

OBJECTIVES:

1. To develop insight among students regarding human development in a life span perspective.
2. To orient students regarding influencing factors and basic concepts of life span development.
3. To equip students with skill to study developmental aspect in a life span context.

S.NO.	THEORY	Cr/Hr
1.	Life span development, stages of developmental & developmental tasks prenatal, infancy and early childhood, middle childhood and adolescence, adulthood and old age	3
2.	Prenatal, perinatal and postnatal stages- issues and scientific concepts associated with conception, pregnancy, prenatal development, labour/birth, postnatal	10
3.	Infancy and early childhood- physical, motor, social, emotional, cognitive and language characteristic, antecedent influence on early growth and development, stimulating approaches for optimizing development	6
4.	Middle childhood and adolescence - physical, motor, social, emotional, cognitive and language characteristic, antecedent influence growth and development	5
5.	Adulthood and old age- physical, motor, social, emotional, cognitive and language characteristic, antecedent influence on growth and development during adulthood, stimulating approaches for optimizing development	6
6.	Recent issue in growth and development from infancy to old age	2
Total		32

	PRACTICAL	Cr/Hr
1.	Observational visit to well-baby clinic to observe full term and preterm babies	2
2.	Case study of individuals in different stages of development (any three)- infancy/early childhood, school age/adolescence, adulthood/old age	3+3+3
3.	Critical analysis of case study and report presentation	2
4.	Preparation of resource file related to any one stage of life span	3
	Total	16

Course Content

Life-Span Development HDFS 121 3(2+1)

INTRODUCTION

The science of life-span development has slowly evolved over the years as longevity has increased and people begin to realize the importance of every age's period of life.

This course is about the changes that take place in our lives: In our bodies, our personalities, our ways of thinking, our feelings, our behaviours, our relationships and in the role that we play during different periods of our lives.

The goal of life-span development psychology is to help us live meaningful, productive lives. The developmental framework includes the following periods and age divisions.

Child Development

- Prenatal Periods: conception through birth

- Infancy: the first two years
- Early childhood: 3 to 5 years.
- Middle childhood: 6 to 11 years
- Adolescent development: 12 to 18 or 20 years
- Early adulthood: 20s and 30s
- Middle Adulthood : 40s and 50s

- Late adulthood: 60 and over

LIFE SPAN STAGES	
Prenatal period	Conception to birth
Infancy	birth to the end of the second week
Babyhood	end of the second week to end of the second year
Late childhood	six to ten or twelve years
Puberty or preadolescence	ten or twelve to fourteen years
Adolescence	thirteen or fourteen to eighteen years
Early adulthood	eighteen to forty years
Middle age	forty to sixty years
Old age or senescence	sixty years to death

INTRODUCTION OF STAGES-

The human body constantly develops and changes throughout the human life cycle, and food provides the fuel for those changes. The major stages of the human lifecycle include pregnancy, infancy, the toddler years, childhood, puberty, older adolescence, adulthood, middle age, and the senior year.

Prenatal period (Conception time the human organism grows from a fertilized cell to billions of cells. During this period, the basic body structure and organs are formed. Both heredity and environment influence development. During the early months, the organism is more vulnerable to negative environmental influences than during any other period of growth.

Infancy (The first two years)

Infancy, which extends from child birth through toddlerhood – usually the second year of life – is a period of tremendous changes. Infants grow in motor ability and coordination and develop sensory skills and an ability to use language. They form attachments to family members and other caregivers. Learn to trust or distrust and to express or withhold love affection. They learn to express basic feelings and emotions and develop some sense of self and independence. Already; they evidence considerable differences in personality and temperament.

Early Childhood (3 to 5 years)

During the early childhood preschool years (From ages 3 to 5), children continue their rapid physical, cognitive, and linguistic growth. They are better able to care for themselves, begin to develop and

Roles become very interested in play with other children. The quality of parent-child relationships is important in the socialization process that is taking place.

Middle childhood (6 to 11 years)

During middle childhood, children make significant advances in their ability to read, write, and do arithmetic; to understand their world; and to think logically. Achievement becomes vitally important, as does successful adjustment with parents. Both psychosocial and moral development proceed at a rapid rate. The quality of family relationships continues to exert a major influence on emotional and social adjustments.

Adolescence (12 to 19 years)

Adolescence is the period of transition between childhood and adulthood during which sexual maturation takes place, formal operational thinking begins, and preparation for entering the adult world occurs. The formation of a positive identity is an important psychosocial task. As adolescents seek greater independence from parents, they also want increased contact and a closer sense of belonging and companionship with their peers.

Early adulthood (20s and 30s)

Achieving intimacy, making career choice, and attaining vocational success are important challenges of early adulthood. Young adults face other decisions such as whether to marry, The selection of a mate, and whether to become parents. Some face the prospect of

divorce and remarriage, which can result in a reconstituted family. Many of the decisions made during this period set the stage for later life.

Middle Adulthood (40s to 50s)

During middle adulthood, many people begin to feel a time squeeze as their social and biological clocks tick away. This stimulates a mid-life crisis in some, during which they reexamine many facets of their lives. For those parents who have launched their children, the middle years may be a time of increased freedom (maximum personal and social responsibility and vocational success). However, adjustments need to be made to changing bodies and changing emotional, social, and job situations.

Late Adulthood (60 and over)

Late Adulthood is a time of adjustment particularly to changing physical capacities, personal and social situation, and relationships. Increasing attention to health care is needed to maintain physical vigor and well-being. The persistence of verbal abilities allows some to continue to grow in knowledge and cognitive skill. Relationship with adult children, grandchildren, and other relatives take on a new meaning especially for the widowed. Maintaining and establishing meaningful friendships with peers is especially important to well-being. According to Reker, Peacock and Wong (1987), people in this stage of life report a high degree of happiness and life satisfaction, and little fear of death.

Major Developments in eight periods of the lifespan

Age Period	Major Developments
Prenatal stages (Conception of birth)	Basic body structure and organs form. physical growth is most rapid of life span. Vulnerability to environmental influences is great.
Infancy and toddlerhood (birth to age 3)	Newborn is dependent but competent. All senses operate at birth, Physical growth the development of motor skills is rapid. Ability to learn and remember is early weeks of the first year. Self – awareness develops in second year, Comprehension and speech develop rapidly. Interest in other children increases.
Early children (3 to 6 years)	Family is still focus of life, although other children become more important. Strength and fine and self-control, self-care increase. Play, creativity and imagination become more elaborate. Cognitive immaturity leads to many (illogical) ideas about the world.
Middle children (6 to 12 years)	Peers assume central importance. Children begin to think logically, although largely concretely, memory and language skills increase. Importance gains improve ability to benefit from formal schooling. Self-concept develops, affecting self-esteem. Physical growth slows. Strength and athletic skill improves.

Adolescence (12to20years)	Physical changes are rapid and profound. Reproductivematurity isattained. Search for identity abstractlyanduses scientificreasoningdevelops.Adolescentegocentrism persists in some behavior. Peer groups help to develops and test self – concepts. Relationships withparentsare generally good.
Youngadulthood (20 to 40 year)	Decisionsaremadeaboutintimaterelationship.Mostpeoplemarry. mostbecomeparents.Physicalhealthpeaks, then declines slightly. Career choice are made.Senseofidentitycontinuestodevelop.Intellectualabilities assumenew complexity.
Middleage(40to65 years)	<p>Search for meaning in life assumes centralimportance.Braverysome deteriorationof physical health, staminaandprowesstakesplace.Womanexperiencemenopause.Wisdom and practical problem-solvingskills are high;abilitytosolvenovelproblemdeclines.Doubleresponsibility of caringfor carrying for children andelderlyparents maycausestress.Timeorientationchangesto changes to “timeleft tolive”</p> <p>Launchingofchildrentypicallyleavesemptynest.Typicallywomanbecomemoreassertiv e, menmorenurturantandexpressive,“burnout”occurs,Foraminority,thereisamidlife “crisis.”</p>

<p>Late adulthood (65 years and over)</p>	<p>Most people are healthy and active, although both mentally and physical ability decline somewhat. Most people are alert. Although intelligence and memory deteriorate somewhat, most people find ways to compensate. Slowing of reaction time affects many aspects of functioning, loss of loved ones. Retirement from work creates more leisure time.</p>
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According to Havighurst, a developmental task is the task which characterises a certain period in the life of an individual, successful achievement of which leads to his happiness in the individual, disapproval by society and difficulty with later tasks.

In short, they are social expectations, e.g., if a child cannot learn physical skills necessary for ordinary play, he will not be able to participate in games, and he will not be popular with his friends. They could also reject him, which would lead to poor self-concept. Developmental lag is the term used to describe slow developing ability in some children.

Developmental Milestones:

Certain indicators called "Developmental Milestones" mark a child's progress on the path of development across definite stages. Milestones are like guideposts for various stages of development, though which every normal child passes. Milestones indicate the age at which to measure e.g. height and weight; whereas milestones for development are more complex and difficult to measure, e.g. cognitive, language, social development, etc. For every child there is a normal range for completion of a "Milestone". But each child reaches a "Milestone" or performs the expected developmental task at his own pace and in his or her own way. If the child seems slow, suggested. If the child is still slow, take the child to a doctor. And some children progress more rapidly than the other. But this is need not be a cause for alarm. If accomplishment of 'Milestones' is unduly delayed, it is a signal that a child should be medically examined.

Purposes of Development Tasks

There are three useful purposes of developmental tasks

- (1) They act as guidelines to help parents and teachers to know what children should learn at a given age. e.g. If the child has to what make good adjustments in school, they should, they should have learnt tasks which make them independent such as putting on and taking off their garments.
- (2) They serve as motivating force the children to learn what the social group expects them to learn at those ages.

Children realize that social acceptance depends on their being able to do what their age mates do. The stronger their desires for social acceptance, greater will be their motivation to learn.

- (3) They tell the parents and teachers what will be expected of children in future, e.g., if parents teach their children how different sports and games are played, then the children will be more popular with them all would like to play with him.

Factors influencing mastery of development Tasks-

Aids to mastery

- (1) Accelerated physical development
- (2) Strength and energy above average for age
- (3) Above average intelligence
- (4) An environment that offers opportunity for learning
- (5) Guidance from parents and teachers in learning
- (6) A strong motivation to learn
- (7) Creativity accompanied by a willingness to be different

Obstacles to mastery

- (1) Retardation in developmental level, whether physical or mental

- (2) Poor health resulting in low energy and strength levels
- (3) A handicapping physical defect
- (4) Lack of opportunity to learn what the social group expects
- (5) Lack of guidance to learning
- (6) Lack of motivation to learn
- (7) Fear of being different

Developmental tasks from birth to 6 years

BABYHOOD AND EARLY CHILDHOOD	EARLY ADULTHOOD
<ul style="list-style-type: none"> ● Learning to take solid food ● Learning to walk ● Learning to talk ● Learning to control the elimination of body wastes ● Learning sex differences and sexual modesty ● Getting ready to read ● Learning to distinguish right and wrong beginning to develop a conscience 	<p>Early Adulthood</p> <ul style="list-style-type: none"> ● Getting started in an occupation ● Selecting a mate ● Learning to live with a marriage partner ● Starting a family ● Rearing Children ● Managing a home ● Taking on civic responsibility ● Finding a congenial social group

LATECHILDHOOD	MIDDLEAGE
<ul style="list-style-type: none">● Learning physical skill necessary for ordinary Games	<ul style="list-style-type: none">● Achieving adult civic and social responsibility

<ul style="list-style-type: none"> ● Building a wholesome attitude toward oneself as a growing organism ● Learning to get along with ages – mates ● Beginning to develop appropriate masculine or feminine social roles ● Developing roles ● Developing fundamental skills in reading, writing, calculating ● Developing concepts, a sense of morality, and a scale of values ● Developing a conscience of sense of morality and a scale of values ● Developing attitudes towards social group and institutions ● Achieving personal independence 	<ul style="list-style-type: none"> ● Assisting oneself and children to become responsible and happy adults ● Developing adult leisure time activities ● Relating oneself to one's spouse as a person ● Reaching and maintaining satisfactory performance in one's occupational career ● Adjusting to aging parents
<p>ADOLESCENCE</p>	<p>OLD AGES</p>

<ul style="list-style-type: none"> ● Achieving new and more mature relations with age-mates of both sexes ● Accepting a masculine or feminine social role ● Accepting one's physique and using one's body effectively ● Achieving emotional independence from parents and other adults ● Preparing for an economic career ● Preparing for marriage and family life ● Acquiring a set of values and a guide to behavior –developing an ideology 	<ul style="list-style-type: none"> ● Adjusting to decreasing physical strength and health ● Adjusting to retirement and reduced income ● Adjusting to death of spouse ● Establishing satisfactory physical living arrangements ● Adapting to social roles in a flexible way
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Physical Development-

Physical development refers to an increase in bodily tissues. Generally, it denotes height and weight changes, changes in body proportions, bone growth, muscular development, and development of the nervous system. The rate of growth of each child in these aspects is different. With physical development comes the sense of bigness or smallness in the individual.

Physical development is an important aspect of development because it influences a child's behaviour both directly and indirectly. Directly, it determines what the child can do and indirectly, it influences his attitude towards himself and others. Abnormal physical development tends to develop a feeling of awkwardness and inferiority.

Directions of Development:

1. Cephalocaudal development

It means that development spreads over the body from head to foot. i.e., individual begins to grow from head region downwards.

The structural & functional developments occur first in the head region, then in trunk & lastly in legs and toes. For example: Infants can control their eye and head movement before they can sit by themselves. They control their back and arms well enough to sit long before they can use their legs for walking.

2. Proximodistal sequence: means that the development proceeds from central part of the body towards peripheries. In this sequence the spinal cord of the individual develops first & then outward development takes place. For example, the baby cuts his front teeth before he cuts his side ones. Functionally, the baby can use his arms before his hands and use his hands before he can control the movement of the fingers.

Physical growth cycle:

The term cycle means that physical growth waves of different velocities, sometimes rapidly and sometimes growth does not occur at a regular pace but rather in periods, phases or waves of different velocities, sometimes rapidly and sometimes slowly.

Motor Development

Motor development is the development of control over bodily movements through coordinated activity of the nerves and the muscles. By motor development is meant the development of strength, speed, and precision in the use of one's arms, legs and other body muscles. This takes place at a rapid rate during childhood. Motor developments refer to the development of control over different muscles of the body. This includes control over gross movements and finer coordination. Gross motor development refers to control over large muscle groups, which help in performing functions such as crawling, standing, walking, climbing, and running. Fine motor development involves the use of small muscles and includes holding things like a cup or a crayon, grasping, turning the pages of a book, buttoning and zipping, drawing and writing and so on as children grow, they refine the motor skills already acquired, as well as develop new ones.

The "crucial time" for motor development in children is from birth to 12 years of age. Children become physically ready for different aspects of motor development at different times. Large motor skills, such as walking, tend to come before the refinement of fine motor skills, such as using a crayon.

The " crucial time " for motor development in children is from birth to 12 years of age. Children become physically ready for different aspects of motor development at different times. Large motor skills, such as walking, tend to come before the refinement of fine motor skills, such as using a crayon. A child needs several years to develop the coordination skills to play catch with a ball easily, and even then, refinement of such skills continues into a child's early adolescence. Parents should monitor a child's motor development but be patient since children vary in their rates of development.

Characteristics of Motor Development

There is generally a consistency in the sequence in which motor skills emerge in different parts of the world. This means that a degust prediction is possible- for example, we may confidently say that a baby whose it's early will walk early.

- (1) Stages of development are observable- in every day language; one cannot run before one can walk.
- (2) Gross motor development follows the Cephalocaudal law that is development goes from the head downwards. Fine motor development follows the Proximodistal law that
- (3.) development goes governing physical growth in which an individual develops from near to far. Proximodistal development is the principle the midline out to the extremities.

Bone Development

(A) Development of Bones during Infancy:

Bone development consists of growth in bone size, change in the number of bones and the change in their composition

. During the first weeks after conception, the parts of the skeleton are formed. By the end of the eighth week after conception, the skeletal pattern is formed in cartilage and connective tissue membranes and ossification begins. It follows the same general trend as growth in size; that is, bone development is most rapid during the first year of life, and then relatively slows up to the time of puberty. However, bone development continues throughout adulthood.

Ossification, or hardening of the bones, is mainly post-natal, beginning in the early part of the first year and ending during puberty. The process begins at the "ossification centre" in the cartilage and gradually spreads throughout the bone. When the process is finished, each bone has its characteristic shape. Ossification proceeds at different rates for different parts of the

body. Ossification is largely dependent upon the secretion of a hormone from the thyroid gland. A deficiency of this hormone will delay ossification. There is also a closer relationship between ossification and nutrition.

because the bones of babies are soft. The shape of the head, for example, can be flattened if babies spend most of their sleep time on their backs, or the chest can be flattened if they sleep too long on their stomachs.

(B.) Development of Bones during Early childhood: The bones ossify at different rates in different parts of the body following the laws of development direction. The muscles become larger, stronger, and heavier with a result that children look thinner as early childhood progresses, even though they weigh more.

*Language Development

Language is a form of communication that uses symbols. Language encompasses every means of communication in which thoughts and feelings are symbolized to convey meaning to others. It includes different forms of communication as writing, speaking, sign language, facial expression, gesture, and art.

Speech is a form of language in which spoken words are used to convey meaning. Speech is a motor - mental skill. It not only involves the coordination of different teams of muscles for vocal expression but also has a mental association of meanings to sounds.

. Because it's the most effective form of communication, it is the most important and most widely used.

Language development refers to acquiring the ability to verbally communicate with others. The chief vocal ability of infants at the time of birth is crying. But by the time they are 1 year old, they are speaking single words, by 2 years they are forming short, simple sentences, and by 6 years of age, they are conversing fluently. The growth of parts of study of vocabulary, grammar and communication skills development of an individual.

Not all sounds made by children, be regarded as speech. Until children learn to associate meanings with these controlled sounds, no matter how correctly they are produced; their speech will be mere "parrot talk" - imitative speech - because it lacks the mental element of meaning.

Emotional Development

Emotion is a state of consciousness or a feeling, felt as an integrated reaction of the total organism, accompanied by physiological arousal, and resulting in a behavioral response. Therefore "An emotion can be referred to as a stirred up state of

an organism. It is a subjective relationship between a person and an event, characterized by a particular feeling state. There are two aspects of emotional development. The first is the emergence of various emotions, such as joy, fear, anger, and sorrow. The second aspect of emotional development (which is closely related to the first) is emotional regulation, the capacity to control and modulate emotion.

Emotional Development is the development of attachment, trust, love, feelings, temperament, concept of self, autonomy, and emotional disturbances. Emotional Development includes the emergence of love, anger, fear, joy, delight and other emotions, as well as learning ways of expressing these emotions in socially acceptable and appropriate ways. For example, a two-year-old may be pardoned for hitting others but an older child has to control expressing physical aggression and has to learn to express anger in ways other than hitting. Emotional development, thus, implies not just experiencing emotions, but even their appropriate expression.

The "prime time" for emotional development in children is birth to 12 years of age. Various aspects of emotional development, which include superior capability, such as awareness of others, empathy and trust, are important at different times. For example, the real "prime time" for emotional attachment and basic trust to be developed is from birth to 18 months, when a young child is forming attachments with the primary caregivers. Such development provides the foundations for other aspects of emotional development that occur as children grow. Emotional intelligence is critical to life success and thus it is crucial to foster its development during the formative years of life. The part of the brain that regulates emotions like empathy experiences. Happiness, hopefulness and resiliency are stimulated through early experiences.

Moral Development

The terms "moral" and "immoral" are so loosely used that their true meaning is often overlooked or ignored. Therefore, before any attempt is made to discuss moral development, it is necessary to understand the meaning of these labels. Moral behavior means behavior in conformity with the moral meaning, manners, customs, and folkways. Moral behavior is controlled by moral concepts—the rules of behavior to which the members of a culture have become used to and which determine the expected behavior patterns of all group members.

Unmoral behavior is behavior that fails to conform to social expectations. Such behavior is not due to ignorance of social expectations but due to disapproval of social standards or lack of feeling of compulsion to conform to social expectations.

Behaviors, which is regarded as "true morality" conforms to social standards and is carried out voluntarily. It comes with the transition from external to internal authority and consists of conduct regulated from within. It is accompanied by a feeling of personal responsibility for one's acts. It involves giving main consideration to the welfare of the group while ignoring their personal desires or gains. True morality is rarely found in children but expected to appear during the adolescent years.

Moral development has both an intellectual and an impulsive side. Then, as soon as they are old enough, they must be given an explanation of why this is right and that is wrong. They must also have opportunities to know what the group expects. Even more important, they must develop a desire to do what is right to act for common good, and to avoid what is wrong. To ensure willingness to act in a socially desirable way, children must receive the approval of the group. Pre-primary children are typically rigid about rules. For a child, things are only right or wrong. There is no in-between, and the child cannot understand that the same person or object can have both good and bad qualities, or, that certain deeds may be right in certain situations, but wrong in others. Just as children differ from adults in cognitive, linguistic, and social functioning, so do they differ in moral reasoning. Now, a few days ago, schools are expected to play a major role in teaching moral values to children. Society cannot function without rules that govern communication, the art of not hurting others, and how to get along in life generally. Therefore, teaching moral behavior is of prime importance. Historically, moral education has been one of the greatest responsibilities of schools.

