gradual trend toward using sixty-five-the age of retirement in many businesses-to mark the beginning of late adulthood.

The last stage in the life span is frequently subdivided into *early old age*, which extends from age sixty to age seventy, and *advanced old age,* which begins at seventy and extends to the end of life. People during the sixties are usually referred to as "elderly" - meaning somewhat old or advanced beyond middle age-and "old'" after they reach the age of seventy-meaning, according to standard dictionaries, advanced far in years of life and having lost the vigor of youth.

24.2 CHARACTERISTICS OF LATE ADULTHOOD

Like every other period in the life span, late adulthood is characterized by certain physical and psychological changes. The effects of these changes determine, to a large extent, whether elderly men and women will make good or poor personal and social adjustments. The characteristics of late adulthood, however, are far more likely to lead to poor adjustments than to good and to unhappiness rather than to happiness. That is why late adulthood is even more dreaded than middle age.

24.2.1 Late adulthood is a Period of Decline

As has been stressed repeatedly, people are never static. Instead, they constantly change. During the early part of life the changes are evolutional in that they lead to maturity of structure and functioning. In the latter part of life, by contrast, they are mainly involution, involving a regression to earlier stages. These changes are the natural accompaniment of what is commonly known as "**aging.**" They affect physical as well as mental structures and functioning.

The period during late adulthood when physical and mental decline is slow and gradual and when compensations can be made for these declines is known as **senescence**-a time of growing old or of aging. People may become senescent in their fifties or not until their early or late sixties, depending upon the rate of physical and mental decline.

The term "senility" is used to refer to the period during late adulthood when a more or less complete physical breakdown takes place and when there is mental disorganization. The individual who becomes eccentric, careless, absentminded, socially withdrawn, and poorly adjusted is usually described as "**senile.**" Senility may come as early as the fifties, or it may never occur because the individual dies before deterioration sets in.

Decline comes partly from physical and partly from psychological factors. The *physical* cause of decline is a change in the body cells due not to a specific disease but to the aging process. Decline may also have *psychological* causes. Unfavorable attitudes toward oneself, other people, work, and life in general can lead to senility, just as changes in the brain tissue can.

Motivation likewise plays a very important role in decline. The individual who has little motivation to learn new things or to keep up to date in appearance, attitudes, or patterns of behavior will deteriorate much faster than one whose motivation to ward off aging is stronger. The new leisure time, which comes with retirement or with the lessening of household responsibilities, often brings boredom which lowers the individual's motivation.

24.2.2 Individual Differences in the Effects of Aging

Individual differences in the effects of aging have been recognized for many centuries.

Today, even more than in the past, it is recognized that aging affects different people differently. Thus it is impossible to classify anyone as a "typically" old person or any trait as "typical" of late adulthood. People age differently because they have different hereditary endowments, different socioeconomic and educational backgrounds, and different patterns of living. These differences are apparent among members of the same sex, but they are even more apparent when men and women are compared because aging takes place at different rates for the two sexes.

Physical aging precedes mental aging, though sometimes the reverse is true, especially when the individual is concerned about growing old and let's go mentally when the first signs of physical aging appear.

24.2.3 Late adulthood is judged by Different Criteria

As the meaning of age is vague and undefined to young children, they tend to judge age in terms of physical appearance and activities. To them, children are smaller than adults and must be cared for while adults are big and can take care of themselves. Old people have white hair and no longer go to work every day.

By the time children reach adolescence, they judge late adulthood in much the same way as adults do, namely in terms of the person's appearance and what the person can and cannot do. Knowing that these are the two most common criteria used to judge their ages, many elderly people do all they can to camouflage the telltale physical signs of aging by wearing clothes like those worn by younger people, and trying to keep up a pace that often overtaxes their strength and energy. This is their attempt to create the illusion that they are not yet elderly or old.

24.2.4 Social Attitudes toward Late adulthood

Stereotypes about late adulthood have a pronounced influence on social attitudes toward both late adulthood and old people. And because most stereotypes are unfavorable, social attitudes likewise tend to be unfavorable.

The unfavorable social attitudes have been emphasized in the difference between the social image of the elderly-the image on which social attitudes are based-and the images the elderly have of themselves-self-images. Note that, for the most part, the elderly have a more favorable image of themselves than the social group has of them.

The significance of unfavorable social attitudes toward the elderly is that it affects the way elderly people are treated. Instead of the reverence and respect for the elderly, characteristic of many cultures, social attitudes result in making the elderly feel that they are no longer useful to the social group and, hence, are more of a nuisance than an asset.

Unfavorable social attitudes toward the elderly are fairly universal today, but they tend to be stronger among certain racial groups and social classes than among others. People who come from countries where respect for the elderly is customary usually treat elderly people with more consideration and respect than do those whose families have lived in America for several generations and who have absorbed the prevailing American social attitude toward the elderly. Members of the upper social classes, knowing that the elderly hold the purse strings to family fortunes, tend to treat elderly members of their social group with more respect than do those of the middle or lower classes, who often must be financially responsible for elderly family members and, as a result, resent them.

24.2.5 The Elderly Have a Minority-Group Status

It is a fact that the number of old people are growing, they occupy a minority-group status-a status that excludes them to some extent from interaction with other groups in the population and which gives them little or no power. This minority-group status is primarily the result of the unfavorable social attitudes toward the aged that have been fostered by the, unfavorable stereotypes of them.

This "second-class citizenship" puts the elderly on the defensive and has a marked effect on their personal and social adjustments. It makes the latter years of life far from "golden" for most people, and it causes them to be victimized by some members of the majority group.

The elderly are not only taken advantage of by unscrupulous business people but they are also the victims of crimes ranging from purse snatching to rape. This is especially true of elderly women who create the impression that they are not strong or agile enough to defend themselves. As a result of the crimes against them, many elderly people hesitate to leave their homes or to do so without a younger person along to protect them.

24.2.6 Aging Requires Role Changes

Just as middle-aged people must learn to play new roles, so must the elderly. Today, where efficiency, strength, speed, and physical attractiveness are highly valued, elderly people are often regarded as useless. Because they cannot compete with young people in the areas where highly valued traits are needed, the social attitude toward them is unfavorable.

Furthermore, it is expected that old people will play a decreasingly less active role in social and community affairs, as well as in the business and professional worlds. As a result, there is a marked reduction in the number of roles the elderly person is able to play, and there are changes in some of the remaining roles. While these changes are due in part to the individual's preferences, they are due mainly to social pressures.

24.2.7 Poor Adjustment is Characteristic of Late adulthood

Because of the unfavorable social attitudes toward the elderly that are reflected in the way the social group treats them, it is not surprising that many elderly people develop unfavorable self-concepts. These tend to be expressed in maladjustive behavior of different degrees of severity. Those who have a history of poor adjustments tend to become more maladjusted as age progresses than those whose earlier personal and social adjustments were more favorable.

Elderly people tend, as a group, to be more subject to maladjustments than those who are younger. Due to increased loss of status in a society dominated by the young, a desire to protect their finances for their wives, and a desire to escape partial - helplessness or pain.

24.2.8 The Desire for Rejuvenation is Widespread in Late adulthood

The minority-group status accorded to most elderly persons has naturally given rise to a desire to remain young as long as possible and to rejuvenate when the signs of aging appear. Ancient people used elixirs or potions, witchcraft and sorcery were used to achieve youth. Today, medicine is being taken to replace sex hormones. Sex therapy, such as Gerovital, the youth drug is used popularly.

Check Your Progress 1

Explain the characteristics of late adulthood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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24.3 LIFE EXPECTANCY

Average life expectancy-the number of years that an individual born in a particular year can expect to live-provide powerful support for the multiplicity of factors that slow biological aging, including improved nutrition, medical treatment, sanitation, and safety. Twentieth-century gains in life expectancy were so extraordinary that they equaled those of the previous 5,000 years. Steady declines in infant mortality are a major contributor to longer life expectancy. But death rates among adults have decreased as well. For example, heart

disease, the leading cause of overall adult death has dropped by nearly 50 percent in the past 30 years, due to declines in risk factors (such as high blood pressure and smoking) and, mostly, advances in medical treatment.

24.3.1 Variations in Life Expectancy

Consistent group differences in life expectancy underscore the joint contribution of heredity and environment to biological aging. On average, women can look forward to 4 to 7 more years of life than men-a difference found in almost all cultures. The female life expectancy advantage also characterizes several animal species, including rats, mice, and dogs. The protective value of the female's extra X chromosome is believed to be responsible. Because men are at higher risk for disease and early death, they reap somewhat larger generational gains from positive lifestyle changes and new medical discoveries.

Length of life-and even more important, *quality of life* in late adulthood-can be predicted by a country's health care, housing, and social services, along with lifestyle factors. When re-searchers estimate **active lifespan,** the number of years of vigorous, healthy life an individual born in a particular year can expect Japan ranks first. Japan's low rate of heart disease, linked to its low-fat diet, in combination with favorable health care and other policies for the aged, account for its leading status.

24.3.2 Life Expectancy in Late Adulthood

As at earlier ages, life expectancy continues to be greater for women than for men. Today, the 65- to 69-year age group consists of 111 women for every 100 men; for people age 85 and older, this number climbs to 160. Discrepancies like these occur in all countries. They are not always present in the developing world because of high death rates of women during childbirth. Although women outnumber men by a greater margin, differences in average life expectancy between the sexes decline as elders advance in age.

24.3.3 Maximum Lifespan

The maximum life span or the genetic limit to length of life for a person free of external risk factors varies between 70 and 110 for most people, with 85 about average. The oldest verified age to which an individual has lived is 122 years.

Do these figures reflect the upper bound of human longevity, or can our life spans be extended further? At present, scientists disagree on answers to this question. Some believe that about 85 or 90 years is as much as most humans can expect, since gains in average life expectancy are largely the result of reducing health risks in the first 20 or 30 years. Expected life for people age 65 and older has increased very little-only about 5 months-over the past decade. Others think we have not yet identified the human genetic limit because the life spans of several species have been stretched in the laboratory-through selective breeding, genetic engineering, and dietary calorie restriction.

Check Your Progress 2

Discuss the life expectancy during late adulthood.

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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24.4 PHYSICAL CHANGES

The programmed effects of specific genes and the random cellular events believed to underlie biological aging make physical declines more apparent in late adulthood. More organs and systems of the body are affected. Nevertheless, most body structures can last into our eighties and beyond, if we take good care of them.

24.4.1 Nervous System

Aging of the nervous system affects a wide range of complex thoughts and activities. Although brain weight declines throughout adulthood, the loss becomes greater after age 60 and may amount to as much as 5 to 10 percent by age 80, due to death of neurons and enlargement of ventricles (spaces) within the brain. Neuron loss occurs throughout the cerebral cortex but at different rates in different regions. In the visual, auditory, and motor areas, as many as 50 percent of neurons die. In contrast, parts of the cortex (such as the frontal lobes) that are responsible for integration of information, judgment, and reflective thought show less change. Besides the cortex, the cerebellum (which controls balance and coordination) loses neurons-in all, about 25 percent. Glial cells, which myelinate neural fibers, decrease as well, contributing to diminished efficiency of the central nervous system.

But the brain can overcome some of these declines. Aging neurons established new synapses after other neurons had degenerated. Furthermore, the aging cerebral cortex can, to some degree, generate new neurons. And brain imaging research reveals that compared with younger adults, elders who do well on memory tasks sometimes show more widely distributed activity across areas of the cerebral cortex.

24.4.2 Sensory Systems

Changes in sensory functioning become increasingly noticeable in late life. Older adults see and hear less well, and taste, smell, and touch sensitivity may also decline. Hearing impairments are far more common than visual impairments, and they extend trends described for middle adulthood, in that many more men than women are affected.