Social Development

Social Development is the process of learning to interact with of the culture group . It forms the basis of socialization . Social development includes a person's ability to interact with others, to develop and maintain relationships , to share , co - operate and adapt in a group . It includes learning the social norms of the society in which one is growing up and hence maturing to be a productive member of the society. It is a continuous process covering the total life span of an individual . There is no uniform pattern of social expectations for it varies from culture to culture . Social development entails acquiring specific skills , which facilitate the development of effective social relationships . It does not happen automatically or all of a sudden . It is a time-consuming process requiring conscious effort, adequate motivation , and requisite opportunities . A newborn baby has no special relationships with the adults around, although he depends totally on others for the satisfaction of his basic needs . However , very soon he is able to identify the persons who fulfil his basic needs and develops a special relationship with them . The first attachment of a child is to the mother. The sight of her face or the tone of her voice is sufficient to soothe the infant . This special bond strengthens as he grows older and very soon it covers the father and other members of the family . No human being can function in isolation . We depend on others not only for our physical survival, but also for our mental and emotional fulfillment. Every individual needs social acceptance and a measure of recognition . This need is first reflected in the family setting . Gradually it widens to the peer group , playmates at school and the outside world at large . A person who has not developed adequate social skills can be very miserable in his day to day living, feeling lost and unwanted. Therefore, both for the physical

and mental well - being of an individual , it is essentialforhimtolearntogetalongwithothersJustbeinginthecompanyof othersisnotenough.Interactingwithothersandcontributing covering the total life span of an individual . There is no uniformpatternofsocialexpectationsforitvariesfromculturetoculture . Social development entails acquiring specific skills , whichfacilitate the development of effective social relationships . Itdoes not happen automatically or all of a sudden . It is a time-consumingprocessrequiringconsciouseffort,adequatemotivation , and requisite opportunities . A newborn baby has nospecialrelationshipswiththeadultsaround,althoughhedependstotally on othersforthesatisfaction ofhis basicneeds . However , very soon he is able to identify the persons who fulfil his basicneeds and develops a special relationship with them . The firstattachmentofachildistothemother.Thesightofherfaceorthetone of her voice is sufficient to soothe the infant . This specialbond strengthens as he grows older and very soon it covers thefather and other members of the family . No human being canfunction in isolation . We depend on others not only for ourphysicalsurvival,butalsoforourmentalandemotionalfulfillment.Eve ryindividualneedsocialacceptanceandameasure of recognition . This need is first reflected in the familysetting . Gradually it widens to the peer group , playmates atschool and the outside world at large . A person who has notdeveloped adequate social skills can be very miserable in his daytodayliving,feelinglostandunwanted.Therefore,bothforthephysical and mental well - being of an individual , it is essentialforhimtolearntogetalongwithothersJustbeinginthecompanyof othersisnotenough.Interactingwithothersandcontributing covering the total life span of an individual . There is no uniformpatternofsocialexpectationsforitvariesfromculturetoculture . Social development entails acquiring specific skills , whichfacilitate the development of effective social relationships . Itdoes not happen

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PRENATAL DEVELOPMENT

Prenatal development includes the development of the embryo and the foetus during a development starts with fertilization, in the germinal stage of embryonic development, and continues in fetal development until birth. The word prenatal has been around since the 1830s mostly as a medical term to describe the state of a pregnant woman or her fetus. The word is made up of Pre means “before” in modern Latin and natal, which comes from natus, Latin for “to be born”. there are prenatal vitamins exercise classes and prenatal checkups- all for women who are expecting babies interestingly and anagram for prenatal is parental.

Conception occurs from the union of male reproductive sex cell called the sperm with female reproductive sex cell called the ovum. The female ovaries produce ova whereas sperm are produced in testis.

FALLOPIANTUBES that transport the ova from the ovaries to the uterus.

ESTROGEN A group of feminizing hormones produced by the ovaries and to some extent by the adrenal glands in both male and females.

GONADS The sex gland that regulate sex drive and the physiological changes that accompany physical maturity, the ovaries in the female and testis in the male.

Fertilization is Union of sperm and ovum, and it leads to conception life begins at the moment of conception that is the time when a female reproductive cell the ovum is fertilized by a male reproductive cell the spermatozoan. In females egg cells develop in ovaries where as male reproductive cells develop in testis in large number are deposited from the mouth of the uterus and they start travelling towards the fallopian tube they are attracted towards the ovum by strong hormonal force, which draws them into tube the surface of the ovum changes when one sperm cell enters and no other sperm cell can enter afterwards this union of two cells to form one cell is known as "fertilization".

CHROMOSOME: - chromosome are Rod like structure in each form or eggs they occur in pair and carry the hereditary material, dot like structures called genes.

GENES: - are string of microscopically small particles located at specific position in chromosomes. They constitute the physical substance passed on from parents to offspring. They are the carriers of hereditary traits. Genes are made up of numerous molecules called DNA -deoxyribonucleic acid. Genes always work in pair and are located in corresponding positions on the chromosome pair each cell of body has the same DNA code and the same gene directs and individuals growth the particular code that we inherit from our parents directs are growth as human rather than any other creature and is responsible for all the physical characteristics we develop its forms have and each ovum cell contains 23 chromosome 22 of these are called autosome and that are responsible for most aspect of individuals development. 23rd pair is called sex chromosome which determines whether the offspring will be a male or a female when the ovum and sperm cell unite to form a single new cell it is called zygote when one's sperm attaches itself to the surface of ovum there is a biochemical reaction on the sperm surface that prevents any other sperm from attaching slowly the sperm penetrates the ovum and within few hours new zygote is formed. During these process two types of cell divisions take place namely mitosis and meiosis mitosis and meiosis describes the process by which the body prepares cell to participate in either asexual or sexual reproduction to make an entire organism.

MITOSIS: - (for other cells) mitosis is the Reproduction of skin, heart, stomach, cheek hair cells. These cells are called “Autosomal” cells. This is also a form of asexual reproduction, where one organism or Cell reproduces itself. chromosome duplicate themselves and divide two set of chromosomes move to opposite side of the cell a wall is formed and eventually to cells are formed. This process goes on continuously in old tissues from conception till death.

MEIOSIS: - for sex cells meiosis is the production of sperm and access the cell are gamet or sex cells eat cell has to go through the division process twice in order for the cell to end up with half the number of chromosomes the cell pass on genetic information to the offspring this is a form of sexual reproduction where one organism or Cell reproduces by crossing with another organism or cell. Each chromosome duplicates and pair with one another crossing overtakes place between the two inner most pairs the pair of chromosomes separate to form two sell each with 23 duplicate chromosome the duplicate chromosome separate to form gametes each with 23 single chromosomes during conception half of the chromosome are inherited from father and half are inherited from the mother. Therefore, from two parents the child receives a new combination of parental genes due to this new combination a child may have many traits in common with one or both of his parents as well as he may resemble one of the grandparents/great grandparents.

Characteristics:

1.The hereditary endowment with serves as the foundation for letter development is fixed ones and for all, at this time. While favourable or unfavorable condition both before and after birth may and probably will affect to some extent the physical and physiological traits that makes up this hereditary endowment, the changes will be quantitative not qualitative.

2. Favourable conditions in the Mother’s Body Can faster the development of hereditary potentials while and favourable condition can stunt their development even to the point of distorting the pattern of future development at few if any other times in the lifespan are hereditary potential so influence by environmental condition as they are during the prenatal period.

3. The sex of the newly created individual is fixed at the time of conception and condition within a 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 an individual determines at the time of conception will not change. Such operations are there and only partial successfully

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 9 months before birth, the individual grows from a microscopically small cell to an infant who measures approximately 20 inches in length and weight, on the average, 7 Pounds. It has been estimated that during this time increases 11-million-time development is likewise phenomenally rapid from a cell that is a round in shape all the body features both external and internal of human being develops 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 and 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 intensive more hazardous- its 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 and significant people form attitude towards newly created individual. These attitudes will have a marked influence on the way their individual is treated, especially during their early, formative years. If the attitude is heavily emotionally weighted, they can be offered to do they have walk with the mother's homeostasis and by so doing, upset the condition in the mother's body that are essential to the normal development of newly created individual.

Prenatal period conception through birth: The prenatal period includes the development process from conception through birth during which time the human organism grows from a fertilized cell to billions of cells. During the period, the basic body structure and organs are formed. heredity and environment influence development. During the early months, the organism is more vulnerable to negative environmental influence than during any other period of growth.

Infancy the first two years: infancy which extend from childbirth through toddlerhood usually the second year of life is a period of tremendous changes. Infants grow in motor ability and coordination and develop sensory skills and an ability to use language. they form attachments to family members and other caregivers, learn to trust or distrust, and to express or withhold love and affection. They learn to express basic feelings and emotions and developed some

sense of self and independent. Already, the evidence considerable differences in personality and temperament.

Early childhood 3 to 6 years: During the early childhood phase School years from (3 to 5), children continue their Rapid physical, cognitive, and linguistic growth. they are better able to care for themselves, begin to develop a concept of self. gender identities and Roles, and becomes very interested in play with other children. The quality of parent's child relationship is important in the socialization process that is taking place.

Middle childhood 6 to 11 years: During middle childhood, children make significant advances in their ability to read, write and do arithmetic; to understand their world; and to think logically. Achievement becomes vitally important as, does successful adjustment with parents. Both psychosocial and moral development proceeds at Rapid rate and moral development proceeds at a repeater. The quality of family relationship continues to exert a major influence on emotional and social adjustments.

Adolescence 12 to 19 years-Adolescence is the period of transition between childhood and adulthood during which sexual maturation take place, formal operational thinking begins and preparation for entering the adult word occurs the formation of a positive identity is an important psychosocial task. As adolescent seeks greater Independence from parents the also wants increased contact and closure sense of belonging and companionship with their peers.

Early adulthood 20 and 30- Achieving intimacy, making career choices and attaining vocational success are important challenge of early adulthood. Young adults face other decisions such as weather to marry, the selection of made and whether to become parents. Some face the prospect of divorce and remarriage which can result in a constituted family. Many of the decisions made during this period said the stage for later life.

Middle adulthood 40 and 60's: During middle adulthood many people begin to feel a times quiz at their social level.

Old age 60- or 65-years:old age has dual definition. It is the last stage in the life process of an individual, and it is an age group of generation comprising a segment of the oldest member of a population.

PRE-NATAL DEVELOPMENT

relating to the period **immediately before and after birth**. The perinatal period is defined in diverse ways. Depending on the definition, it starts at the **20th to 28th week of gestation** and ends 1 to 4 weeks after birth.

occurring during, or pertaining to, the periods before, during, or after the time of birth; that is, before delivery from the 22nd week of gestation through the first 28 days after delivery. Of, relating to, or being the period around childbirth, especially the five months before and one month after birth: perinatal mortality; perinatal care.

This period constitutes a window of opportunities through which parent infant interaction may be reinforced, offspring the ability of decreasing the risk of family dysfunction. Perinatal is the period of time when you become pregnant and up to a year after giving birth. You might also have heard of the following terms antenatal or prenatal meaning before birth postnatal or Postpartum meaning after 'birth'. During perinatal development, the testis synthesizes and release testosterone in large quantities into the circulatory system, which then influences the development and function of a wide variety of steroid sensitive tissues, including the brain. The perinatal period begins at the 20th 28 week of gestation at the 20th to 28 weeks of gestation and ends 124 weeks after delivery. It is characterized by complex is geological changes that may adversely affect oral health. The word perinatal refers to the time before and after the birth of a child perinatal depression includes depression that begins during pregnancy and depression that begins after baby is born.

Postnatal development

Postnatal (Latin word for after birth; from post meaning after and Natalis meaning of birth) is the period beginning immediately after the birth of a child and extending for about 6 weeks. Postnatal environment factors affecting growth include nutrition, disease, social economic status, urbanization, physical activity, climate and psychosocial deprivation. The five live

stages of postnatal development are neonatal infancy, childhood, adolescence and maturity the neonatal period extends from birth to one month in fancy begins at one month and continuous 1 year and then afterwards toddler hood which starts from one year to 2 years.

Characteristics: -

1. Infancy Duration: -2 years' Time of extreme dependence. Beginning of psychological abilities. (Abilities to speak coordination of sensation and physical action) Physical development is dominant. Weight normal infants initially have a top five and half to 10 pounds. After birth 5 to 7% decreased. Brain development occurs rapidly. At the time of birth babies' brain is 25% of its adult weight. Nutrition most effective diet is milk breastfeeding.

2. childhood: -Duration: - 2 to 11 years

Early childhood(2 to 6 years) Muscle weight reduced Height Body fat declines.

Weight: - 5 to 6 kg Factors: - inheritance. Environment. Nutrition.

Late childhood (6 to 11 years) Strength increase due to deposition of calcium and phosphorus in.

Adolescence Adolescence (13 to 19 years) Physical change Height Weight Breast growth Facial hair Deepening of voice Identity and independence. •hormones •major body changes.

Issues and concept associated with conception: -

Medical and Healthcare: - Ordinarily the foetus is well protected in its uterine environment, but as soon as the women suspect she is pregnant, she needs to receive good prenatal care. Time is of The Reserve because the first three month of fetal development are crucial to the optimum health of the child. Initial prenatal visits include a complete physical examination. Because the prospective for these involved and concerned as well, it is helpful for him to a company his partner on pre-natal visits. Examiner will take a complete medical history of the mother, and the father if necessary, and perform various testis and makes recommendations regarding health care during pregnancy.

Minor side effects: - No pregnancy is without some discounted expectant mother Hai may experience one or several of the following to wearing degrees: nausea (morning sickness) heartburn, flatus(gas) haemorrhoids,constipation, shortness of breath, backache ,leg cramps uterine contractions, insomnia ,Minor vaginal discharge and varicose veins. Major complications of pregnancy: -

Major complications of pregnancy arise infrequently; however, when they do, they more seriously threaten the health and life of the women and the developing embryo or fetus than do the usual minor discomforts of pregnancy.

Pernicious vomiting: - This is prolonged and persistent vomiting which may dehydrate the women and rob her of a liquid nutrient for proper growth. One woman in several hundred suffers from vomiting to the extent that she requires hospitalization.

Toxemia:- This is characterized by high blood pressure; water logging of the tissue (edema) indicated by swollen face and limbs or rapid weight gain; albumin in the urine; headache; blurring of vision and eclampsia (convulsions) if not treated toxemia can be fatal to mother and embryo or fetus. Most commonly it is a disease of neglect because proper prenatal care is lacking and during pregnancy ranks as one of three chief causes of maternal mortality.

Threatened abortion: - The first function system symptoms are usually vaginal bleeding. Studies reveal that about one in six pregnancies is spontaneously aborted before the fetus is of sufficient size to survive. Most spontaneous abortion occurs early in pregnancy 3 out of 4 happens before the 12th week and only one in four occurs between 12 to 28 weeks.

RH incompatibility: - This involves an expected mother with RH negative blood who carries a fetus with RH positive blood. **Pregnancy:** -

Signs and symptoms of pregnancy: - There are numerous signs of pregnancy which appear sooner or later. All pregnant women experience one or more of those before going to the doctor.

Amenorrhea (missing a period):- The first sign of pregnancy is a missing period if the woman has a regular cycle and is overdue 10 days late, it is possible that the conception has occurred. However, it is advisable to consult the doctor as sometimes menstrual period may be missed due to anxiety, emotional upset, or an illness. Pregnancy tests done on urine are the confirmatory tests.

Morning sickness: - It is causing restlessness and vomiting in morning/waking time. It is another sign of pregnancy that affects 50% of women due to the changes in the hormone balance that is an increase in estrogens. It starts 2-3 weeks after the first missed period. It may occur at anytime of the day. It may be mild or severe for some women where it is and some women may never experience it at all. It is normal and should not cause concern, unless it leads to frequent vomiting.

Changes in Breast: - right from the very beginning of pregnancy breast becomes tender and grow larger breast size increases and lady feels heaviness and tightness nipple are fuller and firmer. Areola becomes darker nature prepares for the day the baby will be born and will need feeding nipples grow a little, so that they will be of a size the baby when. Frequent urination: - increase in frequency of passing urine is another common sign. it is due to the irritation of the bladder by the nearby growing uterus during early days of pregnancy. In the latter stage it can be due to pressure on urinary bladder by enlarged heavy womb. be unless passing of urine is not accompanied by a burning sensation, there is no need to worry.

Enlargement of abdomen: - abdomen starts increasing in size and becomes prominent after three months due to growth of the foetus inside the womb of mother. the moments of flutters are not strong enough to be aware of them until 4 or 5 months. Quickening: - movement of the child inside the Mother's Womb is known as quickening. mother Can Feel This Moment at the end of 5th month in first pregnancy and little earlier in subsequent pregnancy. Mucus discharge: - increase in the Normal amount of mucus discharge from vagina is normal provide it is not irritating or foul smelling. •

A change in taste: - most of the women develops strong likes and dislikes of certain food during pregnancy. this is because of increase in secretion of hormones in body during pregnancy.

Discomforts during pregnancy: - Pregnancy is a complicated process & needs very delicate Handling. Many women go through the whole period of pregnancy Very cheerfully. Some may, however, have various discomforts, which Can be lessened by proper care.

1. Nausea and Vomiting: The most common minor discomfort of Pregnancy is morning sickness, which usually occurs immediately After women gets up in the morning but may feel nausea/vomiting At other times of the day also. Nausea is very common during First 3 months mainly because of the hormonal changes in body. If a pregnant lady develops fear & anxiety about the sex of the Child, it becomes an acute problem. Empty stomach is also. Responsible for nausea. It becomes mild by the end of Third month except in some ladies.

2. Prolonged vomiting is a serious condition and help of doctor is Required.

Precautions:

(1) Pregnant lady should take it as a natural process. She should Keep herself occupied and should not keep herself anxious, Worried or fearful.

(ii) She should never remain empty stomach. She will probably feel More comfortable if she eats small meals fairly often, rather than two or three large meals a day. The diet should be nutritious and easily digestible.

(ii) To get rid of morning sickness few biscuits or roasted chanas Etc can be eaten before getting out of bed. A glass of limewater In the morning is also helpful.

(iv) Proper rest & sleep are important.

(v) In case of severe constipation milk of magnesia after meals is Helpful.

(vi) If the problem continues for a long period and the vomiting are Frequent than doctor should be consulted but no drug without Advice should be taken. 3. Miscarriage/threatened Abortion: For some reasons the lining Of the uterus rejects the growing foetus. If the developing cell is Not firmly attached to the lining of the uterus it will be thrown out Together with the rest of the lining with fairly heavy blood loss. The pregnant women should take complete bed rest with foot End raised. If there is a bloodstained discharge or spasms of Pain in lower abdomen, then she should consult the doctor Immediately.

Precautions

(0) Complete rest is important

(1) Avoid lifting heavy weight

(i) If bleeding or pain persists, consult doctor immediately. Heartburns and Indigestion: Heartburn in fact is a form of Indigestion. It is the burning sensation below the breastbone. It May be due to pressure of the uterus on stomach or heart. The Digestive problem is more common during last three months Because of the large quantity of acid retained in stomach. Spicy And fried foods are also responsible for frequent acidity and Indigestion [() Avoid spicy and fried foods.

(i) Drink cold milk at short intervals.

(i) Take dinner 3 to 4 hours before going to ben Occasional use of antacids is recommended. Constipation: In pregnancy high level of progesterone slows Down the passage of food along the bowels. More water & Grain From the stools and the stools become hard at which can Constipation. Other causes may be lack of roughage, fussy & irregular toilet habits and weak intestinal

Precautions:

(1) More intake of water & fluids () Include roughage and lots of green leafy vegetables in diet Get () More salads and raw vegetables should be consumed

(v) Regular toilet habits (V) Long evening & morning walks are helpful (vi) Purgatives should not be used readily without consent of doctor Varicose veins and Piles: Sometimes certain veins in the leg become swollen and painful called varicose veins. They dilate and collect more blood in dilatation that puts an extra strain on them. The second common site is around the anus called piles. Precautions: () Lying down as often as possible during the day may help enlarged veins, (1) Avoid standing for long period () Undertake simple exercises of ankle (v) Put feet high, with pillow underneath (V) Avoid stockings with tight band above (V) Wear long socks throughout day (vi) Try to rest your foot on a footrest (vii) For varicose veins of the anus avoid constipation, take more laxatives, 6. Fainting and Giddiness: Fainting and giddiness in pregnancy. The total volume of blood during pregnancy is increased by 20 percent while the total number of red blood cells remains the same. Since it is the red blood cells that pick up oxygen, blood results in fainting. Sometimes low blood pressure, cannot carry it to the brain, therefore the increased volume causes tiredness; standing for long time, sudden change in position is also responsible for it. Precautions: (1) Get blood pressure checked regularly (ii) Do not stand for too long (iii) Take proper rest (iv) Wear loose and comfortable clothes. (v) Avoid stuffy, crowded and airless rooms. 7. Aches and Pains: This is common, especially in the later months of pregnancy. During pregnancy the ligaments, which hold the joints together, become loose. With advancement of pregnancy abdominal muscles stretch and cause pelvic pains. Pelvic pain lasts for a very short period and is common during the third trimester. It can also be caused because of uncomfortable shoes and clothes.

Precautions:

(i) Avoid high heels (1) Prefer comfortable clothing (i) Take proper rest (iv) Sleep on a firm-based bed (v) Should stand and walk in a correct posture of body 8. Backache: It is a very common problem and is faced by almost 100 per cent pregnant ladies. It is caused by unusual pressure/ strain exerted on the back due to enlarged abdomen. Sometimes it can be there because of general weakness of muscles. Precautions: (1) Regular rest periods are important (i) Correct posture while sitting and standing (ii) Avoid lifting heavy weight (iv) Use hot water bottle (v) Avoid standing for long periods (vi) Consult doctor if pain is unbearable Frequent Urination: It is caused by the pressure of uterus on bladder during the first trimester and by pressure of child's head during the third trimester. Precautions: (1) Avoid fluids at

night. (ii) Keep genitals clean to avoid infection 10. Vaginal Discharge: Mucus discharges from vagina increase During pregnancy because vaginal tissues are changing in the Process of preparing themselves for the birth of the child. Innermost layer of vagina becomes thick and elastic. If the Discharge is thick, profuse and accompanied by itching, consult The doctor.

Precautions: (1) Keep vagina clean by washing it thoroughly with plain water

(iii) If colour of discharge changes to pale yellow or contains blood, Consult doctor.

(iii) Can use cotton or sanitary pad if there is excessive discharge. 11. Muscle Cramps and Shooting Pains: The pregnant women May feel cramps in thighs, leg muscles and toes. This is common During third trimester of pregnancy. It is caused by the contraction Of muscles, due to low circulation of blood. It usually lasts for few Seconds and no treatment is generally required Precautions: (1)Go for light massaging. (ii) Frequently change position and walk without shoes in the room.

(iv) Take rest.

(iv) Bend toes forward for relaxation.

12. Insomnia /Sleeplessness: During first trimester sleeplessness Could be because of the fear of delivery, tension, anxiety & worry About the sex of the unborn child. During last trimester it could Be because of the inconvenience caused by the stretching of the Whole stomach. Backache, pain in pubic region, tiredness and Heavy spicy food at night could be other reasons for insomnia. Precautions: (1) Take dinner 3-4 hours before going to bed (ii) Go for long walk before retiring to bed (iv) Wear loose and comfortable nightwear 13.

Breathlessness: Breathlessness is experienced by many ladies During advanced stage of pregnancy after the slight exertion Because of pressure of enlarged uterus on the diaphragm.