24.4.2a Vision: Structural changes in the eye make it harder to focus on nearby objects, see in dim light, and perceive color. In late adulthood, vision diminishes further. For example, the cornea (clear covering of the eye) becomes more translucent and scatters light, which blurs images and increases sensitivity to glare. The lens continues to yellow, leading to further impairment in color discrimination. From middle to old age, cloudy areas in the lens called **cataracts** increase, resulting in foggy vision and eventual blindness. Besides biological aging, heredity, sun exposure, and certain diseases (such as diabetes) increase the risk of cataracts. Fortunately, removal of the lens and replacement with an artificial lens implant or corrective eyewear are highly successful in restoring vision.

24.4.2b Hearing: Reduced blood supply and natural cell death in the inner ear and auditory cortex along with stiffening of membranes (such as the eardrum), cause hearing to decline in late adulthood. Decrements are greatest at high frequencies, although detection of soft sounds diminishes throughout the frequency range. In addition, responsiveness to startling noises lessens, and discriminating complex tone patterns becomes harder.

Although hearing loss has less impact on self-care than vision loss, it affects safety and enjoyment of life. Of all hearing difficulties, the age-related decline in speech perception has the greatest impact on life satisfaction. Ability to detect the content and emotionally expressive features of conversation declines after age 70, a difficulty that worsens in noisy settings.

As with vision, most elders do not suffer from hearing loss great enough to disrupt their daily lives. Of those who do, compensating with a hearing aid and minimizing background noise are helpful. Beginning at birth, our perception is *intermodal* (combines information from more than one sensory system). By attending to facial expressions, gestures, and lip movements, older adults can use vision to help interpret the spoken word. When family members and others speak in quiet environments, older people are far more likely to convey an image of alertness and competence than of reduced sensitivity to the surrounding world.

24.4.2c Taste and Smell: Older adults have greater difficulty recognizing familiar foods by taste alone. But no change in the number or distribution of taste buds takes place late in life, so the drop in taste sensitivity just described may be due to factors other than aging. Smoking, dentures, medications, and environmental pollutants can affect taste perception. When taste is harder to detect, food is less enjoyable, increasing the likelihood of deficiencies in the elderly person's diet. Flavor additives can help make food more attractive to older adults.

Smell contributes to enjoyment of food and also has a self protective function. An aging person who has difficulty detecting rancid food, gas fumes, or smoke may be in a life-threatening situation. A decrease in the number of smell receptors after age 60 contributes to declines in odor sensitivity. Older adults are less accurate at linking odors with such descriptors as *floral, musky, fruity,* or *sweet.*

24.4.2d Touch: Touch sensitivity is especially crucial for certain adults, such as the severely visually impaired who must read in Braille and people who make fine judgments about texture in their occupations or leisure pursuits- for example, in art and handicraft activities. To measure touch perception, researchers determine how close two stimuli on the skin must be before they are perceived as one. Aging brings a sharp decline on the hands, especially the fingertips, and less of a drop on the arms and lips. Decreased touch sensitivity may be due to loss of touch receptors in certain regions of the skin and slowing of blood circulation to the extremities. After age 70, nearly all elderly are affected.

24.4.3 Cardiovascular and Respiratory Systems

Aging of the cardiovascular and respiratory systems proceeds gradually during early and middle adulthood, usually without notice. Signs of change are more apparent in late adulthood, and they prompt concern among aging individuals, who know these organ systems are vital for quality and length of life.

As the years pass, the heart muscle becomes more rigid and some of its cells die while others enlarge, leading the walls of the left ventricle (the largest heart chamber, from which blood is pumped to the body) to thicken. In addition, artery walls stiffen and accumulate some plaque (cholesterol and fats) due to normal aging (much more if the person has atherosclerosis). Finally, the heart muscle becomes less responsive to signals from pacemaker cells within the heart, which initiate each contraction.

The combined result of these changes is that the heart pumps with less force, maximum heart rate decreases, and blood flow throughout the circulatory system slows. This means that sufficient oxygen may not be delivered to body tissues during high physical activity.

Changes in the respiratory system compound the reduced oxygenation just described. Because lung tissue gradually loses its elasticity, between ages 25 and 80, vital capacity (amount of air that can be forced in and out of the lungs) is reduced by half. As a result, the lungs fill and empty less efficiently, causing the blood to absorb less oxygen and give off less carbon dioxide. This explains why older people increase their breathing rate more and feel more out of breath when exercising.

Cardiovascular and respiratory deficiencies are more extreme in people who have smoked cigarettes throughout their lives, failed to reduce dietary fat, or had many years of exposure to environmental pollutants.

24.4.4 Immune System

As the immune system ages, T cells, which attack antigens (foreign substances) directly, become less effective. In addition, the immune system is more likely to malfunction by turning against normal body tissues in an autoimmune response. A less competent immune system can increase the elderly person's risk for a variety of illnesses, including infectious diseases (such as the flu), cardiovascular disease, certain forms of cancer, and a variety of

autoimmune disorders, such as rheumatoid arthritis and diabetes. But an age-related decline in immune functioning is not the cause of most illnesses among the elderly. It merely permits disease to progress, whereas a stronger immune reaction would have stamped out the disease agent.

24.4.5 Sleep

Older adults require about the same total sleep time as younger adults: around 7 hours per night. Yet as people age, they have more difficulty falling asleep, staying asleep, and sleeping deeply-a trend that begins after age 30 for men and after age 50 for women. The timing of sleep tends to change toward earlier bedtime and earlier morning awakenings. Changes in brain structures controlling sleep and higher levels of stress hormones in the bloodstream, which have an alerting effect on the central nervous system, are believed to be responsible.