Precautions: Lie down flat with head raised with a pillow. (ii) Take proper rest (iii) If shortness of breath is frequent, see doctor. 14. Oedema /swelling: Quite common during early months of Pregnancy and occurs because of increase in blood volume. Face and toes look puffy causing difficulty in waking. Precautions: Take proper rest () Avoid long standing (i)

Blood Pressure should be kept under control (iv) Raise feet while sitting (v) Regular urinal examines (vi) Light, easily digestible and nutritious diet should be taken Apart from these discomforts some warning signals when doctor Needs to be consulted immediately are as follows 1. Spotting (bleeding from vagina) 2. Severe headache 3.Very high or very low Blood Pressure. 4.Excessive vomiting 5. High fever Prolonged vomiting is a serious

condition and help of doctor is required. Precautions: (1) Pregnant lady should take it as a natural process. She should keep herself occupied and should not keep herself anxious, worried or fearful. (ii) She should never remain empty stomach. She will probably feel more comfortable if she eats small meals fairly often, rather than two or three large meals a day. The diet should be nutritious and easily digestible. (ii) To get rid of morning sickness few biscuits or roasted chanas etc can be eaten before getting out of bed. A glass of limewater in the morning is also helpful. (iv) Proper rest & sleep are important. (v) In case of severe constipation milk of magnesia after meals is helpful. (vi) If the problem continues for a long period and the vomiting are frequent than doctor should be consulted but no drug without advice should be taken. 2. Miscarriage/threatened Abortion: For some reasons the lining of the uterus rejects the growing foetus. If the developing cell is not firmly attached to the lining of the uterus it will be thrown out together with the rest of the lining with fairly heavy blood loss. The pregnant women should take complete bed rest with foot end raised. If there is a bloodstained discharge or spasms of pain in lower abdomen, then she should consult the doctor immediately. Precautions (0) Complete rest is important (1) Avoid lifting heavy weight (i) If bleeding or pain persists, consult doctor immediately. Heartburns and Indigestion: Heartburn in fact is a form of indigestion. It is the burning sensation below the breastbone. It may be due to pressure of the uterus on stomach or heart. The digestive problem is more common during last three months because of the large quantity of acid retained in stomach. Spicy and fried foods are also responsible for frequent acidity and Indigestion Precautions: - Avoid spicy and fried foods. (i) Drink cold milk at short intervals. (i) Take dinner 3 to 4 hours before going to bed Occasional use of antacids is recommended.

Constipation: In pregnancy high level of progesterone down the passage of food .

Other causes-irregular toilet habits and weak intention

Precautions: (1) More intake of water & fluids. Include roughage and lots of green leafy vegetables.

More salads and raw vegetables should be increased (v) Regular toilet habits (V) Long evening & morning walks are helpful 5. (vi) Purgatives should not be used regularly without consent of doctor.

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Apart from these discomforts some warning signals when doctor needs to be consulted immediately are as follows

1. Spotting (bleeding from vagina)
2. Severe headache
3. Very high or very low Blood Pressure.
4. Excessive vomiting
5. High fever
6. Severe constipation
7. Irritation while passing urine
8. Strong pelvic contractions
9. Visual disturbances
10. Rupture of water bag
11. Weak or absence of foetal movements
12. Frequent breathlessness.

All are alarming signs and negligence can prove to be fatal for the expectant mother and foetus.

Do's and Don't for a Healthy Pregnancy

1. DO see a doctor at the first signs of pregnancy.
2. DO have regular checkups
3. DO eat nutritious food
4. DO get plenty of rest
5. DO moderate exercise
6. DO wear comfortable clothes and low-heeled shoes
7. DO take time from a busy schedule to relax
8. DON'T take any drug, medication or supplement without doctor's approval.
9. DON'T smoke or drink
10. DON'T ignore unusual symptoms that should be reported to the doctor

ANTENATAL CARE

The word 'antenatal care' means the care of woman during pregnancy. Such care includes both physical and psychological care. The primary aim of antenatal care is to achieve a healthy mother and a healthy baby at the end of pregnancy. The objectives of antenatal care are: (i) To promote, protect and maintain the health of the mother during pregnancy. (ii) To

foresee complications and prevent them. (iii) To detect "high risk" cases and give them special attention. (iv) To remove anxiety associated with delivery. (v) To reduce maternal and infant mortality and morbidity. (vi) To teach mother the elements of childcare, nutrition, personal hygiene and environmental sanitation. (vii) To sensitize mother to the need of family planning. In older days child was studied as a child and not as an individual. Events prior to birth were regarded unimportant but now research have proved that the environment in which the child grows up has a tremendous influence on the development of child. Only a healthy mother gives birth to a healthy child [22/05, 3:52 pm]:

1. Exercise
 - (i) It improves muscle tone, which helps the body to cope with additional strain during pregnancy.
 - (ii) In case of normal pregnancy routine exercises like cycling, swimming, dancing, driving etc can be continued but no new vigorous exercise should be started.
 - (iii) Sports women should decrease the time spent on active sports.
 - (iv) Best are long brisk walks in fresh air. It purifies blood and gives energy to brain and heart. It also induces good sleep.
 - (v) Normal household work is a good form of exercise.
 - (vi) If the lady has a tendency for threatened abortion she should indulge in very light work.
 - (vii) Exercise and rest are in fact the two most important ingredients in ensuring a beautiful and healthy pregnancy. The fitter you are when the baby is born, the quicker is the recovery of the body after delivery.
2. Rest and sleep Now days a much more sensible attitude towards pregnancy is adopted. No one believes in living an idle existence through out pregnancy. There are no bars on women's work as long as she gets proper rest and sleep and is not exhausted.
 - (1) An 8 to 10 hours sleep during night and 1 ½ to 2 hours sleep during afternoon is recommended.
 - (ii) While resting, lady should avoid sitting with folded knees or crossed legs. During pregnancy it restricts the circulation of blood in the lower portion and can cause varicose veins.
 - (iii) Keep the feet raised to improve circulation.
 - (iv) During last trimester insomnia (lack of sleep) is quite common because of indigestion or due to anxieties and fear of delivery. Thus, the lady should not believe old lady's tale and should have a healthy and a positive attitude.
3. Clothes
 - (0) Clothes worn by pregnant lady should be comfortable and allow freedom of movement.
 - (ii) Up to fifth month most women can alter their clothes to accommodate the bulging abdomen. But during the last trimester of pregnancy loose clothes should be preferred. As the pregnancy progresses, it is better to have a few comfortable dresses.
 - (iii) Any thing, which restricts the abdomen or hinders the development of the foetus, should be avoided.
 - (iv) Clothes with small bodice and lots of gathers at chest are most suitable.
 - (v) During pregnancy breast size increases hence, properly fitting under garments should be chosen and replaced.
 - (vi) Low heeled sandals should be preferred as it is difficult for the lady to balance herself with high heels and can also cause

backache. (vii) Clothes made from natural fibres like cotton, wool or silk should be preferred as they are more comfortable and more absorbent. A pregnant woman tends to feel warmer than non-pregnant.

4. Medical Check up (i) Another very important aspect is the medical check up and the first visit to doctor should be as early as the pregnancy is confirmed. (ii) First visit is longest as the doctor notes down the history. If it is the first pregnancy all the details about pregnant lady is recorded and during the subsequent pregnancies, the complete medical history of the previous deliveries is recorded. The purpose is to ensure health of mother and the child to be born. (iii) Even if pregnant lady does not feel any discomfort, regular checkups are very important because some problems during the pregnancy do not produce symptoms and can be detected by the doctor only through special tests. (iv) The medical checkups are normally scheduled once a month during the first trimester of pregnancy, fortnightly during the second trimester and early third trimester and regular weekly checkups during the last month. Following clinical investigations are must to ensure health of the lady as well as the proper growth of foetus during the routine checkups: (i) Urine Test should be done regular to avoid Urinary Track Infection (UTI), especially where there is history of diabetes in family. B.P. should be kept normal as High or Low B.P. is bad for (ii)mother as well as foetus. 6. Severe constipation 7. Irritation while passing urine 8. Strong pelvic contractions 9. Visual disturbances 10. Rupture of water bag 11. Weak or absence of foetal movements 12. Frequent breathlessness All are alarming signs and negligence can prove to be fatal for the expectant mother and foetus.

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8. DON'T take any drug, medication or supplement without doctor's Approval.
9. DON'T smoke or drink
10. DON'T ignore unusual symptoms that should be reported to the Doctor

3.7 ANTENATAL CARE

3.8 The word 'antenatal care' means the care of woman during Pregnancy. Such care includes both physical and psychological care. The primary aim of antenatal care is to achieve a healthy mother and A healthy baby at the end of pregnancy. The objectives of antenatal care are: (i) To promote, protect and maintain the health of the mother during Pregnancy. (ii) To foresee complications and prevent them. (iii) To detect "high risk" cases and give them special attention. (iv) To remove anxiety associated with delivery. (iv) To reduce maternal and infant mortality and morbidity. (v) To teach mother the elements of childcare, nutrition, personal Hygiene and environmental sanitation. (vi) To sensitize mother to the need of family planning. In older days child was studied as a child and not as an

individual. Events prior to birth were regarded unimportant but now research has proved that the environment in which the child grows up has a tremendous influence on the development of child. Only a healthy (i) Mother gives birth to a healthy child improves muscle tone, which helps the body to cope with additional strain during pregnancy. (ii) In case of normal pregnancy routine exercises like cycling, swimming, dancing, driving etc can be continued but no new vigorous exercise should be started. (iii) Sports women should decrease the time spent on active sports. (iv) Best are long brisk walks in fresh air. It purifies blood and gives energy to brain and heart. It also induces good sleep. (v) Normal household work is a good form of exercise. (vi) If the lady has a tendency for threatened abortion she should indulge in very light work. (vii) Exercise and rest are in fact the two most important ingredients in ensuring a beautiful and healthy pregnancy. The fitter you are when the baby is born, the quicker is the recovery of the body after delivery.

2. Rest and sleep Now days a much more sensible attitude towards pregnancy is adopted. No one believes in living an idle existence through out pregnancy. There are no bars on women's work as long as she gets proper rest and sleep and is not exhausted. (1) An 8 to 10 hours sleep during night and 1 ½ to 2 hours sleep during afternoon is recommended. (ii) While resting, lady should avoid sitting with folded knees or crossed legs. During pregnancy it restricts the circulation of blood in the lower portion and can cause varicose veins. (iii) Keep the feet raised to improve circulation. (iv) During last trimester insomnia (lack of sleep) is quite common because of indigestion or due to anxieties and fear of delivery. Thus, the lady should not believe old lady's tale and should have a healthy and a positive attitude.

3. Clothes Clothes worn by pregnant lady should be comfortable and allow freedom of movement. (ii) Up to fifth month most women can alter their clothes to accommodate the bulging abdomen. But during the last trimester pregnancy loose clothes should be preferred. As the pregnancy progresses, it is better to have a few comfortable dresses. (iii) Any thing, which restricts the abdomen or hinders the development of the foetus, should be avoided. (iv) Clothes with small bodice and lots of gathers at chest are most suitable. (v) During pregnancy breast size increases hence, properly fitting under garments should be chosen and replaced. (vii) Low heeled sandals should be preferred as it is difficult for the lady to balance herself with high heels and can also cause backache. (viii) Clothes made from natural fibres like cotton, wool or silk should be preferred as they are more comfortable and more absorbent. A pregnant woman tends to feel warmer than non-pregnant.

4. Medical Check up (i) Another very important aspect is the medical check up and the first visit to doctor should be as early as the pregnancy is confirmed. (ii) First visit is longest as the doctor notes down the history. If it is the first

pregnancy all the details about pregnant lady is recorded and during the subsequent pregnancies, the complete medical History of the previous deliveries is recorded. The purpose is to Ensure health of mother and the child to be born. (iii) Even if pregnant lady does not feel any discomfort, regular Checkups are very important because some problems during the Pregnancy do not produce symptoms and can be detected by the doctor only through special tests. (iv) The medical checkups are normally scheduled once a month During the first trimester of pregnancy, fortnightly during the Second trimester and early third trimester and regular weekly Checkups during the last month. Following clinical investigations are must to ensure health of The lady as well as the proper growth of foetus during the routine Checkups: (i) Urine Test should be done regular to avoid Urinary Track Infection (UTI), especially where there is history of diabetes in family. B.P. should be kept normal as High or Low B.P. is bad for (ii)Mother as well as foetus.

Prenatal development

1. Germinal period from conception to implantation (attachment period to the uterine wall) about 14 days.

2. Embryonic period from 2 weeks to 8 weeks after conception;

3. The fetal period from 8 weeks through remainder of the pregnancy. shows the early stages of the fetal period. From zygote to implanted blastocyst. From the time of ovulation, it takes about two weeks before the fertilized egg is completely of the implanted in the wall in the uterus. In the meantime, the ovum divides and subdivides, forming the morula and then the Blastocyst.

Ectopic pregnancy; body cavity. Such a condition is called an ectopic pregnancy An embryo that begins forming in this way, of Attachment uterus usually dies or has to be removed surgically.

EMBRYONIC PERIOD

embryo as stated previously, about 14 days after conception, the Location other blastocyst implants itself in the utrine wall. The embryonic than inside period begins the uterus at the

end of the second week. The embryo develops from a round layer of cells across the center of the Blastocyst. At 18 days, the embryo is about 0.0625 (1/16) of an inch long.

During its early weeks, human embryos closely resemble those of other vertebrate animals, as the embryo has a tail and traces of gills, both of which soon disappear. The head develops before the rest of the body. Eyes, nose and ears are not yet visible at one month, but a backbone and vertebral canal have formed. Small buds that will develop into arms and legs are also present. **Embryo_ Growing Baby from the end of the eighth week after conception.**

FETAL PERIOD.

By the end of the embryonic period (2 months), the fetus has developed the first bone structure and distinct limbs and digits that take place on human form, and internal organs continue to develop. By the end of the first trimester (one third the length of pregnancy, or 12.7 weeks), the fetus is about 3 inches long; most major organs are present, a large head and face are well formed, and a heartbeat can be detected with a stethoscope.

Fetus Growing Baby from the beginning of the third month of development to birth
Trimester One third of By the end of the fourth or fifth month, the mother can usually feel fetal movement. The skin of the fetus during gestation is covered with a fine hair, usually shed before birth. At the end of the fifth month, the fetus weighs about 1 pound and is about 12 inches long. It sleeps and wakes, sucks and moves about 12.7 weeks.

INFANCY

Infancy, or the period of the newborn, is according to standard dictionaries, the beginning of 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 lifespan. The word infant suggests extreme helplessness, and it will be limited in this book to the first few weeks of life. During this period, the newborn's complete helplessness gradually gives way to increasing independence.

It is sub-divided into two periods

: (1) Period of Parturition: this period lasts for 15-30 minutes of post-natal life. It begins when the foetal body has emerged from the mother's body and lasts until the umbilical cord has been cut and tied.

(2) Period of Neonate: this period extends from the cutting and tying of the umbilical cord to approximately end of second week. During this period, the infant makes adjustments to the new environment outside the mother's body.

CHARACTERISTICS OF INFANCY

Each period in the lifespan is characterized by certain development 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.

(1) Infancy is the shortest of all development periods. Infancy begins with birth and ends when the infant is approximately two weeks old, by far the shortest of all development periods. It is the time when the foetus 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 behaviour. Although most infants complete this adjustment in two weeks or slightly less, those whose birth has been difficult or premature require more time.

(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".

(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 this adjustment has 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.

(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. As Bell et al. have said (10): Newborn behaviour is more like a preface to a book than like a table of its contents yet to be unfolded. Further, the preface is itself merely a rough draft undergoing rapid revision. There are some clues to the nature of the book in the preface, but these are in code form and taking them as literally prophetic is likely to lead to disappointment.

(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 towards 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

. PHYSICAL DEVELOPMENT

Physical development refers to increase in bodily tissues. Generally, it denotes height and weight changes, changes in body proportions, bone growth, muscular development and development of nervous system. The rate of growth of each child in these aspects is different.

With physical development comes the sense of bigness or smallness in the individual. Physical development is an important aspect of development because it influences child's behaviour both directly and indirectly. Directly, it determines what the child can do and indirectly, it influences his attitudes towards himself and others. Abnormal physical development tends to develop a feeling of awkwardness and inferiority. Physical development during infancy Body size during in fancy is measured in terms of height and weight. While height and weight follow similar patterns of development with slow gains in one paralleled by slow gains in the other, and vice-versa - the total growth in height from birth to maturity is less than the total growth in weight. The total increase in height is approximately 3.5- fold and the total increase in weight is approximately 20 - fold. During infancy, the weight of the Infant almost doubles in the first 5 months and triples by 1 year. Height: children of the same age vary greatly in height, but the pattern of growth is similar for all. A typical child at birth measures between 42.5 to 52.5 cm. At four months, the Infant measures 57.5 to 60 cm. At 8 months, 65 to 70 cm; and at 1 year 70 to 75 cm. At two years, the child is 80 to 85 cm tall. Thus, infants gain about twice as much in height during their first year of life as during the second year of life. By the end of first year child gains in height between 22.5 to 27.5 cm. Weight: An average newborn weighs 2.5 to 3.25 kg; some weigh only 1.25 to 1.5 kg and some nearly 6.5 kg. By the end of the first month, the average baby not only regains the weight or lost after birth but has begun to show a weight increase. At 4 months, the Infant Doubles his birth weight and at the end of the first year, triples it. During the second and third year, the child gains from 1.25 to 2 kg annually.

SOCIAL DEVELOPMENT

Social Development is the process of learning to interact with people in a meaningful manner in accordance with the social norms of the culture group. It forms the basis of specialization. Social development includes a person's ability to interact with others, to develop and maintain relationships, to share, co-operate and adapt in a group. It includes learning the social norms of the society in which one is growing up and hence maturing to be a productive member of the society. It is a continuous covering the total lifespan of an individual. There is no uniform pattern of social expectations for it varies from culture to culture. Social development entails acquiring specific skills, which facilitate the development of the effective social relationships. It does not happen automatically or all of a sudden. It is a time-consuming process requiring conscious effort, adequate motivation, and requisite opportunities. A newborn baby has no special relationships with the adults around, although

he depends totally on others for the satisfaction of his basic needs. However, very soon he is able to identify the persons who fulfil his basic needs and develops a special relationship with them. The first attachment of a child is to the mother. The sight of her face or the tone of her voice is sufficient to soothe the Infant. This special bond strengthens as he grows older and very soon it covers the father and other members of the family. Social development during infancy

1. At birth, babies are non-gregarious. They do not distinguish clearly between people's voices and other noises. However, social behaviour has its beginning in infancy.
2. By the time a baby is two months old, he is able to focus his eyes and responds by smiling, following his mother by moving his eyes and so on. Initial social interaction of a baby is with the adults who look after him. This provides him the feelings of security. Very soon he learns to recognize the voice of his mother, the touch of her hands and responds to her or turns away if someone else catering to his needs.
3. At around the third month, babies can distinguish between people and objects in their environment, and they respond differently to them. By that time, their eye muscles are strong and sufficiently co-ordinated to see clearly, and their hearing is also sufficiently developed to distinguish sounds. As a result of this development, they are maturationally ready to learn to be social.
4. By the time babies are four months old, they turn their heads when they hear human voices and smile in response to a smile. They Express pleasure in the presence of others by smiling, kicking and waving their arms. During the third month, babies cry when left alone but they stop crying when they are talked or diverted by rattle or some other mechanical device.
5. From the fifth to the sixth months, babies react differently to smiling and scolding, and they can distinguish between friendly and angry voices. They recognize familiar people with smiles and show definite expressions of fear in the presence of strangers.
6. During the sixth month, social advances become more aggressive. Babies, for example, pull the hair of the person who is holding them, they grab the person's nose or eyeglasses, and they explore the person's facial features.
7. By 7 or 9 months of age, babies attempt imitate speech sounds as well as simple acts and gestures. Babies prefer parents to other family members or strangers. By eight months, they start creeping and prefer to be in company of others.
8. Around the age of 8 or 9 months, the baby is in a position to imitate simple adult sounds, acts and gestures. He responds when he is restrained from handling objects and communicates his fear and dislike of the unfamiliar.
9. At nine and ten months, babies are quite socially advanced. They creep after their parents and are often underfoot. They love attention. They love being chased and like to throw toys and have them picked up so they can throw them again. They show their fear and dislike of strangers by drawing away and crying when a stranger approaches them.
10. At 12 months,

babies are most often friendly and happy. They are also sensitive to emotions of others. At this age, they like to be centre of attention. They like to play games with the family and can refrain from doing things in response to “no-no”. They are usually tolerant to strangers.

MOTOR DEVELOPMENT

Motor development is the development of control over bodily movements through coordinated activity of the nerve centres, the nerves and the muscles. By motor development is meant the development of the strength, speed and precision in the use of One's arms, legs and other body muscles. This takes place at a rapid rate during childhood. Motor developments refer to the development of control over different muscles of the body. This includes control over gross movements and finer coordination. Gross motor development refers to control over large muscle groups, which help in performing function such as crawling, walking, climbing and running. Fine motor development involves the use of small muscles and include holding things like a cup or a crayon turning the pages of a book, buttoning and zipping, drawing and writing and so on. As children grow, they refine the motor skills already acquired, as well as a developed new one. A child needs several years to develop the coordination skills to play Catch with a ball easily, and even then, refinement of such skills continues into a child's early adolescence. Parents should monitor child's motor development but be patient since children vary in their rates of development. Motor development during infancy the most obvious change during the course of infancy is the acquiring of new motor skills. The word motor refers to muscular movements. The neonate's general mass activity and reflex actions gradually changed to specific muscle control such as voluntary, coordinated motor responses. Changes in motor skills occur at a fairly consistent rate, indicating that maturation is a primary factor in their development. Every child goes through each stage, but there are minor differences in the sequence of stages from one child to another environmental factors, such as the lack of opportunities to practice the motor skills, the attitude of the child toward learning the skills, and the child's physiological and psychological inhibitions to learning, can influence the development of motor skills. Therefore, the process of development is sequential unless there is interference from unusual condition.

Types of motor skills emerging during infancy

Skill is the purposive behaviour requiring the coordination of sensory information and muscular responses to attain some specific goal. The two basic type of motor skill that emerge during infancy are gross and fine.

1. Development of gross motor skills: Gross motor skills refer to the large-muscle skills that include upright postural body control and locomotion. Gross motor behaviour involves the large areas of the body such as, in walking or swimming. In developing the gross motor skills, there is a basic sequence that leads to walking. The neonate normally is unable to hold his or her head erect when lying prone or when being held in a sitting position.

- At one month, the Infant can hold his or her head straight out in a horizontal plane when lying on his or her stomach.
- By two months, as the neck muscles develop the Infant can hold his or her head face up.
- By four months of age, most infants can lift their head and upper trunk when placed prone on a table. They no longer are content to lie on their back.
- Between four and seven months occurs rolling over as an infant gains control and coordination of voluntary muscles.
- At about seven months the child acquires the skill of sitting up. Around this time the spine becomes more rigid, and the back muscles strengthen, making it possible for the Infant to set up unsupported. Pre-walking motions appear around the seventh month.
- By the eight months, the Infant may be able to pull himself up with support. This ability usually occurs just before creeping begins.
- Around ten months, crawling and creeping appear. Crawling refers to the progression made by an infant in which he does not lift the abdomen from the floor while moving all four Limbs i.e., using both the arms and feet. Hitching, or scooting, is a situation in which the Infant may move about in a sitting position, using one leg to push the body along. He or she may go backwards, sideways, or in circles. Finally, the infants set out on his or her own. With arms held out and feet wide apart for balance, he or she takes the first jerky steps.
- By eleven to twelve months of age, the child can stand-alone. He or she may show preference for one hand to the other. Child is able to drink from a cup.

2. Development of fine motor skills: As an infant matures, simple strategies such as mouthing every object are replaced by more Complex strategies such as fingering objects, transferring objects from one hand to the other, and rotating object with both hands. Pre-term or at-risk infants are delayed in acquiring these skills when compared with full-term infants. Fine Motor skills refer to the small-muscle skills that include the ability to reach with the hand, to grasp, and to manipulate objects. Fine motor behaviour involves smaller muscles and includes such skills as grasping, catching and writing.

- The reflex grasp, present at birth, is different from the voluntary grasp developed later. The reflex grasp is a palm grasp and not a thumb - and - finger grasp. About the second month, the reflex grasp begins to decline, and the voluntary grasp begins to develop.

Between one and four months, with their hands usually open, infants spend a great deal of time looking at their hands and swiping at object within reach. Late in this stage they can rise their hands close to an object. • By about five months of age, infants can successfully reach out and grasp an object. This grass is crude, using both hands. If an infant uses one hand, he or she will often hold the object without using the thumb and will fumble it. • Between four to eight months, the Infant reaches more often with one hand than with both hands. Between six to ten months, the infants gain the ability to transfer objects from one hand to the other. Milestones in motor development during infancy: When the babies' central nervous systems, muscles, and bones have matured enough and they are in an appropriate position with freedom to move, they will lift their heads. They are not to be taught to do this, and the more they practice it, the better day become at it. Each newly mastered activity prepares a baby to tackle the next motor skills. • Head control: At birth most babies can turn their heads from side to side while supine and can lift their heads enough to turn them while prone. First, they master lifting the head while prone, then holding it erect while sitting, and then lifting it while supine. • Sitting: Babies learn to sit either by getting up from a lying position or by getting down from a standing one. The average baby Sits with support at 4 months, in a highchair at 6 months, and alone at 7 months. • Rolling over: At 5 to 7 months the average baby rolls from stomach to back, and later from back to stomach. • Pre-walking locomotion: Before they walk, babies get around in a variety of ways. They crawl on their bellies pull their bodies along with their arms, dragging their feet behind. They hitch or scoot, moving along in a sitting position, pushing forward with arms and legs. They bear-walk, with hands and feet touching the ground. And they creep, crawling on hands and knees with trunk above the floor. Most babies creep and crawl at about 9 to 10 months. • Standing: with a helping hand, the average baby can stand at 8 months, pull to a standing position at about a year, and stand-alone at 13 to 14 months.

EMOTIONAL DEVELOPMENT

Emotion is a state of consciousness or a feeling, felt as an integrated reaction of the total organism, accompanied by physiological arousal, and resulting in a behavioural response. Therefore "An Emotion can be referred to as a stirred-up state of an organism." It is a subjective relationship between a person and an event, characterized by a particular feeling

state. There are two aspects of emotional development. The first is the emergence of various emotions, such as joy, fear, anger, and sorrow. The second aspect of emotional development (which is closely related to the first) is emotional regulation, the capacity to control and modulate emotion. Emotional Development is the development of attachment, trust, love, feelings, temperament, concept of self, autonomy and emotional disturbances. Emotional Development includes emergence of love, anger, fear, joy, delight and other emotions, as well as learning ways of expressing these emotions in a socially acceptable and appropriate ways. For example, a two year old may be pardoned for hitting others, but an older child has to control expressing physical aggression and has to learn to express anger in ways other than hitting. Emotional development, thus, implies not just experiencing emotions, but even their appropriate expression. The "prime time" for emotional development in children is birth to 12 years of age. Various aspects of emotional development, which include superior capability, such as awareness of others, empathy and trust, are important at different times. For example, the real "prime time", for emotional attachment and basic trust to be developed is from birth to 18 months, when a young child is forming attachments with the primary caregivers. Such development provides the foundations for other aspects of emotional development that occur as children grow. Emotional intelligence is critical to life success and thus it is crucial to foster its development during the formative years of life. The part of brain that regulates emotions like empathy, happiness, hopefulness and resiliency is stimulated through early experiences. Patterns of emotional development during infancy Several opinions are expressed on the manifestations of emotions. Some researchers are of the view that emotion is the result of learning and maturation, while others think that the infant is capable of emotional experiences even at the time of birth, if not earlier. Though, the infant lacks the knowledge & understanding, it exhibits wants, fear, anger, love, and hate from the very beginning of life. John B. Watson (1920), led the way in experimentally studying the emotional responses of children, presented various kinds of stimuli to newborn babies and recorded their reactions. His showed that newborn infants exhibited three kinds of unlearned emotional responses, namely, fear, rage and love. He postulated that all emotional reactions experienced by the older children and adults are the outgrowth of these three primary emotions. Bridge's (1988) work is considered to be a masterpiece in the study of emotions. She has made comprehensive studies of babies ranging in age from birth to two years. She observed that the newborn responds with an undifferentiated excitement to any kind of emotional situation. As a result of maturation and learning, differentiation from the state of general excitement takes place by about 3 months of age. Distress and Delight are the first

emotions to emerge. Distress is characterized by crying and gasping (short quick breath from mouth). Smiling indicates delight. But the muscular tensions are common to both. Distress accompanies an unpleasant situation and becomes differentiated into anger, disgust and fear by the time infant reaches six months of age. Delight follows a pleasant situation and is found to branch into elation and affection. Studies have shown that as one advances in age, maturation and experience increases the variety of the emotional responses in one's life. Hence, even before the baby is a year old, many emotions like anger, fear, disgust, and affection can be differentiated from each other. A wide range of stimuli including people, objects and situations, which in the younger infant were ineffective, can arouse these responses.

Growth of Emotions The ability to respond emotionally is present in the newborn infant. The first sign of emotional behaviour is general excitement due to strong stimulation. At birth, however, the infant shows no clear-cut responses that can be identified as specific emotional states. Usually, before the period of the neonate is over, the general excitement of the newborn becomes differentiated into simple reactions that suggest pleasure and displeasure. Unpleasant responses cause crying and mass activity whereas pleasant responses are apparent when the baby sucks. The baby shows pleasure by a general relaxation of the entire body, and by pleasant sounds in the form of coos and gurgles. Even before babies are one year old, emotional expressions are similar to those of adults. As children grow older, their emotional responses become less diffused, random, and undifferentiated. Young babies, for example, show displeasure merely by screaming and crying. Later, their reactions include resisting, throwing things, stiffening the body, running away, hiding, and verbalizing. With increasing age, linguistic responses (use of language) increase, and motor responses decrease. The patterns of response are similar in all newborns but as the influence of learning and environment are felt; the behaviour accompanying the different emotions gets individualized. All children show different emotional expressions to any situation. For example, one child may run out of the room when he is frightened, another may hide behind his mother while another may stay on where he is and cry.

Influences of Maturation and learning The gradual influence of maturation and learning results in the transition from general gross learning to more definite and individual emotional expression, from childish emotional expression to more subdued and adult like forms, especially those who are likely to receive greater social approval. Role of imitation is also significant in emotional development because emotional expressions are also learnt from parents, siblings, friends and teachers with whom child interacts in day-to-day life and considers as his role model.

Common Emotions of infancy Unpleasant Emotions

1. **Fear:** Certain fears are characteristically found at certain ages and may, therefore, be called the "typical fears" for those age levels. The most common fear-provoking stimuli in babyhood are loud noises, animals, dark rooms, high places, sudden displacement, being alone, pain, and strange persons, places, and objects. Fear of strangers emerges around seven months of age and then rapidly develops during the latter part of infancy. Young children are afraid of more things than either babies or older children. Most common fear-provoking stimuli in this age is being left alone. Loud noises, a sudden fall from a height, animals, dark rooms, pins and encounter with strange persons are a few other experiences inducing fear (lack of experience makes child incapable of reasoning out that feared object may not cause him any personal harm).
 2. **Anger:** It is more frequently expressed emotion than fear. The baby responds with anger outbursts to minor physical discomforts and interference with physical activities. In an anger outburst the energy is not directed towards any serviceable end. It is displayed by screaming, kicking of legs, throwing objects etc. Anger is a more frequently expressed emotion in childhood than fear in its different forms. The reason for this is that anger-provoking stimuli are numerous, and children discover at an early age that anger is an effective way of getting attention or what they want. Each year, the number of anger-arousing situations increases, and children tend to display more anger. The frequency and intensity with which children experience anger varies from child to child. Some children can withstand anger-provoking stimuli better than others.
 3. **Stimuli to Anger:** It also varies with age. Babies respond with angry outbursts to minor physical discomforts and interference with physical activities. Their inability to make them understood through babbling or through their early attempts to speak likewise irritates them. Then, too, they get angry if people do not give them as much attention as they crave for or if their possessions are taken away from them.
- Pleasant Emotions**
1. **Joy, Pleasure and Delight:** Joy is a pleasant emotion. In its milder forms, it is known as pleasure, delight, or happiness. Among babies, the pleasant emotions of joy, happiness, and delight come from physical well-being. These are also associated with baby's activities such as cooing, babbling, creeping, standing up, walking, and running. Laughter begins to appear around the fourth month of life and becomes increasingly frequent and intense with age. Some conditions that give rise to laughter in saying the first year of life are auditory stimuli (lip popping or "boom, boom"), tactile stimuli (blowing in the baby's hair), social stimuli (playing games such as peek-a-boo),

and visual stimuli (pretending to suck the baby's bottle or crawling on the floor). It is a feeling of great happiness. When the child is one year old, it is differentiated into elation and affection. Among babies' pleasant emotions come from physical well-being. An infant seems to have a pleasant time through activities, such as (speaking in quite soft voice) cooing, babbling, kicking, manipulating objects, crawling, standing up, walking and running. Emotional problems show up if a child is deprived of opportunities to experience affection. His personality is seriously damaged. The critical period for 'deprivation of affection' varies from 6 months to 5 years of age. After the age of 5 years, deprivation may not have all that damaging effect on the child as substitute satisfactions are available to him. 2. Curiosity: A curious child is one who reacts positively to new, strange or mysterious elements in his environment by moving towards them, exploring them manipulating them; exhibits a need or a desire to know more about himself and/or his environment; scans his surroundings seeking new experiences persists in examining and/or exploring new stimuli in order to know more about them. Babies express their curiosity by tensing the facial muscles, opening the mouth, stretching out the tongue, and wrinkling the forehead. When babies realize that apparently there is nothing to fear, they try to examine by looking at, grabbing, and exploring by handling and shaking everything that is within their reach. 3. Laughter is contagious: When with others, children laugh more than when alone. This is true of babies and becomes increasingly truer when children are older and want to do whatever their peers are doing. Smiling or laughing and a general relaxation of the entire body always accompany the joyful emotions.

COGNITIVE DEVELOPMENT

Cognition is the act or process of knowing. Cognitive development includes development of reasoning, memory, problem solving, understanding, recall, perception and other mental processes. The focus is to study the way thinking and reasoning patterns emerge and change during different stages. The capacity to learn, remember, and symbolize information, and to solve problems, exists at a simple level in young infants, who can perform cognitive tasks such as discriminating animate and inanimate beings or recognizing small numbers of objects. During childhood, learning and information-processing increase in speed, memory

becomes increasingly longer, and symbol use and the capacity for abstraction develop until a near-adult level is reached by adolescence. Piaget's Stages of Cognitive Development the Piagetian approach to cognitive development emphasizes the qualitative changes in the way people think as they develop. Jean Piaget was a zoologist and was interested in nature. His interest was mainly towards biological sciences. The term cognition refers to internal mental processes, in other words, anything that is going on inside one's "mind". Piaget argued that at the beginning during the sensori-motor period, and infants "thoughts are based on her physical actions". When an infant recognizes her rattle and reaches for it, she is showing a sensori-motor understanding of his environment because he is able to sense the rattle and reach for it. Piaget used the term Scheme to describe this basic unit of cognition. A scheme is the action equivalent of a concept. With it, the infant can organize his world into categories, such as things I can touch or things it can eat. An infant relying on sensori-motor schemes, Piaget argued, is qualitatively different in his cognitive ability from children or adults. Concepts related to Piaget's theory: 1. Knowledge: Piaget, equated knowledge with action. A pre- primary child's knowledge of a ball is based upon the interaction between the child and the ball. Piaget was interested in discovering the different interactions of children with their world to create knowledge. Piaget believed that there are three types of knowledge: 2. Physical Knowledge: This results from the direct action of the child on the object. It is obtained through the process of discovery. 3. Logico-Mathematical Knowledge: This results when the child classifies objects, compares them, and evaluates different points of view. It is obtained through the process of invention. To invention relationships, the child requires experience. Others cannot teach this. 4. Socio-Arbitrary Knowledge: This results from the child's active interaction with other people. It is obtained through active interaction with a teacher. This, therefore, corresponds to the more traditional framework of education. If knowledge is based on the ever-changing interactions of the child with the world, then these interactions will change as the child develops. 1. Schemes- These are the patterns of behaviour that children use to understand and deal with the object. They form basis for later thought. E.g., a young infant learns about a rattle by grasping it, sucking it, and shaking and banging it. Schemes change as development proceeds. Younger children have qualitatively different schemes from those of older children. 2. Assimilation - This is the process of modifying a new object or child uses existing scheme on the new unknown object. If you event to fit into an already existing scheme. It occurs when a give a block to the young infant, in the example above, the baby will grasp it and shake and bang it as it had done with the rattle. 3. Accommodation - This is the process of changing an existing scheme to meet

the requirements of a new experience. If you now give an egg to the baby who has a shaking and banging scheme for small objects, it is obvious what will happen to the egg. Less obvious is what will happen to the baby's banging scheme when the egg breaks. 4. Equilibration - The unexpected consequence of banging the egg creates an imbalance between what is known and what is experienced. This imbalance causes distress to the child. The child then tries to reduce the imbalance, by accommodation. Focusing on the stimuli that caused the disequilibrium does this. In future the child will be more careful before banging small round, white objects. The process of restoring balance is called equilibration. Banging is a favourite Scheme used by babies to explore their world.

Piaget's Stages of Cognitive Development

People progress through four stages of cognitive development between birth and adulthood, according to Jean Piaget. Each stage is marked by the emergence of new intellectual abilities. Piaget divided the cognitive development of children into four stages:

(i) Sensorimotor stage (birth to two years).

(ii) Preoperational stage (two to seven years).

(iii) Stage of concrete operations (seven to eleven years).

(iv) Stage of formal operations (eleven years to adulthood). Piaget believed that all children pass through these stages in that order, and no child can skip a stage. However, different children can pass through the stages at somewhat different rates. Individuals may also perform at more than one stage at the same time with respect to different concepts, particularly at points of transition into a new stage.

LANGUAGE DEVELOPMENT

Language is a form of communication that uses symbols. Language encompasses every means of communication in which thoughts and feelings are symbolized so as to convey meaning to others. It includes different forms of communication as writing, speaking, sign language, facial expression, gesture, and art. Speech is a form of language in which spoken

words are used to convey meaning. Speech is a motor-mental skill, It not only involves the coordination of different teams of muscles for vocal expression but it also has a mental association of meanings to sounds. Because it is the most effective form of communication, it is the most important and most widely used. Language development refers to acquiring the ability to verbally communicate with others. The chief vocal ability of infants at the time of birth is crying. But by the time they are 1 year old, they are speaking single words, by 2 years they are forming short, simple sentences, and by 6 years of age, they are conversing fluently the growth of vocabulary, grammar and communication skills is part of study of language development of an individual. Not all sounds made by children, be regarded as speech. Until children learn to associate meanings with these controlled sounds, no matter how correctly they are produced; their speech will be mere "parrot talk"-imitative speech-because it lacks the mental element of meaning. Language development during infancy Language development is perceived as being influenced by environmental and biological factors. Each human being programmed to learn language, but his or her experience with language is necessary in order to develop language. Language develop begins in infancy. Although the infant cannot understand what is be spoken, it responds to the mother's language. When a parent speaks the baby responds by smiling, cooing (the production of vowel sound or gurgling. The parent is then stimulated to say something else, again the baby responds. This is the beginning of the conversa mode and forms the basis for later communication. The next step language development is Babbling. This involves the production both vowel and consonant sounds, repeated together and often bub. bub. bub. Babbling begins around the third month and increase until nine to twelve months of age.

A Physical Development

during Infancy Body size during infancy is measured in terms of height and weight. While height and weight follow similar patterns of development with slow gains in one paralleled by slow gains in the other, and vice-versa the total growth in height from birth to maturity is less than the total growth in weight. The total increase in height is approximately 3.5-fold and the total increase in weight is approximately. 20-fold. During infancy, the weight of the infant almost doubles in the first 5 months and triples by 1 year. Height: Children of the same age vary greatly in height, but the pattern of growth is similar for all. A typical child at birth

measures between 42.5 to 52.5 cm. At four months, the infant measures 57.5 to 60 cm. At 8 months, 65 to 70 cm; and at one year 70 to 75 cm. At two years, the child is 80 to 85 cm tall. Thus, infants gain about twice as much in height during their first year of life as during the second year of life. By the end of first year, the child gains in height between 22.5 to 27.5 cm. Weight: An average newborn weighs 2.5 to 3.25 kg; some weigh only 1.25 to 1.5 kg, and some nearly 6.5 kg. By the end of the first month, the average baby not only regains the weight lost after birth but has begun to show a weight increase. At 4 months, the infant doubles his birth weight and at the end of the first year, triples it. During the second and third year, the child gains from 1.25 to 2 kg annually. •

MOTOR DEVELOPMENT

Motor development is the development of control over bodily movements through coordinated activity of the nerve centres, the nerves and the muscles. By motor development is meant the development of strength, speed and precision in the use of one's arms, legs and other body muscles. This takes place at a rapid rate during childhood. Motor developments refer to the development of control over different muscles of the body. This includes control over gross movements and finer coordination. Gross motor development refers to control over large muscle groups, which help in performing functions such as crawling, standing, walking, climbing and running. Fine motor development involves the use of small muscles and includes holding things like a cup or a crayon, grasping, turning the pages of a book, buttoning and zipping, drawing and writing and so on As children grow, they refine the motor skills already acquired, as well as develop new ones. The “crucial time for motor development in children is from birth to 12 years of age Children become physically ready for different aspects of motor development at different times large motor skills, such as walking, tend to come before the refinement of fine motor skills, such as using a crayon. A child needs several years to develop the coordination skills to Play catch with a ball easily, and even then refinement of such skills Continues into a child’s early adolescence. Parents should monitor a Child’s motor development but be patient since children vary in their Rates of development.

Characteristics of Motor Development

1. There is generally a consistency in the sequence in which motor skills emerge in different parts of the world. This means that a degree of prediction is possible-for example, we may confidently say that a baby who sits early will walk early.
2. 2 Stages of development are observable- in everyday language; one cannot run before one can walk Gross motor development follows the Cephalocaudal law that is development goes from the head downwards. Fine motor development follows the Proximodistal law that development goes from near to far.

Proximodistal development is the principle governing physical growth in which an individual develops from the midline out to the extremities. A Motor Development during Infancy The most obvious change during the course of infancy is the acquiring of new motor skills. The word motor refers to muscular movements. The neonate's general mass activity and reflex actions gradually change to specific muscle control such as voluntary.

Coordinated motor responses.

Changes in motor skills occur at a fairly consistent rate, indicating that maturation is a primary factor in their development. Every child goes through each stage, but there are minor differences in the sequence of stages from one child to another. Environmental factors, such as the lack of opportunity to practice the motor skills, the attitude of the child toward learning the skills, and the child's physiological and psychological inhibitions to learning, can influence the development of motor skills. Therefore, the process of development is sequential unless there is interference from unusual conditions.

Types of motor skills emerging during Infancy

Skill is the purposive behaviour requiring the coordination of sensory information and muscular responses to attain some specific goal. The two basic types of motor skills that emerge during infancy are gross and fine. 1. Development of Gross Motor Skills: Gross motor skills refer to the large-muscle skills that include upright postural body control and locomotion. Gross Motor Behaviour involves the large areas of the body such as, in walking or swimming. In developing the gross Motor skills, there is a basic sequence that leads to walking. The Neonate normally is unable to hold his or her head erect when lying Prone or when being held in a sitting position. (1) At One Month, the infant can hold his or her head straight out in a horizontal plane when lying on his or her stomach. (ii) By Two Months, as

the neck muscles develop the infant can Hold his or her head face up. (iii) By Four Months of age, most infants can lift their head and upper trunk when placed prone on a table. They no longer are content to lie on their back. (iv) Between four and seven months occurs Rolling Over as an infant gains control and coordination of voluntary muscles. (v) At about seven months the child acquires the skill of Sitting Up. Around this time the spine becomes more rigid, and the back muscles strengthen, making it possible for the infant to sit up unsupported. Pre-walking motions appear around the seventh month. (vi) By the eighth month, the infant may be able to pull himself up four to eight months, the infant reaches more often with one hand than with both hands. (vii) Between six and ten months, the infants gain the ability to transfer objects from one hand to the other. Finally with support. This ability usually occurs just before creeping begins. (viii) Around ten months, Crawling and Creeping appear. Crawling refers to the progression made by an infant in which he does not lift the abdomen from the floor while moving all four limbs i.e., using both the arms and feet. Hitching, or scooting, is a situation in which the infant may move about in a sitting position, using one leg to push the body along. He or she may go backwards. Sideways, or in circles. Finally, the infant sets out on his or her own. With arms held out and feet wide apart for balance, he or she takes the first jerky steps. (viii) By eleven to twelve months of age, the child can stand-alone He/she may show preference for one hand to the other Child is Able to drink from a cup. (ix) By fourteen months of age, two-third babies can walk without support, and by the age of eighteen months, the toddler walks more like an adult. Once the walking ability is refined, he or she begins to run. (x) Around the twenty-first and twenty-second months, a child can walk upstairs while holding the railing, and kick a large ball There is the urge to carry objects, as well as push, pull or drag all sorts of things. (xi) By twenty-five months the toddler can run without falling and can walk up and down the steps alone, putting both feet on each step. Between twenty-four and thirty months, children can jump with both feet and stand on one leg.