Until age 70 or 80, men experience more sleep disturbances than women for several reasons. First, enlargement of the prostate gland, which occurs in almost all aging men, constricts the urethra (the tube draining the bladder) and leads to a need to urinate more often, including during the night. Second, men are more prone *sleep apnea,* a condition in which breathing ceases for 10 seconds or longer, resulting in many brief awakenings. The incidence of sleep apnea in elderly men is high; 30 to 50 percent have twenty or more episodes per night. Finally, periodic rapid movement of the legs sometimes accompanies sleep apnea but also occurs at other times of night called '**restless legs'** these movements may be due to muscle tension, reduced circulation, or age-related changes in motor areas of the brain. Although common among the elderly and not dangerous, they do disrupt sleep.

24.4.6 Physical Appearance and Mobility

The inner physical declines we have considered are accompanied by many outward signs of growing older-involving the skin, hair, facial structure, and body build. Because these changes occur gradually, older adults may not notice their elderly appearance until its arrival is obvious.

Creasing and sagging of the skin, extends into late adulthood. In addition, oil glands that lubricate the skin become less active, leading to dryness and roughness. "Age spots" increase; in some elderly individuals, the arms, backs of the hands and face may be dotted with these pigmented marks. Moles and other small skin growths may also appear. Blood vessels can be seen beneath the more transparent skin, which has largely lost its layer of fatty support. This loss further limits the older adult's ability to adapt to hot and cold temperatures.

The face is especially likely to show these effects because it is frequently exposed to the sun, which accelerates aging. Other facial changes occur: The nose and ears broaden as new cells are deposited on the outer layer of the skeleton. Teeth may be yellowed, cracked, and chipped, and gums may recede; with better dental care, these outcomes are likely to be less pronounced in future generations. As hair follicles under the skin's surface die, hair on the head thins in both sexes, and the scalp may be visible. In men with hereditary pattern baldness, follicles do not die but, instead, begin to produce fine, downy hair.

Body builds changes as well. Height continues to decline, especially in women, as loss of bone mineral content leads to further collapse of the spinal column. Weight generally drops after age 60 due to additional loss in lean body mass (bone density and muscle), which is heavier than the fat deposits accumulating on the torso.

Several factors affect mobility. The first is muscle strength, which generally declines at a faster rate in late adulthood than in middle age. Second, bone strength deteriorates because of reduced bone mass, and tiny cracks in response to stress weaken the bones further. Third, strength and flexibility of the joints and the tendons and ligaments (which connect muscle to bone) diminish.

Check Your Progress 3

State the physical changes that happen during late adulthood

Notes: a) Write your answer in the space given below.

      b) Check your answer with the one given at the end of this lesson.

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24.5 MEMORY

As older adults take in information more slowly and find it harder to apply strategies, inhibit irrelevant information, and retrieve relevant knowledge from long-term memory, the chances of memory failure increase. A reduced capacity to hold material in working memory while operating on it means that memory problems are especially evident on complex tasks.

24.5.1 Deliberate versus Automatic Memory

Although all of us have had memory failures from time to time, difficulties with recall rise in late adulthood. Because working memories could hold less at once, they attended poorly to context. When we try to remember, context serves as an important retrieval cue. Because older adults take in less about a stimulus and its context, they sometimes cannot distinguish an experienced event from one they imagined.

Automatic form of memory called **implicit memory,** or memory without conscious awareness. In a typical implicit memory task, you would be asked to fill in a word fragment (such as t k) after being shown a list of words. You would probably complete the sequence with a word you had just seen *(task)* rather than other words *(took* or *teak).* Notice that you engaged in recall without trying to do so.

24.5.2 Associative Memory

One way of characterizing the memory deficits in terms of a general, age-related decline in binding information into complex memories. Researchers call this an **associative memory deficit** or difficulty creating and retrieving links between pieces of information, - for example, two items or an item and its context, such as one trying to remember the name of the movie with the child actor or where one had seen the movie.

24.5.3 Remote Memory

Although older people often say that their **remote memory or very long term recall** is clearer than their memory for recent events, research does not support this conclusion. How about *autobiographical memory,* or memory for personally meaningful events, such as what you did on your first date or how you celebrated your college graduation? To test for this type of memory, researchers typically give a series of words (such as *book, machine, sorry, surprised)* and ask adults to report a personal memory cued by each. People between 50 and 90 recall both remote and recent events more frequently than intermediate events, with recent events mentioned most often. Among remote events recalled, most happened between ages 10 and 30.

24.5.4 Prospective Memory

Elderly people often complain that they have become more absentminded about daily events. **Prospective memory** refers to remembering to engage in planned actions in the future. The amount of mental effort required determines whether older adults have trouble with prospective memory.

Older adults do better on *event-based* than on *time-based* prospective memory tasks. In an event based task, an event (such as a certain word appearing on a computer screen) serves as a cue for remembering to do something (pressing a key) while the participant engages in an ongoing activity (reading paragraphs). As long as the event based task is not complex, older adults do as well as younger adults.

24.6 Erikson's Theory: Ego Integrity versus Despair

The final psychological conflict of Erikson's theory, ego integrity versus despair, involves coming to terms with ones life. Adults who arrive at a sense of integrity feel whole, complete, and satisfied with their achievements. They have adapted to the mix of triumphs and disappointments that are an inevitable part of love relationships, child rearing, work, friendships, and community participation. They realize that the paths they followed, abandoned, and never selected were necessary for fashioning a meaningful life course.

The capacity to view one's life in the larger context of all humanity-as the chance combination of one person and one segment in history-contributes, to the serenity and contentment that accompany integrity. In a study of people ranging in age from 17 to 82, increased age was associated with greater psychosocial maturity, measured in terms of striving for generativity and ego integrity in everyday behavior. Generativity and ego integrity, in turn, largely accounted for the link between age and psychological well-being. Just as Erikson's theory indicates, the psychosocial maturity of these later years seems to bring increased happiness.

The negative outcome of this stage, despair, occurs when elders feel they have made many wrong decisions, yet time is too short to find an alternate route to integrity. Without another chance, the despairing person finds it hard to accept that death is near and is overwhelmed with bitterness, defeat, and hopelessness. According to Erikson, these attitudes are often expressed as anger and contempt for others, which disguise contempt for oneself.