3. Development of Fine Motor Skills:

As an infant matures, simple strategies such as mouthing every object are replaced by more complex strategies such as fingering objects, transferring objects from one hand to the other, and rotating objects with both hands. Pre-term or at-risk infants are delayed in acquiring these skills when compared with full-term infants. Fine motor skills refer to the small-muscle skills that include the ability to reach with the hand, to grasp, and to manipulate objects. Fine motor behaviour involves smaller muscles and includes such skills as grasping, catching and writing. (i) The reflex grasp, present at birth, is different from the voluntary grasp developed later. The reflex grasp is a palm grasp and not a thumb-and-finger grasp. About the second month, the reflex

grasp begins to decline, and the voluntary grasp begins to develop (ii) Between one and four months, with their hands usually open, infants spend a great deal of time looking at their hands and swiping at objects within reach. Late in this stage they can raise their hands close to an object. (iii) By about five months of age, infants can successfully reach out and grasp an object (prehensile reaching). This grasp is crude, using both hands. If an infant uses one hand, he or she will often hold the object without using the thumb and will fumble it. (iv) Between, between nine and fourteen months, the thumb and Forefinger are used together in the form of a pincer grasp. Once the infant can reach and grasp, everything goes into the mouth. This type of exploration also exercises the tongue and mouth muscles, which are important for future speech development. (vii) Between ten and twelve months, infants can take things apart but cannot put them back together. (vi) Fine motor control continues to increase between twelve and eighteen months. Infants at this stage can hold a cup and begin to hold a spoon but cannot use it properly. The infant enjoys practicing this new ability by continuously dropping things. (ix) By twenty-four to thirty months, skills become more and more refined. For instance, the child can hold a cup with one hand and no longer overturns the spoon. He or she can build a tall tower with blocks and put things together. Milestones in Motor Development during Infancy: When the babies' central nervous systems, muscles, and bones. Have matured enough and they are in an appropriate position with freedom to move, they will lift their heads. They are not to be taught to do this, and the more they practice it, the better they become at it. Each newly mastered activity prepares a baby to tackle the next motor skills.

1. Head Control: At birth most babies can turn their heads from side to side while supine (lying on their backs) and can lift their heads enough to turn them while prone (on their stomachs). First, they master lifting the head while prone, then holding it erect while sitting, and then lifting it while supine.
- 2 Sitting: Babies learn to sit either by getting up from a lying Position or by getting down from a standing one. The average Baby sits with support at 4 months, in a highchair at 6 months, And alone at 7 months.
- 3.olling Over: At 5 to 7 months the average baby rolls from stomach to back, and later from back to stomach.
- 4.Pre-walking Locomotion: Before they walk, babies get around in a variety of ways. They crawl on their bellies and pull their bodies along with their arms, dragging their feet behind. They hitch or scoot, moving along in a sitting position, pushing forward with arms and legs. They bear-walk, with hands and feet touching the ground. And they creep, crawling on hands and knees with trunk above the floor. Most babies creep and crawl at about 9 to 10 months.
5. Standing: With a helping hand, the average baby can stand at 8 months, pull to a standing position at about a year, and stand alone at 13 to 14 months.
6. Walking: Less than a month

after first standing alone, babies take their first step, tumble to the floor, go back to creeping, and then try another step. Within a few days, they are walking regularly. The average baby can walk with help at 9 to 11 months; walk alone at 15 months, run swiftly at 18 months, climb stairs with one hand held at 18 months, and jump at 20 months. • 7. Manipulation: Neonates show the grasping reflex. When the palm is 'stimulated, they grasp a cube. The 5-month-old babies don't grasp firmly, but they do touch objects. At 7 months, grasping doesn't include the thumb; at 9 months it does. Early grasping

SOCIAL DEVELOPMENT

Social Development is the process of learning to interact with people in a meaningful manner in accordance with the social norms of the culture group. It forms the basis of socialization, social development includes a person's ability to interact with others, to develop and maintain relationships, to share, co-operate and adapt in a group. It includes learning the social norms of the society in which one is growing up and hence maturing to be a productive member of the society. It is a continuous process covering the total life span of an individual. There is no uniform pattern of social expectations for it varies from culture to culture. Social development entails acquiring specific skills, which facilitate the development of effective social relationships. It does not happen automatically or all of a sudden. It is a time-consuming process requiring conscious effort, adequate motivation, and requisite opportunities. A newborn baby has no special relationships with the adults around, although he depends totally on others for the satisfaction of his basic needs. However, very soon he is able to identify the persons who fulfil his basic needs and develops a special relationship with them. The first attachment of a child is to the mother. The sight of her face or the tone of her voice is sufficient to soothe the infant. This special bond strengthens as he grows older and very soon it covers the father and other members of the family. No human being can function

in isolation. We depend on others not only for our physical survival, but also for our mental and emotional fulfilment. Every individual needs social acceptance and a measure of recognition. This need is first reflected in the family setting. Gradually it widens to the peer group, playmates at school and the outside world at large. A person who has not developed adequate social skills can be very miserable in his day to day living, feeling lost and unwanted. Therefore, both for the physical and mental well-being of an individual, it is essential for him to learn to get along with others. Just being in the company of others is not enough. Interacting with others and contributing something to a social cause increases the effectiveness of social interaction. Observations of institutionalized children have shown that special ties and relationships do not develop unless adequate intense experiences are provided to an infant. The "prime time" for social development in children is birth to 12 years of age. Various aspects of social development, which include higher capacities, such as awareness of others, trust, altruistic behaviour etc are important at different times. Early nurturing is important for social development as it occurs in phases and embraces both self-awareness as well as the ability to interact with others. For example, sharing toys is something that a 2-year-old's brain is not fully developed to do well, so this social ability is more common and positive with toddlers who are 3 or older. A parent's efforts to nurture and guide a child will assist in laying healthy foundations for social and emotional development.

Characteristics of Social Development

Social Development is defined as the acquisition of the ability to behave in accordance with social expectations. A less formal definition might be 'learning the rules of the game'. The process by which one learns the rules is called socialization, a process that includes three components: (1) Learning how to behave: this involves first of all coming to understand what the rules are and then learning to obey them. (i) Playing approved social roles: Every group has its own defined roles that people are expected to play, e.g., parents are not supposed to behave like children. (ii) Developing social attitudes: children realize the value of group membership and feel a need to join. A. Social development during infancy at birth, babies are non-gregarious. They do not distinguish clearly between people's voices and other noises. However, social behaviour has its beginning in infancy. By the time a baby is two months old, he is able to focus his eyes and responds by smiling, following his mother by moving his eyes and so on. Initial social interaction of a baby is with the adults who look after him. This provides him the feeling of security. Very soon he learns to recognize the voice of his mother, the touch of her hands and responds to her or turns away if someone else catering to his

needs. 3. At around the third month, babies can distinguish between people and objects in their environment, and they respond differently to them. By that time, their eye muscles are strong and sufficiently coordinated to see clearly and their hearing is also sufficiently developed to distinguish sounds. As a result of this development, they are maturational ready to learn to be social. 4. By the time babies are four months old, they turn their heads when they hear human voices and smile in response to a smile. They express pleasure in the presence of others by smiling, kicking, and waving their arms. During the third month, babies cry when left alone but they stop crying when they are talked to or diverted by a rattle or some other mechanical device. From the fifth to the sixth months, babies react differently to smiling and scolding, and they can distinguish between friendly and angry voices. They recognize familiar people with smiles and show definite expressions of fear in the presence of strangers. 6. During the sixth month, social advances become more aggressive. Babies, for example, pull the hair of the person who is holding them, they grab the person's nose or eyeglasses, and they explore the person's facial features. 7. By 7 or 9 months of age, babies attempt to imitate speech sounds as well as simple acts and gestures. Babies prefer parents to other family members or strangers. By eight months, they start creeping and prefer to be in company of others. 8. Around the age of 8 or 9 months, the baby is in a position to imitate simple adult sounds, acts and gestures. He responds when he is restrained from handling objects and communicates his fear and dislike of the unfamiliar. 9. At nine and ten months, babies are quite socially advanced. They creep after their parents and are often underfoot. They love attention. They love being chased and like to throw toys and have them picked up so they can throw them again. They show their fear and dislike of strangers by drawing away and crying when a stranger approaches them. 10. At 12 months, babies are most often friendly and happy. They are also sensitive to emotions of others. At this age, they like to be centre of attention. They like to play games with the family and can refrain from doing things in response to "no-no." They are usually tolerant to strangers.

Factors contributing to the development of social behaviour in Infancy

Imitation: Babies become a part of the social group by imitating others. They first imitate facial expressions, then gestures and movements, then speech sounds, and, finally, total patterns of Behaviour.

2. Shyness: By the third or fourth months, babies can distinguish between familiar people and strangers. By first year, they react to strangers by crying, hiding their heads, and clinging to the person who is holding them.

3. Attachment behaviour. When babies are able to establish warm, Loving relationship with their mothers or mother substitutes, the Pleasure from this association motivates them to try to establish Friendly relationships with other people.

4. Dependency: More a person cares

for the baby, the more dependent he becomes on that person. He shows dependency by clinging to the person, crying when left with someone else, and expecting to be waited on even when he is capable of doing things for himself. 5. Rivalry: Rivalry develops in associations with other babies or children. It is shown by attempts to snatch toys or other objects from them, not because the babies want them but because it gives them pleasure to show their superiority. 6. Attention seeking: During the second year, babies try to get the attention of adults by vocalizations, especially crying, by grabbing at their clothes, by hitting them, and by doing forbidden things. If they are successful, they show their satisfaction by smiling or laughing. 7. Resistant behaviour: During the middle of the second year of life, resistant behaviour begins. It is expressed by tensing the body, crying, and refusal to obey. Unless babies are given opportunities to be independent, resistant behaviour usually leads to negativism. •

PSYCHOSOCIAL THEORY BY ERIKSON Freud stresses biological determinants of behaviour whereas Erikson looks to cultural and societal influences. Erikson's theory is much broader than Freud's and encompasses the entire life span, with emphasis on a greater variety of motivational and environmental factors. His major concern was with the growth of the ego; especially with the ways society shapes its development. He gave eight stages of development through which each individual passes. At every stage. An individual has to resolve a conflict. How an individual resolves the conflict determines his ego development. Stages of psychosocial development: Erikson's work is called Psychosocial theory because it deals with the principles of psychological as well as social development Erikson hypothesized that people pass through eight psychosocial stages in their lifetime and every individual has a psychosocial task to master during each stage. In each stage the person confronts, and hopefully masters, new challenges. Each stage builds on the successful completion of earlier stages. The challenges of stages if not successfully completed may be expected to reappear as problematic behaviour in the future.

PIAGET'S THEORY OF INFANT COGNITIVE DEVELOPMENT

- Piaget's theory provides a good starting point for our consideration of infant cognitive development. For one thing, Piaget was the first person to propose a comprehensive theory of cognitive development in infancy based on systematic observation of Infants ' behaviour. In addition, his ideas have set the agenda for research on infant cognition. Many present day developmentalists disagree strongly with Piaget's conclusion, but the questions he asked and

the topics he studied still have a powerful influence on infancy research (Haith and Benson, 1998).

EARLY CHILDHOOD

Most people think of childhood as a fairly long period in their life span a time when the individual is relatively helpless and dependent on others. To children, childhood often seems endless as they wait impatiently for the magic time to come when society will regard them as grown up and no longer as children. Childhood begins when the relative dependency of babyhood is over, at approximately the age of two years, and extends to the time when the child becomes sexually mature, at approximately 13 years for the average girl and 14 years for average boy. After children become sexually mature, they are known as adolescents. 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 child sexually mature. Thus, early childhood begins at the conclusion of the age when it is practically a thing of the past and is being replaced by growing independence - and ends about the time the child enters first grade in school. The dividing line between early and late childhood is significant for two reasons. First, it is used almost exclusively for American children who, before they reach the compulsory school entrance age, are treated very differently than they are after they enter school. It is the treatment they receive and the expectations of the social group that influence what this treatment will be that determine when the dividing line between early and late childhood should occur. The second reason why placing the dividing line between early and late childhood at six years is significant is that it is not influenced by physical but by social factors. There is relatively little difference in the physical growth and development of children before and after they are six-year-old. The five-year-old, for example, is not radically different from the seven-year-old. On the other hand, in a culture where the law requires that children must begin their formal education when they reach their sixth birthday, social pressures and social expectations play an important role in determining how children differ before they enter school from those who have already been subjected to school experiences. If formal entrance into school came a year earlier or a year later, the dividing line between early and late childhood would be at five years in the former case, and at seven years in the latter case. The new pressures and expectations that accompany the child's formal entrance into school result

in changes in patterns of behavior, interest, and values. As a result, children become "different" people from what they were earlier. It is this difference in their physical makeup that justifies dividing this long span of years into two subdivisions, early and late childhood.

CHARACTERISTICS OF EARLY CHILDHOOD

Just add certain characteristics of babyhood make it distinctive. 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 applied to this period.

Names used by parents

Most parents consider early childhood a problem age or a troublesome age. While babyhood presents a problem 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 babyhood. The reason that behavior problems dominate the early childhood years is that young children are developing distinctive personalities and are demanding 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. Because of these problems, early childhood seems a less appealing age than babyhood to many parents. The dependency of the baby, so endearing to parents as well as to older siblings, is now replaced by a resistance on the child's part to their help and the tendency to reject demonstrations of their affection. Furthermore, few young children are as cute as babies, which also makes them less appealing. Parents often refer to early childhood as 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 (11,61). 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 required the use of toys. When alone, however, children continue to play with their toys well into the third or even 4th grade. During the preschool years, nursery schools, kindergartens, daycare centers, and organized playgroups

all emphasize play which makes use of toys. As a result, whether young children are playing alone or with peers, toys are an important element of their play activities.

Names used by Educators

Educators refer to the early childhood years as the 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, daycare 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 grade. The early childhood years, either in the home or in a preschool, or a time of preparation.

Names used by Psychologists

Psychologists use a number of different names to describe the outstanding characteristics of psychological development of children during the early years of childhood. One of the most commonly applied names is the pre-ego 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 grade. Because 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. At no other time in the life span is imitation of the speech and actions of others more pronounced than it is during early childhood. For this reason, it is also known as 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.

Developmental tasks of early childhood

CHILDHOOD Although the foundations of some of the developmental tasks young children are expected to master before they enter school are laid in babyhood, much remains to be learned in the relatively short four-year span of early childhood. When babyhood ends, all

normal babies have learned to walk, do with varying degrees of proficiency; Have learned to take solid food; And have achieved a reasonable degree of psychological stability. The major task of learning to control the elimination of body waste 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 concept 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 sex is 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, specially in the neighborhood, in school, and on the playground. Even more important, young children must lay the foundations for a conscience as a guide to right and wrong behavior. The conscience serves as a source of motivation for children to do what they know is right and to avoid doing what they know is wrong when they are too old to have the watchful eye of a parent, or a parent substitute constantly focused on them. 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 babyhood must be replaced by more mature ones. The reason for this is that relationships to others in babyhood 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. They must learn to be outer bound instead of self bound.

Physical Development in Early Childhood

Height: - The average end increasing height is three inches. By the age of six, The average child measures 46.6 inches.

Weight: - The average annual increase in weight is 3 to 5 pounds. at age 6, children should weigh approximately 7 times as much as they did at birth. The average girl weighs 48.5 pounds, and the average boy weighs 49 pounds.

Body Proportions: - Body proportions change markedly, and the baby look disappears. Facial features remain small, but the chin becomes more pronounced, and the neck elongates. there is a gradual decrease in the stockiness of the trunk, And the body tends to become cone shaped, with the flattened abdomen, a broader and flatter chest, and shoulders that are broader and squarer. The arms and legs lengthen and may become Spindly, and the hands and feet grow bigger.

Body Build: - Differences in body build become apparent for the first time in early childhood. Some children have an endomorphic or flabby, fat body build, some have a mesomorphic or sturdy, muscular body build, and some have an ectomorphic or relatively thin body build.

Bones and Muscles: - The bones ossify at different rates in different parts of the body, following the laws of developmental direction. The muscles become larger, stronger, and heavier, with the result that children looked thinner at early childhood progresses, even though they weigh more.

Fat: - Children who tend toward endomorphy have more adipose than muscular tissue; Those who tend toward mesomorphic have more muscular than adipose tissue; And those with an ectomorphic build have both small muscles and little adipose tissue.

Teeth: - During the first four to six months of early childhood, the last four baby teeth-the back molars-erupt. During the last half years of early childhood, the baby teeth began to be replaced by permanent teeth. The first to come out are the front central incisors-The first baby teeth to appear. when early childhood ends, the child generally has one or two permanent teeth in front and some gaps their permanent teeth will eventually erupt. childhood

SKILLS OF EARLY CHILDHOOD

Early is the ideal age to learn skills. There are three reasons for this. First, young children enjoy repetition and are, therefore, willing to repeat an activity until they have acquired the ability to do it well. Second, young children are adventuresome and, as a result, are not held back by fear of hurting themselves or of being ridiculed by peers, as older children often are. And third, young children learn easily and quickly because their bodies are still very pliable

and because they have acquired so few skills that they do not interfere with the acquisition of new ones. Early childhood may be regarded as the “teachable moment” for acquisition skills. If children are not given opportunities to learn skills when they are developmentally ready to do so and when they want to do so because of their growing desire for independence, they will not only lack the necessary foundations for the skills their peers have learned but they will lack the motivation to learn skills when they are eventually given an opportunity to do so

Typical Skills of Early Childhood

What skills young children will learn depends partly upon their maturational readiness but mainly upon the opportunities they are given to learn and the guidance they receive in mastering these skills quickly and efficiently. Children from poor environments, it has been reported, generally master skills earlier and in larger numbers than children from more favored environments, not because they are maturational more advanced but because their parents are too busy to wait on them then it is no longer necessary. There are sex differences in the kinds of skills children learn. Early in childhood, boys come under pressure to learn play skills that are culturally approved for members of their own sex and to avoid mastering those which are considered more appropriate for girls. They are, for example, encouraged to learn skills involved in ballplay, just as girls are encouraged to learn skills related to home making. In spite of variations, all young children learn certain common skills, though the time they learn them may vary somewhat and the proficiency with which they learn them may be different. These common skills can be divided into two major categories: Hand skills and leg skills.

Hand Skills: - Self feeding and dressing skills, begin in babyhood, are perfected in early childhood. The greatest improvement in dressing skills generally comes between the ages of 1 ½ and 3 ½ years. Brushing the hair and bathing are skills which can be acquired easily in early childhood. By the time children reach kindergarten age, they should be able to bathe and dress themselves with a fair degree of proficiency, to tie their shoelaces and to comb their hair with little or no assistance. Between the ages of five and six, most children can become proficient in throwing and catching balls. They can use scissors and can mold with clay, make cookies, and sew. Using crayons, pencils, and paints, young children are able to color outlined pictures, draw or paint pictures of their own, and make a recognizable drawing of a man.

Leg Skills: - Once young children have learned to walk, they turned their attention to learning other movements requiring the use of their legs. They learn to hop, skip, Gallop, jump by the time they are five- or six-year-old. Climbing skills are likewise well established in early childhood. between the ages of three and four, tricycling and swimming can be learned. Other leg skills acquired by young children include jumping rope, balancing on rails or on the top of a wall, roller skating, ice skating, and dancing.

Handedness Early childhood may be regarded as a critical period in the establishment of handedness.the reason is that, during this period, Children abandon, to a large extent, the tendency to shift from the use of one hand to the use of other hand and begin to concentrate on learning skills with one hand as the dominant hand and the other as the auxiliary or helping hand. There is evidence that handedness-Or the tendency to use one hand in preference to the other-Is not firmly established until sometime between the ages of three and six years. This, of course, does not mean that children cannot change the dominant hand if they want to do so. For example, should first graders discover that it is a handicap to use their left hand when they are trying to imitate the model of right-handed writing the teacher puts on the chalkboard, they can change to using the right hand as the dominant hand if their motivation to do so is strong enough. However, with each passing year, the habit of using one hand as the dominant hand in preference to the other hand becomes more firmly established. As a result, changing handedness becomes increasingly difficult. There is evidence, though not substantiated by research studies, that children Who attend Nursery schools or kindergartens or who In daycare centers or day camps during the summer months, are less likely to develop left handed tendencies than children whose early childhood peers are spent mainly in playgroup and with neighborhood playgroups. The reason for this is that, in preschools and childcare centers, teachers and other caretakers are advised to encourage children to use their right hands and are expected to teach new hence skills in such a way that children who are still somewhat ambidextrous we'll find the use of their right hands relatively easy and far less confusing than they will by the time they reach first grade. not all preschools or childcare centers emphasize the encouragement of right handedness but many more do than those which ignore this aspect of guidance. By contrast, many parents believe that handedness is a hereditary trait and, as a result, when they see their children using their left hands, they seem that they are naturally left-handed and do nothing to encourage them to learn new skills with their right hands as the dominant ones. Because many of the hand skills young children learned cannot be carried out with the one hand but require the use of both

hands, both hands must be trained to carry out the skill. However, few skills require that both hands play equally important roles in carrying out the skills. Consequently, in teaching young children new hand skills emphasis should be placed on the movements made by the dominant hand and those by the auxiliary hand. These movements are often quite different. In the case of crayoning, for example, the dominant hands use the crayon, and the auxiliary hand holds the paper in place so the child can crayon a figure on it. In buttoning a garment, most of the movements of pushing the button through the holes are done by the dominant hand while the movements made by the auxiliary hand consist mainly of holding the garment in such a way that the button will be close enough to the buttonhole to be inserted into it

LANGUAGE DEVELOPMENT

IMPROVEMENT IN SPEECH DURING EARLY CHILDHOOD

By the time children are two years old, most of the pre speech forms of communication they found so useful during babyhood have been abandoned. Young children no longer Babble, and their crying is greatly curtailed. They may use gestures, but mainly as supplements to speech- to emphasize the meaning of the words they use- rather than as substitutes for speech. However, they continue to communicate with others by emotional expressions which, on the whole, unless subject to social disapproval and less likely to be judged as “babyish” than other pre speech forms. During early childhood, there is a strong motivation on the part of most children to learn to speak. There are two reasons for this. First, learning to speak is an essential tool in socialization. Children who can communicate easily with their peers make better social contacts and are more readily accepted as members of the peer groups than children whose ability to communicate is limited. Young children attending preschools will be handicapped both socially and educationally unless they speak as well as their classmates. Second, learning to speak is a tool in achieving independence. Children who cannot make known their wants and needs, or who cannot make themselves understood, are likely to be treated as babies and failed to achieve their independence they want and feel capable of handling successfully. If children cannot tell their parents or other caretakers that they want to try to cut their own meat or brush their own hair, the adults are likely to continue these tasks on the assumption that the children are too young to be interested in mastering them. This keeps the child from becoming self-reliant and independent. To improve communication, children must master two major tasks, both of which, add essential elements of learning to

speaking. They must, first, improve their ability to comprehend what others are saying to them and, second, they must improve their own speech so that others can comprehend what they are trying to communicate to them. While parents and other caretakers usually put more emphasis on learning to speak, the task of improving comprehension is, indirectly, taken care of by children themselves because of their strong motivation to communicate as a tool for social interaction.

Tasks Involved in Learning to Speak Early Childhood

Pronunciation of Words: Certain sounds and sound combinations are especially difficult for a young child to learn to pronounce, such as the consonants Z, W, D, S, and And the consonant combinations st, str, dr, and fl. Listening to radio and television can be an aid in learning correct pronunciation.

Vocabulary Building: Young children's vocabularies increase rapidly as they learn new words and new meanings for old words. In vocabulary building, young children learn a general vocabulary of words, such as "good" and "bad", "give" and "take", As well as many words with specific usage such as numbers and the names of colors.

Forming Sentences: Three- or four-word sentences are used as early as two years of age and commonly at three. Many of these sentences are incomplete, consisting mainly of nouns and lacking verbs, prepositions, and conjunctions. After age three, The child forms six to eight word sentences containing all parts of speech.

Factors Influencing How Much Young Children Talk

Intelligence: The brighter the child, the more quickly speech skills will be mastered and, consequently, the ability to talk.

Type of Discipline: Children who grow up in homes where discipline tends to be permissive, talk more than those whose parents are authoritarian and who believed that "children should be seen but not heard".

Ordinal Position: First born children are encouraged to talk more than their later born siblings and their parents have more time to talk to them.

Family Size: Only children are encouraged to talk more than children from large families and their parents have more time to talk to them. In large families, the discipline is likely to be authoritarian and this prevents children from talking as much as they would like to.

Socioeconomic Status: In lower class families, family activities tend to be less organized than those in middle and upper class families. There is also less conversation among the family members and less encouragement for the child to talk.

Racial Status: The poorer quality of speech and of conversational skills of many young black children may be due in part to the fact that they have grown up in homes where the father is absent, or where family life is disorganized because there are many children, or because the mother must work outside the home.

Bilingualism: Why young children from bilingual homes may talk as much at home as children from monolingual homes, their speech is usually very limited. When they are with members of their peer group or with adults outside the home.

Sex- Role Typing: As early as the preschool years, there are effects of sex role typing on children's speech. Boys are expected to talk less than girls, but what they say, and how they say it, is expected to be different. Boasting and criticizing others, for example, are considered more appropriate for boys than for girls, while the reverse is tattling.

EMOTIONAL DEVELOPMENT

EMOTIONS OF EARLY CHILDHOOD

Emotions are especially intense during early childhood. This is a time of disequilibrium when children are "out of focus" in the sense that they are easily aroused to emotional outburst and, as a result, are difficult to live with and guide. While this is true, a major part of early childhood, it is especially true of children aged 2 ½ to 3 ½ and 5 ½ to 6 ½. Although any emotion may be heightened in the sense that it occurs more frequently and more intensely than is normal for that particular individual, heightened emotionality in early childhood is characterized by temper tantrums, intense fears, and unreasonable outbursts of jealousy. Part of the intense emotionality of children at this age may be traced to fatigue due to too strenuous and prolonged play, rebellion against taking naps, and the fact that they may eat too little. Much of the heightened emotionality characteristic of this age is psychological rather than physiological in origin. Most young children feel that they are capable of doing more than their parents will permit them to do and revolt against the restrictions placed upon them. In

addition, they become angry when they find they are incapable of doing what they think they can do easily and successfully. Even more important, children whose parents expect them to measure up to unrealistically high standards will experience more emotional tension than children whose parents are more realistic in their expectations.

COMMON EMOTIONS OF EARLY CHILDHOOD

Anger: The most common causes of anger in young children are conflicts over playthings, the thwarting of Wishes, and vigorous attacks from another child. Children express anger through temper tantrums, characterized by crying, screaming, stamping, kicking, jumping up and down, or striking.

Fear: Conditioning, imitation, and memories of unpleasant experiences play important roles in arousing fears, as do stories, pictures, radio and television programs, and movies with frightening elements. At first, a child response to fear is panic; later, responses become more specific and include running away and hiding, crying, and avoiding frightening situations.

Jealousy: Young children become jealous when they think parental interest and attention as shifting towards someone else in the family, usually a new sibling. Young children may openly express their jealousy, or they may show it by reverting to infantile behavior, such as bed wetting, pretending to be ill, or being generally naughty. all such behavior is a bid for attention.

CURIOSITY: Children are curious about anything new that they see and also about their own bodies and the bodies of others. Their first responses to curiosity take the form of sensory motor exploration; Later, as a result of social pressures and punishment, they respond by asking questions.

Envy: Young children often become envious of the abilities or material or possessions of another child. They expressed their envy in different ways, the most common of which is complaining about what they themselves have, by verbalizing wishes to have what the other has, or by appropriating the objects they envy.

Joy: Young children derive joy from such things as a sense of physical well being, in courageous situations, sudden or unexpected noises, slight calamities, playing pranks on others, and accomplishing what seemed to them to be difficult tasks. They expressed their joy by smiling and laughing, clapping their hands, jumping up and down, or hugging the object or person that has made them happy.

Grief: Young children are saddened by the loss of anything they love or that is important to them, whether it be a person, a pet, or an inanimate object, such as a toy. Typically, they expressed their grief by crying and by losing interest in their normal activities, including eating.

Affection: Young children learn to love the things – people, pets, or objects – that give them pleasure. They express their affection verbally as they grow older but, while they are still young, they express it physically by hugging, petting, and kissing the object of their affection.

SOCIAL DEVELOPMENT

SOCIALIZATION IN EARLY CHILDHOOD

One of the important developmental tasks of early Childhood is acquiring the preliminary training and Experience needed to become a member of a “gang” in late childhood. Thus, early childhood is often called the pre-gang age. The foundations for socialization are laid as the number of contacts young children have with their peers increases with each passing year. Not only do they play more with other children, but they also talk more with them. The kind of social contacts young children have is more important than the number of such contacts. If young children enjoy their contacts with others, even if they are only occasional, their attitudes toward future social contacts will be more favorable than if they have more frequent social contacts of a less favorable kind. Children who prefer interacting with people to interacting with objects develop more social know-how and, as a result, are more popular than those who have limited social interactions. The advantages young children take of the opportunities offered them for social contacts will be greatly influenced by how pleasurable their past social contacts have been. As a general rule, during the preschool years, children find social contacts with members of their own sex more pleasurable than those with members of the opposite sex.

Patterns of Early Socialization

Between the ages of two and three years, children show a decided interest in watching other children and they attempt to make social contacts with them. This is known as parallel play, play in which young children play independently beside other children rather than with them. If any contacts are made with other children, they tend to be frictional rather than cooperative. Parallel play is the earliest form of social activity young children have with their peers. Following this comes associative play, in which children engage in similar, if not

identical, activities with other children. As social contacts increase, young children engage in cooperative play, play in which they are a part of the group and interact with group members. Even after children begin to play with other children, they often play the role of onlooker, watching other children at play but making no real attempt to play with them. From this onlooker experience, young children learn how others make social contacts and what their behavior is in social situations. By the time young children are four years old, if they have had these preliminary socializing experiences, they usually understand the rudiments of team play, they are conscious of the opinions of others, and they try to gain attention by showing off. In the remaining years of early childhood, they then polish off-the-shelf rough edges of their social behavior and learn new patterns of behavior that will make acceptance by the peer group more assured.

Early Forms of Behavior in Social Situations

The most important forms of social behavior necessary for successful social adjustment appear and begin to develop at this time. In the early years of childhood, these forms are not developed well enough to enable the child to get along successfully with others at all times. However, this is a crucial stage in development because it is at this time that the basic social attitudes and the patterns of social behavior are established. In a longitudinal study of a group of young children, Waldrop and Halverson reported that those children who, at age 2½ years, were friendly and socially active continued to be so when they reached the age of 7½ years. They concluded that “Sociability at 2½ years was predictive of sociability at 7½ years. The different forms of behavior in social situations during the early childhood years are given in Note that many of these patterns appear to be unsocial or even antisocial rather than social. However, each of these apparently unsocial or anti-social patterns of behavior is important as a learning experience that will enable young children to know what the social group approves and disapproves and what it will and will not tolerate.

Companions in Early Childhood

At all ages, companions may be of three different kinds. What they are and what role they play in the socialization of young children. In early childhood, companions are mainly associates and playmates. While young children may refer to some of their favorite playmates as their “friends,” few play the role of friends during the early childhood years. During the first year or two of early childhood, when contacts with others are mainly in parallel or associative play, children’s companions are primarily associates. Later, when they engage in

cooperative play, their companions become their playmates. At this time, many young children have one or more favorite playmates with whom they not only play but with whom they also communicate their feelings, Emotions, interests, and even their aspirations for the future. These children then play the role of friends as well as of playmates. Only as early childhood draws to a close and the egocentric speech of young children gradually becomes more socialized does this happen. In the selection of companions, children prefer Other children of their own ages and levels of development who can do what they are able to do.

SOCIAL AND UNSOCIAL BEHAVIOR PATTERNS

Social Patterns

Imitation

To identify themselves with the group, children Imitate the attitudes and behavior of a person Whom they especially admire and want to be like.

Rivalry

The desire to excel or outdo others is apparent as early as the fourth year. It begins at home and later develops in play with children outside the home.

Cooperation

By the end of the third year, cooperative play and group activities begin to develop and increase in both frequency and duration as the child's opportunities for play with other children increase.

SYMPATHY

Because sympathy requires an understanding of the feelings and emotions of others, it appears only Occasionally before the third year. The more play Contacts the child has, the sooner sympathy will develop

. Empathy

Like sympathy, empathy requires an understanding of the feelings and emotions of others but, In addition, it requires the ability to imagine one-Self in the place of the other person. Relatively few Children are able to do this until early childhood ends.

Social Approval

As early childhood draws to a close, peer approval becomes more important than adult approval. Young children find that naughty and disturbing behavior is a way of winning peer approval.

Sharing

Young children discover, from experiences with others, that one way to win social approval is to share what they have—especially toys—with others. Generosity then gradually replaces selfishness.

Attachment Behaviour

Young children who, as babies, discovered the satisfaction that comes from warm, close, personal associations with others, gradually attach their affection to people outside the home, such as a nursery schoolteacher, or to some inanimate object, such as a favourite toy or even a blanket. These then become what are known as attachment objects.

UNSOCIAL BEHAVIOUR

Negativism

Negativism, or resistance to adult authority, reaches its peak between three and four years of age and then declines. Physical resistance gradually gives way to verbal resistance and pretending not to hear or understand requests.

. Aggressiveness

Aggressiveness increases between the ages of two and four and then declines. Physical attacks begin to be replaced by verbal attacks in the form of name-calling, tattling, or blaming others.

Ascendant Behavior

Ascendant behavior, or “bossiness,” begins around the age of three and increases as opportunities for social contacts increase. Girls tend to be bossier than boys.

Selfishness

While young children’s social horizons are limited mainly to the home, they are often selfish and egocentric. As their social horizons broaden, selfishness gradually wanes but generosity is still very undeveloped.

Egocentrism

Like selfishness, egocentrism is gradually replaced by an interest in and concern for others. How soon this change will occur will depend on how many contacts young children have with people outside the home and how anxious they are to win their acceptance.

Destructiveness A common accompaniment of temper outbursts in young children is destroying anything within their reach, whether their own or someone else's possessions.

Sex antagonism

Until they are four years old, boys and girls play together harmoniously. After that, boys come under social pressures that lead them to shun that might be regarded as "sassy's." Many engage in aggressive behavior which antagonized girls.

Prejudice Most preschool children show a preference for playmates of their own race, but they seldom refuse to play with children of another race. Racial prejudice begins sooner than religious or socioeconomic prejudice, but later than sexual prejudice.

COGNITIVE DEVELOPMENT

DEVELOPMENT OF UNDERSTANDING

With increased intellectual abilities, especially the abilities to reason and to see relationships, with increased ability to explore their environments because of greater motor coordinations and controls, and with increased ability to ask questions in words others can understand, young children's understanding of people, objects, and situations increases rapidly. This increase in understanding comes from new meanings being associated with meanings learned during babyhood. Young children now begin to notice details that formerly escaped their attention. As a result, they are not so apt to confuse objects, situations or people that have elements in common as they formerly did. Their concepts thus become more specific and meaningful to them. Piaget has called this the preoperational stage of thinking, a stage which extends from about two or three years of age until children are seven or Eight years old. How long and difficult a mental process children must contend with in the development of understanding has been emphasized by Bernstein's Study of how children learn about sex and

birth. According to this study, there are six levels of understanding, extending from three or four years of age until children are twelve or thirteen years old. During early childhood, their understanding is limited to where babies come from and how they are manufactured by people. As late childhood draws to a close, most children understand the physical causality of conception and birth. Common Categories of Concepts Children develop many of the same concepts Because of common learning experiences. Other concepts are individual and depend upon the learning.

DEVELOP DURING EARLY CHILDHOOD

Life Children tend to ascribe living qualities to inanimate objects-dolls and stuffed animals, for ex-ample. Adults may encourage this by pointing out Similarities between animate and inanimate ob-Jects, such as a cloud formation that resembles a dog or a horse.

Death Young children tend to associate death with anything that goes away, but they are usually unable to comprehend the finality of death.

Bodily Functions Young children, as a group, have very inaccurate concepts of bodily functions and of birth. This is true even when they enter school though, in time, These faulty concepts are corrected through teachings in hygiene and sex education classes.

Space Four-year-olds can judge short distances accurately but the ability to judge long distances does not develop until late childhood. By the use of Cues they understand, they learn to judge right and left accurately.

Weight Before children learn that different materials have different weights-which does not occur much before the school age-they estimate weight almost exclusively in terms of size.

Numbers Children who attend nursery school or kindergarten usually understand numbers up to 5 but have only vague concepts about numbers higher than that.

Time Young children have no idea of the duration of time-how long an hour is, for example-nor canthey estimate time in terms of their own activities. Most four- or five-year-olds know the day of the week, and by the age of six they know the month, Season, and year.

Self By the time they are three, most young children know their sex, their full names, and the names of the different parts of their bodies. When they start to play with other children, their self-concepts begin to include facts about their abilities and their race but not about their socioeconomic levels.

Sex Roles Clear concepts of appropriate sex roles are developed by the time boys are five years old but, for girls, these concepts are less clear because the approved sex role for girls is not as clearly defined as for boys.

Social Awareness Before early childhood ends, most children are able to form definite opinions about others whether a person is “nice” or “mean,” “smart” or “dumb,” for example

. **Beauty** Most young children prefer music with a definite tune or rhythm and they like simple designs and bright, gaudy colors. **Comic** Among the things most often perceived as comic by young children are funny faces made by themselves or by others, socially inappropriate behavior, and the antics of domestic animals. Play on words likewise appeals to them as “funny.” **MORAL**

DEVELOPMENT IN EARLY CHILDHOOD

Moral development in early childhood is on a low level. The reason for this is that young children’s intellectual development has not yet reached the point where they can learn or apply abstract principles of right and wrong. Neither do they have the necessary motivation to adhere to rules and regulations because they do not understand how this benefit them as well as members of the social group because of their inability to comprehend the whys and wherefores of moral standards, young children must learn moral behavior in specific situations. They merely learn how to act without knowing why they do so. And because the retention of young children, even those who are very bright, tends to be way is a long, difficult process. Children may be to poor, learning how to behave in a socially approved not to do something one day but, by the next day or they were told not to do. Thus, what may appear even the day after that, they may have forgotten what adults to be willful disobedience is often only a cause of forgetting. Early childhood has been characterized what Piaget has called “morality by constraint this stage of moral development, children obey rules automatically, without using reason or judgment, and they regard adults in authority as omnipotent. They also judge all acts as right or wrong in terms of the consequences rather than in terms of the motivations behind them. According to the way young children view a matter, a “wrong” act results in punishment which is dealt with either by other human beings or by natural or supernatural factors. Kohlberg has elaborated on and extended Get’s stages of moral development during the early childhood years to include two stages of this first level Which he has labeled “preconventional morality.” In the first stage, children are obedience and punishment-oriented in the sense that they judge acts a Right or wrong in terms of the

physical consequences of these acts. In the second stage, children conform to social expectations in the hope of gaining rewards. As early childhood comes to an end, habits of obedience should be established, provided had consistent discipline. However, young children have not yet developed consciences and, as a result, they do not feel guilty or ashamed if caught doing something they know is wrong. Instead, they may be frightened at the prospect of punishment or they may try to rationalize their acts in the hope of escaping punishment.

TYPES OF DISCIPLINE USED IN EARLY CHILDHOOD

Authoritarian Discipline This is the traditional form of discipline and is based on the old saying that “to spare the rod means spoiling the child.” In authoritarian discipline, parents and other caretakers establish rules and inform children that they are expected to abide by them. No attempt is made to explain to the children why they must conform nor are children given opportunities to express their opinions about the fairness or the reasonableness of the rules. If children fail to conform to the rules, they’re subjected to corporal punishment, often harsh and cruel, which is supposed to act as a deterrent to future rule breaking. Their reason for breaking the rule is not taken into consideration. It is assumed that they knew the rule and willfully violated it. Nor is it considered necessary to reward them for complying with a rule. This is regarded as their duty and any reward given, it is believed, might encourage children to expect to be bribed to do what society regards as their duty.

Permissive Discipline Permissive discipline developed as a revolt against the authoritarian discipline many adults had been subjected to during their own childhoods. The philosophy behind this type of disciplinary technique was that children would learn from the consequences of their acts how to behave in a socially approved way. Consequently, they were not taught rules, they were not punished for willful breaking of rules, nor were they rewarded for behaving in a socially approved way. There is a tendency on the part of many adults today to abandon this form of discipline on the grounds that it fails to fulfill all three of the essential elements of discipline.

Democratic Discipline Today there is a growing tendency to favor discipline based on democratic principles. These principles emphasize the rights of the child to know why rules are made and to have an opportunity to express their opinions if they believe a rule is unfair. Blind obedience is not expected even when children are very young. Attempts are made to have children understand the meaning of the rules and the reasons the social group expects

them to abide by them. Instead of corporal punishment, in Democratic discipline an attempt is made to make the punishment “fit the crime” in the sense that the punishment is related to the misdeed. Appreciation for attempts to conform to social expectations as spelled out in rules is shown by rewards, mainly in the form of praise and social recognition.

SEX-ROLE TYPING IN EARLY CHILDHOOD

While some of the foundations of sex-role typing are laid as babyhood draws to a close, the major part of these foundations is laid during early childhood. That is why early childhood is often referred to as a critical age in sex-role typing. During this stage in the developmental pattern, two important aspects of sex-role typing are expected to be mastered: learning how to play the appropriate sex role and accepting the fact that they must adopt and conform to the approved sex-role stereotype if they want to win favorable social judgments and, in turn, social acceptance. Failure to do so will handicap children in their adjustment to the peer groups that play such an important role in the social life of the older child. Learning Sex-Role Stereotypes Sex-role stereotypes are constellations of meanings associated with members of the male and members of the female sex. These meanings relate to the approved appearance and body build of the individual; the approved type of clothing, speech, and behavior; the approved way to behave in relation to members of the other sex; and the approved way to earn a living during the adult years. Until shortly after World War I, the approved stereotypes for male and female sex roles were clearly defined and not subject to change or modification. They were stereotypes handed down from generation to generation because each generation found that behavior conforming to these stereotypes brought the greatest good and the greatest satisfaction to members of the two sexes as well as to society. These stereotypes are today called traditional sex-role stereotypes. Gradually, since the end of World War I but with greater speed since World War II, these stereotypes have been changing. Instead of marked differences in the roles of the two sexes, as prescribed by the traditional sex-role stereotypes, modifications have made the two roles more similar than different. Instead of being different, it began to be recognized that members of the two sexes were more similar than different and, as a result, should play roles that are more similar than different. These stereotypes are called the egalitarian sex-role stereotypes. Whether young children will learn traditional or egalitarian sex-role stereotypes will depend on the pressures and opportunities given in the home. If parents play traditional roles and if they believe that their children will make better social adjustments and be happier if they learn to play these roles, they will present models of traditional sex roles in their own behavior and select stories, TV programs,

and other Mass media that emphasize the traditional roles. Only if their contacts outside the home, in nursery school, Kindergarten, day-care centre, or in the homes of playmates show them patterns of the egalitarian sex roles will they know that there is any sex role except that depicted in the traditional sexrole stereotypes they learn at home. In learning sex-role stereotypes, whether traditional or egalitarian, young children do not learn all aspects of the stereotypes at one time. Instead, the stereotypes are built up gradually as new meanings are added and interrelated to old meanings in the constellation of meanings. While different children may learn sex-role stereotypes in different ways, the usual pattern is fairly predictable. They learn first that some children are girls and others are boys, that some adults are women, and some are men. At the same time, they learn that they themselves are female or male. Then they learn that certain possessions-clothes, toys, books, and play equipment-are regarded as appropriate for one Sex while others are regarded as appropriate for the other sex. They discover that certain personality characteristics and patterns of behavior are associated with one sex while others are associated with the other sex. Gradually, they learn that males play certain roles in childhood as well as in adulthood while Females play other roles. By the time early childhood draws to a close, most young children have fairly well-developed sex-role stereotypes. Agencies of Sex-Role Typing Learning sex-role stereotypes does not guarantee sex-role typing. Young children must learn to behave in accordance with the patterns outlined in the stereotypes. This they do partly by imitation but more by direct training in which they are shown how to Imitate a model-and are either encouraged to do so or reprovved for failure to do so. In addition to direct methods of sex-role typing, young children are subjected to indirect methods. They are kept from having opportunities to learn to behave in what those responsible for their training regard as sex-inappropriate behavior. Girls, for example, are not given boys' play equipment or toys; and if they do play with the toys of their brothers or male peers, they are often given femaleappropriate toys and encouraged to play with them rather than with those regarded as inappropriate for their sex. In early childhood, parents and other family members are the main agencies of sex-role typing. Should young children go to preschools or be cared for at day-care centers, the teachers and other caretakers will play important roles in their sexrole typing. Bernstein has explained how this is done: "Sexism starts with kindergarten activities in which little girls are directed to the housekeeping corner, while boys are steered toward blocks and trucks...Schools thus provide a shrinking of alternatives instead of an expansion". Outside the schoolroom, Bernstein has further explained, sex-role typing likewise goes on. Recreations for boys and girls are strongly differentiated. Boys, for example, are given balls

and bats and areshown how to use them, while girls are expected to spend their outdoor recreational time on such sex-approved games as jacks and jumping rope. Another important agency of sex-role typing in early childhood comes from the mass media. The stories read to children, the comics they look at, and the TV shows and commercials they see all contribute to their typing. However, these play a less important role in the typing process than do the people in the Child's life. This is because parents, older siblings, Caretakers, and teachers can show their approval or disapproval of the child's behavior. This acts as a motivation to conform to the sex-role stereotypes the group with which the young child is identified considers appropriate. This motivation to conform is absent in the mass media. By the time early childhood draws to a close, most children are well typed. They not only know what the social group considers appropriate for members of their sex, but they have also learned to accept and act in accordance with this stereotype. Girls have already learned to think of boys as strongerbrighter, and more able than they are, while boys have learned to think of girls as less able to play as they want to play and, as a result, stop playing with them. While both buys and girls are well sex-role Typed by the time early childhood ends, boys tend to be better typed than girls. There are two reasons for this. First, the stereotype of the male is more clearly defined than the stereotype of the female, with the result that it is easier for boys to know exactly what constitutes a male than for girls to know what the social group regards as "feminine." Second, because more Stigmas are associated with a "sissy" than with a "tomboy," more pressure is put on boys to learn the male sex role than on girls to learn the female sex role not until girls approach puberty is the social pressure to be feminine as great as the social pressure to be masculine.