Check Your Progress 4

Explain the tasks related to memory during late adulthood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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24.7 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   Characteristics of Late Adulthood
ii)   Life Expectancy in Late Adulthood
iii)   Physical Changes in Late Adulthood
iv)   The tasks related to memory during late adulthood
v)   Erikson's Theory: Ego Integrity versus Despair

24.8 Check Your Progress: Model Answers

1. Your answer may include:
    i)   Late adulthood as a period of decline
    ii)   Individual Differences in the effects of aging
    iii)   Late adulthood as judged by different criteria
    iv)   Social attitudes toward late adulthood
    v)   The elderly have a minority-group status
    vi)   Aging requires role changes
    vii)   Poor adjustment is characteristic of late adulthood
    viii)   The desire for rejuvenation is widespread in late adulthood

2. The life expectancy during late adulthood includes:
    i)   Variations in Life Expectancy
    ii)   Maximum Lifespan

3. The physical changes that happen during late adulthood are:
    i)   Physical Changes

ii)   Nervous System
iii)   Sensory Systems
iv)   Cardiovascular and Respiratory Systems
v)   Immune System
vi)   Sleep
vii)   Physical Appearance and Mobility

4. Your answer may include:
i)   Deliberate versus Automatic Memory
ii)   Associative Memory
iii)   Remote Memory
iv)   Prospective Memory

24.9 Lesson – End Activities

1. Explain different types of memory.
2. Mention any one suitable method to promote memory.

24.10 References

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LESSON – 25
CHANGE IN SELF CONCEPT AND PERSONALITY - PSYCHOLOGICAL WELL-BEING - RELATIONSHIPS - RETIREMENT AND LEISURE

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25.0 AIMS AND OBJECTIVES

This lesson will give an overall picture of the change in self concept and personality, psychological well-being and the relationships with others and retirement and leisure of late adulthood

After going through this Lesson, you will be able to:

    v) Discuss the changes in self concept and personality during late adulthood
    vi) Mention the psychological well-being during late adulthood
    vii) List the relationships established during late adulthood
    viii)   State the retirement and leisure activities during late adulthood

25.1 INTRODUCTION

Stability of the "**big five**" personality traits from mid - to late life continues. The ingredients of ego integrity: wholeness, contentment, and image of the self as part of a larger world order. These attributes are reflected in several significant late-life changes in both self-concept and personality.

25.1.1 Secure and Multifaceted Self-Concept

Older adults have accumulated a lifetime of self-knowledge, leading to more secure and complex conceptions of themselves than at earlier ages. Many believe that are good at

counselling others, growing a flower garden, giving dinner parties, budgeting money, and figuring out who could be trusted and who couldn't. At the same time, one may believe that she/he couldn't get around the city as easily as before.

Elders when asked to respond to the question 'Who am I?' participants mentioned a broad spectrum of life domains, including hobbies, interests, social participation, family, health, and personality traits. Adults of both ages expressed more positive than negative self-evaluations, although a slight increase in negative comments occurred in the older group. Positive, multifaceted self-definitions predicted psychological well-being.

As the future shortens, most elders, into their eighties and nineties, continue to mention hoped-for selves in the areas of good health, relationships, and social responsibility and are very active in pursuing them. These grant older adults goals in life and a sense of further development. Even in advanced old age, when some capacities decline, the majority of older adults retain a coherent sense of self. They regard themselves as very much the same person they have always been.

25.1.2 Agreeableness, Sociability, and Acceptance of Change

During late adulthood, shifts in three personality characteristics take place-changes that, once again, defy stereotypes of the elderly. Old age is not a time in which the personality inevitably becomes rigid and morale declines. Instead, a flexible, optimistic approach to life is common.

Rating open-ended interviews with elders in their sixties, and again when they reached their eighties and nineties, researchers found that scores on adjectives that make up *agree-ableness--generous, acquiescent,* and *good-natured*--were higher on the second occasion than the first for over one-third of the sample. These qualities seem to characterize people who have come to terms with life despite its imperfections. However, participants showed a slight dip in *sociability* as they aged. Perhaps this reflects a narrowing of social contacts as people become more selective about relationships and as family members and friends die-trends.

A third, related development is greater *acceptance of change*-an attribute the elderly frequently mention as important to psychological well-being. That many older adults adjust well to change is evident in what they say when asked about dissatisfactions in their lives. They often respond that they are not unhappy about anything! A capacity to accept life's twists and turns, many of which are beyond one's control, is vital for positive functioning in late adulthood. Most elders are resilient; they bounce back in the face of adversity, especially if they tended to do so earlier in their lives.

25.1.3 Spirituality and Religiosity

How do older adults manage to accept declines and losses yet feel whole and complete and anticipate death with calm composure? One possibility is that they develop a more mature sense of spirituality. That is, they actively seek a higher meaning for life, knowing that it will end in the foreseeable future. Spirituality is not the same as religion. A transcendent sense of truth and beauty can be found in art, nature, and relationships with others. But religion provides many people with beliefs, symbols, and rituals that guide this quest for meaning.

Older adults attach great value to religious beliefs and behaviors. Although declining health and transportation difficulties reduce organized religious participation in advanced old age, informal religious activities remain prominent in the lives of today's elders.

Furthermore, spirituality and faith may advance to a higher level in late life-away from prescribed beliefs to a more reflective approach that emphasizes links to others and is at ease with mystery and uncertainty. In his theory of the development of faith, James Fowler (Table 1) posits five stages, which have been confirmed in several studies. Notice how adults who

reach Stage 4 become aware of their own belief system as one of many possible world views, contemplate the deeper significance of religious symbols and rituals, and open themselves to other religious perspectives as sources of inspiration.