CONDITIONS CONTRIBUTING TO CHANGED PARENT-CHILD RELATIONSHIPS

Changes in the Child When soft, cuddly babies become more independent and self-sufficient, they tend to be rebellious, Mischievous, self-assertive, exploratory, constantly into everything-demanding of attention, and refusing to do what they are told to do. Even in looks they are less appealing than they were as babies.

Changes in Parental Attitudes As young children become more independent, Parents feel that they need less care and attention than they did when they were babies. But even though young children want to be independent, They often resent not having the attention they had become accustomed to during babyhood.

Parental Concept of a “Good” Child When young children do not come up to parental expectations, parents often become critical and Punitive. Children react to this treatment by being even more negativistic and troublesome

. Childish Concept of a “Good” Parent To most young children, “good” parents are at their beck and call, willing to do what they want when they want it. When parents fail to conform to this concept, children resent it and this weakens.

Parental Preferences Because mothers spend more time with young Children than fathers, and because they better understand troublesome behavior, many young Children prefer their mothers and show it plainly. If fathers resent this and show their resentment by being critical of young children and their behavior, it further widens the gap between them. Should little boys show a preference for their father’s, many mothers resent this, feeling that as they are the ones who have assumed greater responsibility for the care of the children, they should be the favorites.

Preference for Outsiders When young children go to nursery school or kindergarten or when they are placed in a child-free centre, they sometimes develop a preference for aTeacher or caretaker. Many parents feel hurt and resentful, thus widening the gap between them and their children.

PERSONALITY DEVELOPMENT IN EARLY CHILDHOOD

The personality pattern, the foundations of which were laid in babyhood, begins to take form in early childhood. Because parents, siblings, and other relatives constitute the social world of young children, how they feel about them and how they treat them are important factors in shaping self-concepts-the core of the personality pattern. That is why Glasner has said that the child’s self-concept is “formed within the womb of family relationships”. As early childhood progresses, young children have more and more contacts with peers either in the neighborhood or in a preschool or child-care centre. The attitudes of their peers and the way their peers treat them then begin to have an effect on their self-concepts, an effect which may reinforce the effect of family members or may contradict and counteracts some of the family influences. These early peer attitudes, like attitudes on the part of significant family members, are important beCause, once the foundations for the self-concepts are laid, they are far less likely to change than to remain stable. Furthermore, because both family members and peers get into the habit of thinking of young children in a certain way-as kind and helpful or as troublesome show-offs, for example-they are far less likely to change their attitudes than to

continue to think of them in the same way (54). Conditions Shaping the Self-Concept in Early Childhood Because the environment of young children is Limited, to a large extent, to their homes and to family members, it is not surprising that many conditions within the family are responsible for shaping the self-concepts during the early childhood years. The general relationships of young children with their families are important but, of these, parental attitudes stand out as especially important. How parents feel about their children's appearances, their abilities, and their achievements have a marked influence on how the children feel about themselves. The child-training method used in the home is important in shaping the young child's developing concept of self. Strict, authoritarian discipline, accompanied by frequent and harsh corporal punishment, tends to build up resentments against all persons in authority and create feelings of martyrdom-feelings which can and often do develop into a martyr complex. The aspirations parents have for their children play an important role in their developing self-concepts. When their aspirations are unrealistically high, Children are doomed to failure. Regardless of how children react, failure leaves an indelible mark on their self-concepts and lays the foundations for feelings of inferiority and inadequacy the ordinal position of children in a family has an effect on their developing personalities. This influence may be explained in part by the fact that each child in a family learns to play a specific role, in part by differences in the child-training methods used by parents with different children, and in part by the successes and failures children have in their competition with their siblings. Even though young children are infrequently aware of minority-group identification, those who have such an awareness are influenced unfavorably if their peers neglect or reject them. As was pointed out earlier, young children tend to show a preference for playmates of their own race and to neglect, though not discriminate against, those of other racial groups as Inselberg and Burke have pointed out, as early as the late preschool years "appropriate sex-role identification in boys is associated with favorable personality characteristics." Boys with masculine physiques are more successful in interacting with other boys, and this reinforces overt masculine behavior, which in turn leads their peers to judge their actions as sex appropriate. Environmental insecurity, whether due to death, divorce, separation, or social mobility, affects young children's self-concepts unfavorably because they feel insecure and different from their peers. Children whose parents are upwardly mobile, it has been reported, may learn to be independent and ambitious, but they tend to become nervous, tense, and anxious, and highly competitive and aggressive in their peer relationships. Increase in Individuality Individuality, which is apparent at birth and becomes increasingly more so in babyhood, is one of the outstanding characteristics of

young children. By the time early childhood is over and children are ready to enter school, the patterns of their personalities can be readily distinguished. Some children are leaders, and some are followers; some are despotic while others are meek; some are sociable while others are solitary; some like to show off and be the center of attention while others prefer to shun the limelight; and some are egocentric to the point where they think only about themselves while others are conformers, trying to be like members of the group. Thomas et al. have identified three personality syndromes among young children: There are "easy children," who are well adjusted both physically and psychologically; "difficult children," who are irregular in bodily functions, intense in their reactions, and slow to adapt to change; and "slow-to-warm-up children," who have a low activity level and do not adapt quickly. These syndromes show up in children's characteristics and behavior during the preschool years. Individuality is greatly influenced by early social experiences outside the home. When these experiences are unfavorable, children are likely to become unsocial in their relationships with people and to compensate in unsocial ways, such as spending their playtime watching television themselves as martyrs who are picked on by other children. Most young children experience cuts, bruises, lacerations, sprains, broken bones, strained muscles, or similar minor disturbances resulting from accidents. Others have more serious accidents that disable them temporarily or permanently. As was pointed out above, boys have more accidents than girls, and the accidents tend to be more serious. Although most accidents in early childhood are not fatal, many of them leave permanent physical or psychological scars. Many disabilities of childhood, for example, are the result of accidents. A disability can cause young children to develop feelings of inferiority and martyrdom that permanently distort theoretical personality patterns. Even if an accident leaves no permanent physical scar, it can make young children fearful and timid to the point where these feelings will predominate in their adjustments to life. Unattractiveness As early childhood progresses, children become increasingly unattractive, reaching a low point as they emerge into late childhood. There are a number of reasons for this. First, as the body changes shape, children begin to look skinny and awkward; second, their hair becomes coarser and less manageable, and this gives them an unkempt appearance; third, there are gaps in the mouth where baby teeth have fallen out and the permanent teeth which have erupted seem proportionally too large; and fourth, young children care more about having a good time than about keeping neat and clean. The result is that they frequently look dirty and ill-groomed. Regardless of the individual's age, people react positively to those who are attractive looking and negatively to those who are unattractive. As one preschooler explained, "People like you if you are pretty" while another

said, "You're nice to prettyPeople". The less attractive appearance of young children added to their changed behavior makes them less appealing to their parents and other adults than they were when they were babies. This many young children interpret as rejection and bitterly resent it. Even in the peer group, attractiveness is a social advantage, especially for girls. It may be a social disadvantage for boys, especially as they approach the gang age of late childhood. Awkwardness As Dare and Gordon have explained, "Children are not by nature clumsy and, once the toddler stage has passed, the grace of movement of the average child is something to be admired. So the child whose movements are awkward and incoordinate presents an unhappy contrast". While awkwardness in early childhood may be due to brain damage at birth, to mental deficiency, To some other physical cause, it is far more likely to be due to the fact that children are hampered by over-protective parents, by fears engendered by accidents or warnings to "be careful," by environmental obstacles, or by lack of opportunity to practice. As a result, Motor development is delayed, and children give the Impression of being "awkward" as compared with Their age-mates. Children who are awkward due to delay in their motor development cannot keep up with their Age-mates and, as a result, they are left out of their Play. They soon come to think that their age-mates Are better than they-a feeling which, in time, may become generalized and develop into an inferiority complex. Obesity Young children who are 20 percent or more Above the norm for their ages and body builds are regarded, medically, as "obese." Children with endomorphic body builds tend, as a group, to have more problems with obesity than do those with mesomorphic or ectomorphic builds. Obesity is always a hazard, and this is just as true of early childhood as of any other age. First, it is a health hazard. Like people of any age, obese children Are far more likely to develop diabetes and to experience heart and blood-pressure problems than are those whose weight is more nearly normal. Second, Obesity is a hazard to attractiveness. While chubby babies may be regarded as "cute," plump, overStuffed young children are not only not regarded as "cute" but, more seriously, they are likely to be scorned by their peers and labeled "Fatty." In addition, obesity is a hazard in early childhood because it's the time when eating habits are being established. If Young children are encouraged to overeat, if they are Praised and rewarded for their "clean plates," and if they are permitted to overindulge in carbohydrates and what is commonly known as "junk food"-food That fills one up but has little nutrient value-the chances are that the habit will become a life-long one that will lead to an obesity problem that will plague them throughout life. Left-Handedness As Herron has pointed out, "Throughout history, the left hand has had a bad press". There is no physical reason why it is better to be right- handed than left-handed but, because

approximately 90 percent of all Americans are Right-handed, being left-handed makes the individual different, and, throughout the childhood and adolescent years, being different is usually interpreted as being inferior. There are other reasons why being left-handed is regarded as a hazard during the early childhood years. When young children attempt to learn a skill from a right-handed person, they are likely to become confused about how to imitate the model. This confusion tends to worsen as children grow older and as Skills play a more important role in their lives. Left-handedness can affect children's educational success and, later, their vocational success or their social adjustments. Self-conscious adolescents, For example, may shun social situations in which eating with their left hands would embarrass them and make them feel conspicuous. Many parents, believing that left-handedness is a hazard, try to force their lefthanded children to use their right hands. This can also be hazardous because it emphasizes their difference, which they often interpret as inferiority, especially when parents use punitive approaches to force them to use their right hands. Ames and Ilg have sounded a word of caution about putting too much pressure on the young child to learn to use the right hand in preference to the left. According to them: If nature is working out something so complex, it seems obvious that, in all probability, best results will be obtained if parents do not interfere with the Child's natural expression of handedness other than, Perhaps, to present objects nearest to his right hand.

SOME IMPORTANT CONDITIONS CONTRIBUTING TO HAPPINESS IN EARLY CHILDHOOD

Good health, which enables young children to enjoy whatever they undertake and to carry it out successfully. • A stimulating environment in which children Have opportunities to use their abilities to the maximum. Parental acceptance of annoying childish behavior and parental guidance in learning to behave in a socially more acceptable way. A disciplinary policy that is well planned and consistently carried out. This lets young children know what is expected of them and prevents them from feeling that they are unfairly punished. Developmentally appropriate expressions of affection, such as showing pride in young Children's achievements and spending time with them, doing things they want to do. Realistic aspirations, in accordance with their capacities, so that children have a reasonableChance of making a success of what they un-Dertake, thus fostering favorable self-concepts. Encouragement of creativity in play and avoidance of ridicule or unnecessary criticism which dampen young children's enthusiasm to try to be creative. Acceptance by siblings and playmates, so That children will develop favorable attitudes toward social

activities. This can be encouraged by guidance in how to get along with other people and by good home models to imitate. • A prevailing atmosphere of cheerfulness and happiness in the home so that children will learn to make their contributions to maintaining this atmosphere. Achievements in activities important to the child and valued by the group with which the child is identified.

ANTECEDENT INFLUENCE OF GROWTH AND DEVELOPMENT IN EARLY CHILDHOOD

1. **Heredity** Heredity is the transmission of physical characteristics from parents to children through their genes. It influences all aspects of physical appearance such as height, weight, body structure, the colour of the eye, the texture of the hair, and even intelligence and aptitudes. Diseases and conditions such as heart disease, diabetes, obesity, etc., can also be passed through genes, thereby affecting the growth and development of the child adversely. However, environmental factors and nurturing can bring the best out of the already present qualities in the genes.
2. **Exercise and Health** The word exercise here does not mean physical exercise as a discipline or children deliberately engaging in physical activities knowing it would help them grow. Exercise here refers to the normal playtime and sports activities which help the body gain an increase in muscular strength and put on bone mass. Proper exercise helps children grow well and reach milestones on time or sooner. Exercise also keeps them healthy and fights off diseases by strengthening the immune system, especially if they play outside. This is because outdoor play exposes them to microbes that help them build resistance and prevent allergies.
3. **Environment** The environment plays a critical role in the development of children, and it represents the sum total of physical and psychological stimulation the child receives. Some of the environmental factors influencing early childhood development involve the physical surroundings and geographical conditions of the place the child lives in, as well as his social environment and relationships with family and peers. It is easy to understand that a well-nurtured child does better than a deprived one; the environment children are constantly immersed in contributes to this. A good school and a loving family build in children strong social and interpersonal skills, which will enable them to excel in other areas such as academics and extracurricular activities. This will, of course, be different for children who are raised in stressful environments.

4. **Hormones** Hormones belong to the endocrine system and influence the various functions of our bodies. They are produced by different glands that are situated in specific parts of the body to secrete hormones that control body functions. Their timely functioning is critical for normal physical growth and development in children. Imbalances in the functioning of hormone-secreting glands can result in growth defects, obesity, behavioural problems and other diseases. During puberty, the gonads produce sex hormones which control the development of the sex organs and the appearance of secondary sexual characteristics in boys and girls.
5. **Sex** The sex of the child is another major factor affecting the physical growth and development of a child. Boys and girls grow in different ways, especially nearing puberty. Boys tend to be taller and physically stronger than girls. However, girls tend to mature faster during adolescence, while boys mature over a longer period of time. The physical structure of their bodies also has differences which make boys more athletic and suited for activities that require physical rigour. Their temperaments also vary, making them show interest in different things.
6. **Nutrition** Nutrition is a critical factor in growth as everything the body needs to build and repair itself comes from the food we eat. Malnutrition can cause deficiency diseases that adversely affect the growth and development of children. On the other hand, overeating can lead to obesity and health problems in the long run, such as diabetes and heart disease. A balanced diet that is rich in vitamins, minerals, proteins, carbohydrates, and fats is essential for the development of the brain and body.
7. **Familial Influence** Families have the most profound impact in nurturing a child and determining the ways in which they develop psychologically and socially. Whether they are raised by their parents, grandparents, or foster care, they need basic love, care, and courtesy to develop as healthy functional individuals. The most growth is seen when families invest time, energy, and love in the development of the child through activities, such as reading to them, playing with them and having deep meaningful conversations. Families that abuse or neglect children would affect their positive development. These children may end up as individuals who have poor social skills and difficulty bonding with other people as adults. Helicopter parenting also has negative effects as they render children dependent on the parents even as young adults and unable to deal with difficulties in life on their own.:
8. **Geographical Influences** Where you live also has a great influence on how your children turn out to be. The schools they attend, the neighbourhood they live in, the

opportunities offered by the community and their peer circles are some of the social factors affecting a child's development. Living in an enriching community that has parks, libraries and community centres for group activities and sports all play a role in developing the child's skills, talents, and behaviour. Uninteresting communities can push some children to not go outside often but play video games at home instead. Even the weather of a place influences children in the form of bodily rhythms, allergies, and other health conditions. [:

9. Learning and Reinforcement Learning involves much more than schooling. It is also concerned with building the child up mentally, intellectually, emotionally, and socially so they operate as healthy functional individuals in the society. This is where the development of the mind takes place, and the child can gain some maturity. Reinforcement is a component of learning where an activity or exercise is repeated and refined to solidify the lessons learned. An example is playing a musical instrument; they get better at playing it as they practice playing the instrument. Therefore, any lesson that is taught has to be repeated until the right results are obtained. Although nature contributes much to the growth and development of children, nurture contributes much more. As mentioned earlier, some of these factors may not be controllable, and you'll have to make do with what you have. But there are certain things you can ensure for your child. This includes ensuring that your child gets enough rest.
10. Socio-Economic Status The socio-economic status of a family determines the quality of the opportunity a child gets. Studying in better schools that are more expensive has benefits in the long run. Well-off families can also offer better learning resources for their children, and they afford special aid if the kids need it. Children from poorer families may not have access to educational resources and good nutrition to reach their full potential. They may also have working parents who work too many hours and cannot invest enough quality time in their every day, because his development is heavily dependent on the amount of sleep he gets. Pay close attention to your child's nutritional and exercise levels, as these too play an important role in promoting your child's timely and healthy growth and development.

STIMULATING FACTORS IN INFANCY AND EARLY CHILDHOOD

Stimulating approach during growth and development in infancy and early childhood stage

Proper teaching aids Teaching aids are an integral component in any classroom. The many benefits of teaching aids include helping learners improve reading comprehension skills, illustrating or reinforcing a skill or concept, differentiating instruction and relieving anxiety or boredom by presenting information in a new and exciting way. Teaching aids also engage students' other senses since there are no limits in what aids can be utilized when supplementing a lesson.

Family influence Family is the foundation for Development of a child. The way a child is loved, cared& nurtured provides opportunity for a child to be better in his life in future. Family members are the first people with whom a child interacts with. Children learn a lot by observation.

Nourishment Young children should be fed frequently and in adequate quantities throughout the day, and their meals must be nutrientdense and comprised of a variety of food groups. Caregivers should prepare and feed meals with clean hands and dishes and interact with their child to respond to his or her hunger signals

Exercise Physical activities promotes healthy growth and development. It helps build a healthier body composition, stronger bones and muscles. It also improves the child's cardiovascular fitness. Physical activities help in the development of better motor skills and in concentration and thinking skills

Hormones In particular, hormones play a vital role in the regulation of growth and development, cognition, metabolism, hunger/thirst, reproductive processes and sexual function. Such processes are highly important for normal development in young children

MIDDLE CHIDHOOD

- Middle childhood (6to 12years) age 6 to the time individua becomes Sexually nature. Late childhood is marked by conditions. that profoundly affect a chid personal & social adjustment. Entrance into first grade is a milestone and beginning of late childhood. changes in attitudes, values and behaviour. takes place in late childhood
- Development tasks Learning physical skills necessary for ordinary games Building a wholesome attitude toward, oneself as a growing organism Larning to get along with age-mates Beginning to develop appropriate masculme or feminine social roles Developing fundamental skills in reading. writing and calculating Developing concepts necessary for everyday living Developing a conscience, a sense of morality.and a scale of values Developing attitudes toward social groups and institutions Achieving personal independence.

- Growth and Development Middle Childhood (6 to 12) Children between the ages of 6 and 12 are in the age period commonly referred to as middle childhood. In diverse cultures the 5-7 age period is regarded as the beginning of the "age of reason".

- Characteristics Names used by Parents. Troublesome age- Childress are no longer. Willing to do what they are told to do and influenced by peers. Sloppy age- Childers are careless, irresponsible, and slovenly about their appearances. Quarrelsome age - A patterns of behaviour that comes from their association. With peers outside the home of family sibling fights are common and when the emotional climate home is far from pleasant for all. Names used by Educators Elementary schoolage - Entered grade so it is called ESA. Critical period. Achievement habit like over-achiever, under achiever. Once formed in middle childhood tend to persist adulthood. Habit of working below or above it spread to all areas to academic. Names used by Psychologists Gang age - Major concern is acceptance is child or agemates or members of gang They do only gang approved behaviour. Creative age-In this Age only it will be determined wh childress will become conformists of producers of new and original work. Foundations. Of creative expression. Led downs in early childhood. Play Age - More time of middle children is devoted to play Skills of Middle childhood •

Skills of middle childhood Divided roughly into four categories

: *Self-help skills- eat, dress, bath and groom themselves. *Social-help skills- At home (making beds, dusting, and sweeping), at school (emptying Dustbins and washing chalkboards) * School skills-writing, drawing, painting, Dancing. Play skills-bicycle, skating, and swimming. • Physical Development Slow and relatively uniform growth until the changes of puberty begin. Body Build: Body starts to take a particular form. Endomorph Mesomorph Ectomorph • Motor Development Gross Motor Skills Development: In general, boys develop these skills slightly faster than do girls, except for skills involving balance and precise movements such as skipping, jumping, and hopping. Kids at this age also learn how to synchronize the movement of their body's various parts, allowing for the development of smoother, more coordinated whole-body movement routines such as are needed for participating in organized sports (e.g., throwing a football, baseball, or dribbling a basketball. • Fine Motor Skills Development Children in middle childhood also continue to hone their fine motor skills which can be distinguish from gross motor skills in that they require hand-eye coordination. Middle-childhood-aged children show dramatic improvements regarding their printed handwriting and Ability to write in cursive letters. They also develop the ability

to draw complex and detailed pictures that for the first time begin to incorporate depth cues (i.e., such as drawing farther away objects smaller) and 3D elements. Children also commonly become quite skillful at playing complicated games involving hand-eye coordination, including video and computer games. • Social Behaviour Children are no longer satisfied to play at home alone or with siblings or to do things with family members. They want to be with their peers, and they are lonely and dissatisfied when they are not with them. •

EMOTIONS AND EMOTIONAL EXPRESSIONS IN MIDDLE CHILDHOOD

Older children soon discover that expression of emotions, especially of the unpleasant emotions is socially unacceptable to their age mates. They learn that their age-mates regard temper outbursts as babyish, withdrawal reactions to fear as cowardly, and hurting others in jealousy as poor sportsmanship. As a result, older children acquire a strong incentive to learn to control the outward expressions of their emotions. At home, however, there is not the same strong incentive to control the emotions. As a result, children frequently express their emotions as forcibly as they did when they were younger. Under such circumstances, it is not surprising that parents criticize or punish them for "not acting their age." • Common Emotional Patterns of Middle Childhood Just as there are differences in the ways older children express their emotions, so there are differences in the kind of situation that gives rise to them. Older children are far more likely to become angry when a person makes a derogatory comment about them than are younger children who do not completely understand the meaning of the derogatory comment. Similarly, young children's curiosity is aroused by anything new and different. To an older child, the new and different must be pronounced or it will not arouse curiosity. • Emotional Catharsis As children learn to curb the external expressions of their emotions, they discover that, in doing so, they become nervous, tense, and ready to fly off the handle in a temper outburst at the slightest provocation. They are said to be in a "bad mood" or in a "bad humor." • Cognitive development During middle and late childhood children makes strides in several areas of cognitive function including the capacity of working memory, their ability to pay attention, and their use of memory strategies. Both changes in the brain and experience foster these abilities. • Language development Language production depends on children's mastery of fine motor control over the movements of their lips, tongue, breath, etc. Similarly, mastery of complex language phrasing and sentence construction depends on children's various cognitive abilities, including memory and attention abilities. •

CHANGES IN FAMILY RELATIONSHIPS IN LATE CHILDHOOD

The deterioration in family relationships, which began during the latter part of babyhood and continued through early childhood, becomes increasingly detrimental to children's development as late childhood progresses. It is also responsible for much of the feelings of insecurity and the unhappiness that older children experience. Many conditions are responsible for deterioration in family relationships in the closing years of childhood. Some of these are carry overs of earlier conditions and some are new, arising from situations characteristic of this period in the life span. The conditions contributing to changed parent-child relationships in early childhood, given in, still exert their influence in late childhood. In addition, new conditions develop that contribute to the deterioration in family relationships. There are, of course, times of peace and harmony in the home. And there are times when older children show real affection for, and interest in, their siblings, even to the point of helping in the care of younger brothers or sisters and following the advice. There are times when an older child shows real interest in and affection for a younger sibling. (Photo by Erika Stone.) and pattern of behavior set by older siblings. But these favourable relationships are outweighed in number. Similarly, there are times when older children are on the best of terms with their parents and relatives and even seem to enjoy family gathering. However, they more frequently show a definite preference for their own friends and a critical, resentful attitude toward their parents and relatives. The more pronounced these unfavorable attitudes and behavior patterns are, the more family relationships will deteriorate.