Table 1 - Fowler's Stages of Faith Development

Stage of Faith	Period of Development	Description
1. Intuitive-projective	3-7 years	Children's fantasy and imitation lead them to be powerfully influenced by stories, moods, and behaviors demonstrating the faith of adults. They become aware of right and wrong actions
2. Mythic-literal	7-11 years	Children begin to internalize the stories, beliefs, and observances of their religious community, which they take literally. For example, they often hold concrete images of God living on top of the world and watching over everybody
3. Synthetic-conventional	Adolescence	Adolescents have a coherent set of deeply felt beliefs and values, which provides a basis for identity. They have not yet examined this ideology systematically
4. Individuative-reflective	Adulthood	Adults who reach this stage critically reflect on their beliefs and values, recognizing that their world view is only one of many possible world views. They actively shape a personal ideology, forming and re-forming it over time. About religious rituals and symbols, they ask, "What does this really mean?"
5. Conjunctive	Late Adulthood	The few people who attain this stage form an enlarged vision of an all-inclusive human community. They act to bring it about by standing up against persecution and injustice and by promoting a common good that serves the needs of diverse groups. Great religious leaders, such as Mahatma Gandhi and Martin Luther King, Jr., illustrate conjunctive faith

Sex differences in religious involvement and spirituality are evident throughout adulthood. Women are more likely than men to be church or synagogue members, to engage in religious activities, and to report a personal quest for connectedness with a higher power. Women's greater poverty, widowhood, and participation in caregiving, including caring for chronically ill family members, expose them to higher levels of stress and anxiety.

Check Your Progress 1

Explain the changes in self concept and personality during late adulthood
Notes: a) Write your answer in the space given below.
    b) Check your answer with the one given at the end of this lesson.

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25.2 PSYCHOLOGICAL WELL-BEING

Most adults adapt well to old age. Yet a few feel dependent, incompetent, and worthless. Identifying personal and environmental influences on late-life psychological wellbeing is

vital for designing interventions that foster positive adjustment.

25.2.1 Control versus Dependency

Observations of people interacting with older adults in both private homes and institutions reveal two highly predictable, complementary behavior patterns. In the first, called the **dependency-support script**, dependent behaviors are attended to immediately. In the second, called the **independence ignore script**, independent behaviors are mostly ignored. These sequences reinforce dependent behavior at the expense of independent behavior, regardless of the older person's competencies. Even a self-reliant elder did not always resist on others unnecessary help because it brought about social contact.

Among elders who experience no difficulty with daily activities, opportunities to interact with others are related to high satisfaction with everyday life. In contrast, among elders who have trouble performing daily activities, social contact is linked to a less positive everyday existence. This suggests that social interaction while assisting elders with physical care, household chores, and errands is often not meaningful and rewarding, but rather demeaning and unpleasant. Consider these typical reactions of care recipients to a spouse's help with daily activities: **"felt dependent;' "felt indebted;' "felt like a weak, incapable person"**.

25.2.2 Health

Health is a powerful predictor of psychological well-being in late adulthood. Physical declines and chronic disease can be highly stressful, leading to a sense of loss of personal control-a major factor in adult mental health. Furthermore, physical illness resulting in disability is among the strongest risk factors for late-life depression. Although fewer older than young and middle-aged adults are depressed, profound feelings of hopelessness rise with age as physical disability and consequent social isolation increase.

The relationship between physical and mental health problems can become a vicious cycle, each intensifying the other. At times, the rapid decline of a sick elder is the result of despondency and "**giving up**". This downward spiral can be hastened by a move to a nursing home, requiring the older person to adjust to distance from family and friends and to a new self-definition as "a person who can survive only in an institution" In the month after admission, many residents deteriorate rapidly and become severely depressed. The stress of illness together with institutionalization is associated with heightened health problems and mortality. Depression in old age is often lethal. People age 65 and older have the highest suicide rate of all age groups. Personal characteristics like effective coping and a sense of self efficacy-are vitally important. But for frail elders to display these attributes, families and caregivers must grant them autonomy by avoiding the dependency-support script. When older adults remain in charge of personally important areas of their lives, they retain essential aspects of their identity in the face of change and report a more favorable outlook on their past and future.

25.2.3 Negative Life Changes

Elders are at risk for a variety of negative life changes-death of spouse, siblings, and friends; illness and physical disabilities; declining income; and greater dependency. Negative life changes are difficult for all people. But these events may actually evoke less stress and depression in older than in younger adults. Many elders have learned to cope with hard times and to accept loss as part of human existence.

Still, when negative changes pile up, they test the coping skills of older adults. In very old age, such changes are greater for women than for men. Women over age 75 are far less likely to be married, more often have lower incomes, and suffer from more illnesses-especially ones that restrict mobility. Furthermore, elderly women more often say that others depend on them for emotional support. This means that their social relations, even in very old age, are more often a source of stress. And because of failing health, older women may not be able to meet

others' needs for caregiving, with negative consequences for their self-esteem. Not surprisingly, women of very advanced age report a lower sense of psychological well-being than men.

25.2.4 Social Support and Social Interaction

In late adulthood, social support continues to play a powerful role in reducing stress, thereby promoting physical health and psychological well-being. Social support increases the odds of living longer. And it may help explain the relationship of religious participation to survival, noted earlier. Most of the time, elders receive informal assistance from family members-first from their spouse or, if none exists, from children, and then from siblings. If these individuals are not available, other relatives and friends may step in.

Nevertheless, many older adults place such high value on independence that they do not want a great deal of support from people close to them unless they can reciprocate. When assistance is excessive or cannot be returned, it often results in psychological distress. Perhaps for this reason, adult children express a deeper sense of obligation toward their aging parents than their parents expect from them

Check Your Progress 2

Briefly mention the late-life psychological wellbeing.

Notes: a) Write your answer in the space given below.

     b) Check your answer with the one given at the end of this lesson.

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25.3 RELATIONSHIPS IN LATE ADULTHOOD

The social convoy is an influential model of changes in our social networks as we move through life. Assume that you are in the midst of a cluster of ships traveling together, granting one another safety and support. Ships in the inner circle represent people closest to you, such as a spouse, best friend, parent, or child. Those less close but still important travels on the outside, with age, ships exchange places in the convoy, and some drift off while others join the procession. But as long as the convoy continues to exist, you adapt positively.

The ways elders with diverse lifestyles sustain social networks of family members and friends-an effort that fosters personal continuity and security in the face of major life changes. As ties are lost, older adults draw others closer and even add replacements, although not at the rate they did at younger ages. Tragically, for some older adults the social convoy breaks down. There are circumstances in which elders experience abuse and neglect at the hands of those close to them.

25.3.1 Marriage

Marital satisfaction rises from middle to late adulthood, when it is at its peak. Several changes in life circumstance and couples, communication underlie this trend. First, perceptions of fairness in the relationship increase as men participate more in household tasks after retirement. For elders who experienced little social pressure for gender equality in their youth, division of labor in the home still reflects traditional roles. Men take on more home maintenance projects, whereas women's duties cooking, cleaning, laundry, and shopping-continue as before. Among adults retiring today, "feminine" tasks are more equally shared than they were during work life. In either case, men's increased involvement in caring for the home results in a greater sense of equity in marriage than before.

Second, with extra time together, the majority of couples engage in more joint leisure activities. Finally, greater emotional understanding and emphasis on regulating emotion in relationships lead to more positive interactions. Couples married for at least 35 years resolve

conflicts in ways that are less negative and more affectionate than do middle-aged couples.

When marital dissatisfaction is present, it continues to take a greater toll on women than on men. Women tend to confront marital problems and try to solve them. In old age, the energy expended is especially taxing on their physical and mental health. Husbands, in contrast, often protect themselves by withdrawing, as they did in their twenties and thirties.

25.3.2 Gay and Lesbian Partnerships

Elderly gays and lesbians in long-term partnerships have sustained their relationships through a historical period of hostility and discrimination toward homosexuals. Nevertheless, most report happy, highly fulfilling relationships, pointing to their partner as their most important source of social support. And compared with homosexual elders who live alone, homosexual partners rate their physical and mental health more favorably.

A lifetime of effective coping with an oppressive social environment may have strengthened homosexuals, skill at dealing with late-life physical and social changes, thereby contributing to a satisfying partnership. And greater gender-role flexibility enables gay and lesbian couples to adapt easily to sharing household tasks following retirement. Furthermore, because of imagined or real strain in family relationships when they told others about their homosexuality, gays and lesbians less often assume that family members will provide support in old age.

Nevertheless, because of continuing prejudice and lack of social recognition of their partnerships, aging gays and lesbians face unique challenges. Health care systems are often unresponsive to their unique needs. And if their loved one becomes frail or ill, partners are welcome in hospitals or nursing homes or are allowed to participate in health care decisions-an issue. These circumstances can make late-life declines and losses especially painful.

25.3.3 Divorce and Remarriage

Couples who divorce in late adulthood constitute a very small proportion of all divorces in any given year-less than 1 percent. But the divorce rate among people age 65 and older is increasing as new generations of elders become more accepting of marital breakup and as the divorce risk rises for second and subsequent marriages. When asked about the reasons for divorce, elderly men typically mention lack of shared interests and activities, whereas women frequently cite their partner's refusal to communicate and emotional distance. Following divorce, they find it harder to separate their identity from that of their former spouse, and they suffer more from a sense of personal failure. Relationships with family and friends shift at a time when close bonds are crucial for psychological wellbeing. Women suffer most from late-life divorce because they are more likely than men to spend their remaining years living alone. The financial consequences are severe-greater than for widowhood because many accumulated assets are lost in property settlements.

Remarriage rates are low in late adulthood and decline with age, although they are considerably higher among divorced than widowed elders. Older men's opportunities for remarriage are far greater than women's. Nevertheless, the gender gap in elder remarriage is much smaller after divorce than after widowhood. Perhaps because their previous relationship was disappointing, divorcees find it easier than widows to enter a new relationship. Also, divorced older women may be more motivated to remarry because of their more extreme economic circumstances. Finally, some divorced elders leave their marriages only after a new bond is forming.

25.3.4 Widowhood

Widows make up one-third of the elderly population. Most widows and widowers live alone rather than in extended families. Although they are less well off financially than married elders, most want to retain control over their time and living space and to avoid disagreements with their adult children. When widowed elders relocate because they cannot

make mortgage payments or keep up their homes, they usually move closer to family rather than into the same residence.

The greatest problem for recently widowed elders is profound loneliness. At the same time, wide variation in adaptation exists, with age, social support, and personality making a difference. Elders have fewer lasting problems than younger individuals who are widowed, probably because death in later life is expected and viewed as less unfair. And most widowed elders - especially those with outgoing personalities and high self-esteem, are resilient in the face of loneliness. They try to maintain social relationships that were important before the spouse's death and report that relatives and friends respond in kind, contacting them at least as often as before. Also, the stronger elders' sense of self efficacy in handling tasks of daily living, the more favorably they adjust.

25.3.5 Siblings

Elderly siblings in industrialized nations are more likely to socialize than to provide each other with direct assistance because older adults turn to their spouse and children before they turn to their siblings. Nevertheless, siblings seem to be an important "insurance policy" in late adulthood. Widowed and never-married elders have more contacts with siblings, perhaps because they have fewer competing family relationships. They are also more likely to receive sibling support during illness.

25.3.6 Friendships

As family responsibilities and vocational pressures lessen, friendships take on increasing importance. Having friends is an especially strong predictor of mental health among the elderly. Elders reported more favorable experiences with friends than with family members, a difference partly due to the many pleasurable leisure activities shared with friends. But unique qualities of friendship interaction open ness, spontaneity, mutual caring, and common interests-seemed especially influential. In elder friendships, affection and emotional support are both given and received to maintain balance in the relationship. Although friends call on each other for help with tasks of daily living, they generally do so only in emergencies or for occasional, limited assistance. As elders avoid excessive dependency on friends, they register their own autonomy.

25.3.7 Elder Maltreatment

Although the majority of older adults enjoy positive relationships with family members, friends, and professional caregivers, some suffer maltreatment at the hands of these in-dividuals. Recent media attention has led elder maltreatment to become a serious public concern.

Elder maltreatment takes the following forms:

- *Physical abuse*-intentional infliction of pain, discomfort, or injury, through hitting, cutting, burning, physical force, restraint, sexual assault, and other acts.

- *Physical neglect*-intentional or unintentional failure to fulfill caregiving obligations, which results in lack of food, medication, or health services or in the elderly person being left alone or isolated.

- *Psychological abuse*-verbal assaults (such as name calling), humiliation (being treated as a child), and intimidation (threats of isolation or placement in a nursing home).

- *Financial abuse*-illegal or improper exploitation of the elder's property or financial resources, through theft or use without the elder's consent.

Check Your Progress 3

Write about the relationships established during late adulthood

Notes: a) Write your answer in the space given below.

b) Check your answer with the one given at the end of this lesson.

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25.4 RETIREMENT AND LEISURE

The period of retirement has lengthened due to increased life expectancy and a steady decline in average age of retirement-trends occurring in all Western industrialized nations. These changes have also led to a blurring of the distinction between work and retirement. Because mandatory retirement no longer exists for most workers in Western countries, older adults have more choices about when to retire and how they spend their time. The retirement process may include a planning period that lasts for years, the decision itself, diverse acts of retiring, and continuous adjustment and readjustment of activities for the rest of the life course.

Some older adults retire gradually by cutting down their hours and responsibilities, taking part-time bridge jobs that serve as transitions between full-time career and retirement. Others give up their jobs but later return to work both to support themselves because of limited financial resources and to introduce interest and challenge into the retirement years.

25.4.1 The Decision to Retire

Personal and workplace factors in addition to income that influence the decision to retire. People in good health, for whom vocational life is central to self-esteem, and whose work environments are pleasant and stimulating are likely to keep on working. For these reasons, individuals in professional occupations usually retire later than those in blue-collar or clerical jobs. Self-employed elders also stay with their jobs longer, probably because they can flexibly adapt their working hours to changing needs. In contrast, people in declining health; who are engaged in routine, boring work; and who have compelling leisure interests often opt for retirement.

Societal factors also affect retirement decisions. When many younger, less costly workers are available to replace older workers, industries are likely to offer added incentives for people to retire, such as increments to pension plans and earlier benefits-a trend that has contributed to a rising number of retirements.

25.4.2 Adjustment to Retirement

Because retirement involves giving up roles that are a vital part of identity and self-esteem, it usually is assumed to be a stressful process that contributes to declines in physical and mental health. We must be careful not to assume a cause-and-effect relationship each time retirement and unfavorable reactions are paired. For example, a wealth of evidence confirms that physical health problems lead elders to retire, rather than the reverse. And for most people, mental health is fairly stable from the pre- to postretirement years, with little change prompted by retirement itself. The widely held belief that retirement inevitably leads to adjustment problems is contradicted by countless research findings indicating that most people adapt well. They describe themselves as active and socially involved-major determinants of retirement satisfaction.

25.4.3 Leisure Activities

With retirement, older adults have more time for leisure pursuits than ever before. After a **"honeymoon period"** of trying out new activities, many find that leisure interests and skills do not develop suddenly. Instead, meaningful leisure pursuits are usually formed earlier and sustained or expanded during retirement.

Involvement in leisure activities is related to better physical and mental health and reduced mortality. But simply participating does not explain this relationship. Instead, elders

select leisure pursuits because they permit self-expression, new achievements, the rewards of helping others, or pleasurable social interaction. These factors account for gains in well-being.

25.4.4 Successful Aging

Contemporary experts' view **of successful aging**, in which gains are maximized and losses minimized. Successful agers are people for whom growth, vitality, and striving limit and, at times, overcome physical, cognitive, and social declines. Researchers want to know more about their characteristics and development so they can help more seniors' age well. Yet theorists disagree on the precise ingredients of a satisfying old age. Some focus on easily measurable outcomes, such as excellent cardiovascular functioning, absence of disability, superior cognitive performance, and creative achievements. Yet this view has been heavily criticized. Not everyone can become an outstanding athlete, an innovative scientist, or a talented artist.

Recent views of successful aging have turned away from specific achievements toward processes people use to reach personally valued goals. This perspective avoids identifying one set of standards as "successful." Instead, it focuses on how people minimize losses while maximizing gains.

Check Your Progress 4

Write about the retirement and leisure activities during late adulthood.
Notes: a) Write your answer in the space given below.
    b) Check your answer with the one given at the end of this lesson.

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25.5 LET US SUM UP

In this Lesson, we have touched upon the following points:

i)   the changes in self concept and personality during late adulthood
ii)   the psychological well-being during late adulthood
iii)   the relationships established during late adulthood
iv)   the retirement and leisure activities during late adulthood

25.6 Check Your Progress: Model Answers

2. The answer may include the following:
    a. Secure and Multifaceted Self-Concept
    b. Agreeableness, Sociability, and Acceptance of Change
    c. Spirituality and Religiosity
3. The late-life psychological wellbeing are:
    a. Control versus Dependency
    b. Health
    c. Negative Life Changes
    d. Social Support and Social Interaction
3. The relationships established during late adulthood
        i)   Marriage
        ii)   Gay and Lesbian Partnerships
        iii)   Divorce and Remarriage
        iv)   Widowhood
        v)   Siblings
        vi)   Friendships

4.The retirement and leisure activities during late adulthood are:
  i)   The Decision to Retire
  ii)   Adjustment to Retirement
  iii)   Leisure Activities
  iv)   Successful Aging

25.7 Lesson – End Activities
1. Prepare a programme for retirement life.
2. Briefly describe the psychological factors promotes the well being during old age.

25.8 References
1. Adams, H.E., Psychology of Adjustments, New York, Ronald, 1978.
2. Rivgin, L. Education for Adjustment, New York : Appleton Century, 1986.