Antecedent influences on growth and development in middle childhood

1. **Genetics:** Genetics/Hereditary, also known as inheritance or biological inheritance is the transmission of physical characteristics from you to your children through your genes (the basic physical and functional unit of inheritance). Genes have an effect on most of the physical characteristics of your child such as height, weight, body structure, the colour of their eye, the texture of their hair, and even intelligence and aptitudes. For example, if you are tall, it is most likely that your child will also inherit this trait and be tall.

Not only this, various disorders, and health conditions such as heart disease, diabetes, obesity, etc., may also be passed on to your child through your genes, thereby affecting the growth and development of your child.

2. Sex (gender): The sex of your child is another major factor affecting the physical growth and development of your child. Boys tend to be taller and physically stronger than girls. On the contrary, most girls mature faster during adolescence, while boys take a longer period of time to mature. An adolescent is anyone who is between the age of 10 to 19 years and adolescence is the transition phase of your child from childhood to adulthood.

The physical structure of your child's body also depends on their gender. While boys are more athletic, girls might not be a fan of sports or rigorous physical activities.

3. Hormones: The endocrine system is composed of many glands which include the hypothalamus, pituitary, pineal, thyroid, parathyroid, thymus, adrenal, and pancreas. Hormones are produced and secreted by these glands, that regulate the growth and development, metabolism, tissue function, sexual function, reproduction, sleep, mood, etc., of your child's body. The timely functioning of most hormones is required for the normal physical growth and development of your child.

The main growth hormones in your child are:

- Growth hormone (GH) produced by the pituitary gland (a small oval shaped gland at the base of the brain) that helps children with overall growth and development.
- Thyroid hormone, critical for the growth and development of your child's brain. It also regulates your child's heart rate, blood pressure, and energy levels.
- Sex hormones control the development of sex organs. Testosterone is the primary male sex hormone and estrogen is the primary female sex hormone.

4. **Environment:** Environmental factors refer to the external conditions (sum total of physical and psychological situations) that affect your child's growth and development. Some of the environmental factors influencing early childhood development involve the physical surroundings and geographical conditions of the place the child lives in, as well as his/her social environment and relationships with family and peers.

A peaceful, loving family and school environment builds strong social and interpersonal skills in your child, which will enable them to excel in their academics and extracurricular activities. Pollutants like lead, manganese, mercury, and pesticides through water or food, can hamper growth, cause physical abnormalities, and weaken your child's immune system.

5. **Nutrition:** Your child's body needs the right amounts of nutrition to build and repair itself. Malnutrition (lack of sufficient nutrients in the body) can cause deficiency diseases that can adversely affect the growth and development of your child. Make sure your child eats a balanced diet that is rich in vitamins, minerals, proteins, carbohydrates, and fats. These are required for the development of the brain and the body.
6. **Exercises:** Exercises or physical activities are very important for the growth and development of your child. Exercise primarily refers to normal playtime and sports activities that help the body gain muscular strength and bone mass.

Proper exercise will help your child grow well, keep him/her healthy and fight off diseases by strengthening the immune system. Encourage your child to play for about 1 hour every day, if possible, play outdoors. Exposure to sunlight is also essential during the early growth and development stages of your child.

7. **Socio-economic Factors:** The socio-economic status of your family determines the quality of opportunities that your child gets. Children from financially well-off families have access to better nutrition and formal education. Poorer families may

not have access to educational resources and good nutrition to reach their full potential.

To summarize, some of the above-mentioned factors are controllable and you can decide how to manage those for your child's growth and development. But some factors are beyond your control and will play their part. Besides nutrition and exercise, pay close attention to your child's behaviour, attitude, rest, and sleep patterns too.

A physically, mentally, and emotionally healthy child is a joy to every parent!

8. **Family Structure:** Family support is important for all children, but at this age, the family dynamic starts to change. For parent child relationships, at middle childhood, the amount of time children spend with their parents decreases immensely. It is important for parents to recognize that this change is completely normal. Rather than being an authoritarian, reasoning with your children is beneficial at this age because their cognitive development allows for logical thinking. For this reason, children benefit from oversight parenting where they can make supervised decisions on their own. With siblings, this is the stage where sibling rivalry tends to increase. They are also still a good source of support though. Overall, a close-knit family structure is recommended so these kids can get the support they need, but they also need to start having some more independence.

9. **Technology:** Technology can be very useful in a classroom setting to help teachers meet the individual needs of their students, but technology can also be harmful to children at such a vulnerable age. Young adolescents are exposed to media daily whether it be on a computer, the television, or their own person cell phone. One major problem with media is the unrealistic body image the media portrays. Middle Childhood children have a hard time distinguishing what is real online from what is not, so the media can give a distorted view on reality. There is also a lot of content that is out there that is inappropriate for children to see, but they often do anyways because things tend to just pop up on the screen. There are also predators online that parents need to be aware of.

10. **Biological Factors:** For decades, psychologists have argued whether child development is a function of nature or nurture. Most agree that both play a role. Nature refers to biological factors. Nurture refers to environmental or relationship factors. Biological factors include the child's gender, health, prenatal care, and nutrition. If a child is not progressing at the expected rate, education professionals should explore the following:

- Was the child premature? Were any health issues present at birth?

- Does the child have any chronic health conditions.

- Is there a history of mental illness in the family?

- Does the child have healthy eating and

Sleeping habits?

- Does the child regularly visit the

Pediatrician and dentist?

- Has the child had an eye exam?

Is the child being taught appropriate hygiene practices?

ADOLESCENCE AGE

- Adolescence (12 to 20 year)

- **Definition** Physical changes are rapid and profound, reproductive maturity is attained, search for identity becomes central, ability to think abstractly and use scientific reasoning develops, adolescent egocentrism persists in some behaviors, peer groups help to develop and test self-concept, relationships with parents are generally good.

- **Development tasks of adolescence** Achieving new and more mature relations with age-mates both sexes. Achieving a masculine or feminine social role. Accepting one's physique and using one's body effectively. Desiring accepting and achieving socially responsible behavior. Achieving emotional independence from parents and other adults.

- **Physical development characteristics** Physical development refers to increase in bodily tissues. Generally, it denotes height and weight changes, changes in body proportions, bone

growth, muscular development, and development of nervous system. The rate of growth of each child in these aspects is different. With physical development comes the sense of bigness or smallness in the individual. Physical development is an important aspect of development because it influences child's behaviour both directly and indirectly. Directly, it determines what the child can do and indirectly, it influences his attitudes towards himself and others. Abnormal physical development tends to develop a feeling of awkwardness and inferiority

. • Directions of Development:

1.Cephalocaudal development: It means that development spreads over the body from head to foot i.e., individual begins to grow from head region down wards. The structural & functional developments occur first in the head region, then in trunk & lastly in legs and toes. For example: Infants can control their eye and head movement before they can sit by themselves. They control their back and arms well enough to sit long before they can use their legs for walking.

2.Proximodistal sequence: means that the development proceeds from central part of the body towards peripheries. In this sequence the spinal cord of the individual develops first & then outward development takes place. For example, the baby cuts his front teeth before he cuts his side ones. Functionally, the baby can use his arms before his hands and use his hands before he can control the movement of the fingers. Physical growth cycle: The term cycle means that physical growth does not occur at a regular pace but rather in periods, phases, or waves of different velocities, sometimes rapidly and sometimes slowly. •

Growth in Adolescence

Puberty is a period of rapid growth and sexual maturation. These changes begin sometime between eight and fourteen. Girls begin puberty at around ten years of age and boys begin approximately two years later. Pubertal changes take around three to four years to complete. Adolescents experience an overall physical growth spurt. The growth proceeds from the extremities toward the torso. This is referred to as distal proximal development. First the hands grow, then the arms, and finally the torso. The overall physical growth spurt results in 10-11 inches of added height and 50 to 75 pounds of increased weight. The head begins to grow sometime after the feet have gone through their period of growth. Growth of the head is preceded by growth of the ears, nose, and lips. The difference in these patterns of growth result in adolescents appearing awkward and out-of-proportion. As the torso grows, so does

the internal organs. The heart and lungs experience dramatic growth during this period. During childhood, boys and girls are quite similar in height and weight. However, gender differences become apparent during adolescence. From approximately age ten to fourteen, the average girl is taller, but not heavier, than the average boy. After that, the average boy becomes 216 both taller and heavier, although individual differences are certainly noted. As adolescents physically mature, weight differences are more noteworthy than height differences. At eighteen years of age, those that are heaviest weigh almost twice as much as the lightest, but the tallest teens are only about 10% taller than the shortest (Seifert, 2012). Both height and weight can certainly be sensitive issues for some teenagers. Most modern societies, and the teenagers in them, tend to favour relatively short women and tall men, as well as a somewhat thin body build, especially for girls and women. Yet, neither socially preferred height nor thinness is the destiny for many individuals. Being overweight, in particular, has become a common, serious problem in modern society due to the prevalence of diets high in fat and lifestyles low in activity (Taravella, Hirscher, & Woolston, 2004). The educational system has, unfortunately, contributed to the problem as well by gradually restricting the number of physical education courses and classes in the past two decades. Average height and weight are also related somewhat to racial and ethnic background. In general, children of Asian background tend to be slightly shorter than children of European and North American background. The latter in turn tend to be shorter than children from African societies (Eveleth & Tanner, 1990). Body shape differs slightly as well, though the differences are not always visible until after puberty. Asian background youth tend to have arms and legs that are a bit short relative to their torsos, and African background youth tend to have relatively long arms and legs. The differences are only averages, as there are large individual differences as is a period of rapid growth and sexual maturation. These changes begin sometime between eight and fourteen. Girls begin puberty at around ten years of age and boys begin approximately two years later. Pubertal changes take around three to four years to complete. Adolescents experience an overall physical growth spurt. The growth proceeds from the extremities toward the torso. This is referred to as distal proximal development. First the hands grow, then the arms, and finally the torso. The overall physical growth spurt results in 10-11 inches of added height and 50 to 75 pounds of increased weight. The head begins to grow sometime after the feet have gone through their period of growth. Growth of the head is preceded by growth of the ears, nose, and lips. The difference in these patterns of growth result in adolescents appearing awkward and out-of-proportion. As the torso grows, so does the internal organs. The heart and lungs experience dramatic growth

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Sexual Development

Typically, the growth spurt is followed by the development of sexual maturity. Sexual changes are divided into two categories: Primary sexual characteristics and secondary sexual characteristics. Primary sexual characteristics are changes in the reproductive organs. For males, this includes growth of the testes, penis, scrotum, and sperm Arche or first ejaculation of semen. This occurs between 11 and 15 years of age. For females, primary characteristics include growth of the uterus and menarche or the first menstrual period. The female gametes, which are stored in the ovaries, are present at birth, but are immature. Each ovary contains

about 400,000 gametes, but only 500 will become mature eggs (Crooks & Baur, 2007). Beginning at puberty, one ovum ripens and is released about every 28 days during the menstrual cycle. Stress and higher percentage of body fat can bring menstruation at younger ages.

Male Anatomy: Males have both internal and external genitalia that are responsible for procreation and sexual intercourse. Males produce their sperm on a cycle, and unlike the female's ovulation cycle, the male sperm production cycle is constantly producing millions of sperm daily. The main male sex organs are the penis and the testicles, the latter of which produce semen and sperm. The semen and sperm, as a result of sexual intercourse, can fertilize an ovum in the female's body; the fertilized ovum (zygote) develops into a foetus which is later born as a child. 217

Female Anatomy: Female external genitalia is collectively known as the vulva, which includes the mons veneris, labia majora, labia minora, clitoris, vaginal opening, and urethral opening. Female internal reproductive organs consist of the vagina, uterus, fallopian tubes, and ovaries. The uterus hosts the developing foetus, produces vaginal and uterine secretions, and passes the male's sperm through to the fallopian tubes while the ovaries release the eggs. A female is born with all her eggs already produced. The vagina is attached to the uterus through the cervix, while the uterus is attached to the ovaries via the fallopian tubes. Females have a monthly reproductive cycle; at certain intervals the ovaries release an egg, which passes through the fallopian tube into the uterus. If, in this transit, it meets with sperm, the sperm might penetrate and merge with the egg, fertilizing it. If not fertilized, the egg is flushed out of the system through menstruation. Figure 6.2 Female Reproductive System Source Figure 6.1 Male Reproductive System Source 218

Secondary sexual characteristics are visible physical changes not directly linked to reproduction but signal sexual maturity. For males this includes broader shoulders and a lower voice as the larynx grows. Hair becomes coarser and darker, and hair growth occurs in the pubic area, under the arms and on the face. For females, breast development occurs around age 10, although full development takes several years. Hips broaden, and pubic and underarm hair develops and also becomes darker and coarser. Acne: An unpleasant consequence of the hormonal changes in puberty is acne, defined as pimples on the skin due to overactive sebaceous (oil-producing) glands (Dolgin, 2011). These glands develop at a greater speed than the skin ducts that discharges the oil. Consequently, the ducts can become blocked with dead skin and acne will develop. According to the University of California at Los Angeles Medical Centre (2000),

approximately 85% of adolescents develop acne, and boys develop acne more than girls because of greater levels of testosterone in their systems (Dolgin, 2011). Experiencing acne can lead the adolescent to withdraw socially, especially if they are self-conscious about their skin or teased (Goodman, 2006). Effects of Pubertal Age: The age of puberty is getting younger for children throughout the world. According to Euling et al. (2008) data are sufficient to suggest a trend toward an earlier breast development onset and menarche in girls. A century ago the average age of a girl's first period in the United States and Europe was 16, while today it is around 13. Because there is no clear marker of puberty for boys, it is harder to determine if boys are maturing earlier too. In addition to better nutrition, less positive reasons associated with early puberty for girls include increased stress, obesity, and endocrine disrupting chemicals. Cultural differences are noted with Asian-American girls, on average, developing last, while African American girls enter puberty the earliest. Hispanic girls start puberty the second earliest, while European-American girls rank third in their age of starting puberty. Although African American girls are typically the first to develop, they are less likely to experience negative consequences of early puberty when compared to European-American girls (Weir, 2016). Research has demonstrated mental health problems linked to children who begin puberty earlier than their peers. For girls, early puberty is associated with depression, substance use, eating disorders, disruptive behaviour disorders, and early sexual behaviour (Graber, 2013). Early maturing girls demonstrate more anxiety and less confidence in their relationships with family and friends, and they compare themselves more negatively to their peers (Weir, 2016). Problems with early puberty seem to be due to the mismatch between the child's appearance and the way she acts and thinks. Adults especially may assume the child is more capable than she is, and parents might grant more freedom than the child's age would indicate. For girls, the emphasis on physical attractiveness and sexuality is emphasized at puberty and they may lack effective coping strategies to deal with the attention they may receive. Figure 6.3 First time shaving Source 219 Additionally, mental health problems are more likely to occur when the child is among the first in his or her peer group to develop. Because the preadolescent time is one of not wanting to appear different, early developing children stand out among their peer group and gravitate toward those who are older. For girls, this results in them interacting with older peers who engage in risky behaviours such as substance use and early sexual behaviour (Weir, 2016). Boys also see changes in their emotional functioning at puberty. According to Mendel, Harden, Brooks-Gunn, and Graber (2010), while most boys experienced a decrease in depressive symptoms during puberty, boys who began puberty earlier and exhibited a rapid

tempo, or a fast rate of change, increased in depressive symptoms. The effects of pubertal tempo were stronger than those of pubertal timing, suggesting that rapid pubertal change in boys may be a more important risk factor than the timing of development. In a further study to better analyze the reasons for this change, Mendel, Harden, Brooks-Gunn and Graber (2012) found that both early maturing boys and rapidly maturing boys displayed decrements in the quality of their peer relationships as they moved into early adolescence, whereas boys with more typical timing and tempo development actually experienced improvements in peer relationships. The researchers concluded that the transition in peer relationships may be especially challenging for boys whose pubertal maturation differs significantly from those of others their age. Consequences for boys attaining early puberty were increased odds of cigarette, alcohol, or another drug use (Dudovitz, et al., 2015).

Gender Role Intensification: At about the same time that puberty accentuates gender, role differences also accentuate for at least some teenagers. Some girls who excelled at math or science in elementary school, may curb their enthusiasm and displays of success at these subjects for fear of limiting their popularity or attractiveness as girls (Taylor, Gilligan, & Sullivan, 1995; Sadker, 2004). Some boys who were not especially interested in sports previously may begin dedicating themselves to athletics to affirm their masculinity in the eyes of others. Some boys and girls who once worked together successfully on class projects may no longer feel comfortable doing so, or alternatively may now seek to be working partners, but for social rather than academic reasons. Such changes do not affect all youngsters equally, nor affect any one youngster equally on all occasions. An individual may act like a young adult on one day, but more like a child the next.

Adolescent Brain The brain undergoes dramatic changes during adolescence. Although it does not get larger, it matures by becoming more interconnected and specialized (Giedd, 2015). The myelination and Figure 6.4 Source Figure 6.5 Source 220 development of connections between neurons continues. This results in an increase in the white matter of the brain and allows the adolescent to make significant improvements in their thinking and processing skills. Different brain areas become myelinated at different times. For example, the brain's language areas undergo myelination during the first 13 years. Completed insulation of the axons consolidates these language skills but makes it more difficult to learn a second language. With greater myelination, however, comes diminished plasticity as a myelin coating inhibits the growth of new connections (Dobbs, 2012). Even as the connections between neurons are strengthened, synaptic pruning occurs more than during childhood as the brain adapts to changes in the environment. This synaptic pruning causes the gray matter of the brain, or the cortex, to become thinner but more efficient (Dobbs, 2012).

The corpus callosum, which connects the two hemispheres, continues to thicken allowing for stronger connections between brain areas. Additionally, the hippocampus becomes more strongly connected to the frontal lobes, allowing for greater integration of memory and experiences into our decision making.

Piaget's Formal Operational Stage

During the formal operational stage, adolescents are able to understand abstract principles which have no physical reference. They can now contemplate such abstract constructs as beauty, love, freedom, and morality. The adolescent is no longer limited by what can be directly seen or heard. Additionally, while younger children solve problems through trial and error, adolescents demonstrate hypothetical-deductive reasoning, which is developing hypotheses based on what might logically occur. They are able to think about all the possibilities in a situation beforehand, and then test them systematically (Crain, 2005). Now they are able to engage in true scientific thinking. Formal operational thinking also involves accepting hypothetical situations. Adolescents understand the concept of transitivity, which means that a relationship between two elements is carried over to other elements logically related to the first two.

Adolescent Egocentrism:

Once adolescents can understand abstract thoughts, they enter a world of hypothetical possibilities and demonstrate egocentrism or a heightened self-focus. The egocentricity comes from attributing unlimited power to their own thoughts (Crain, 2005). Piaget believed it was not until adolescents took on adult roles that they would be able to learn the limits to their own thoughts. David Elkind (1967) expanded on the concept of Piaget's adolescent egocentricity. Elkind theorized that the physiological changes that occur during adolescence result in adolescents being primarily concerned with themselves. Additionally, since adolescents fail to differentiate between what others are thinking and their own thoughts, they believe that others are just as fascinated with their behaviour and appearance. This belief results in the adolescent anticipating the reactions of others, and consequently constructing an imaginary audience. "The imaginary audience is the adolescent's belief that those around them are as concerned and focused on their appearance as they themselves are" (Schwartz, Maynard, & Uzelac, 2008, p. 441). Elkind thought that the imaginary audience contributed to the self-consciousness that occurs during early adolescence. The desire for privacy and reluctance to share personal information may be a further reaction to feeling under constant

observation by others. Alternatively, recent research has indicated that the imaginary audience is not imaginary. Specifically, adolescents and adults feel that they are often under scrutiny by others, especially if they are active on social media (Yau & Reich, 2018). Another important consequence of adolescent egocentrism is the personal fable or belief that one is unique, special, and invulnerable to harm. Elkind (1967) explains that because adolescents feel so important to others (imaginary audience) they regard themselves and their feelings as being special and unique. Adolescents believe that only they have experienced strong and diverse emotions, and therefore others could never understand how they feel. This uniqueness in one's emotional experiences reinforces the adolescent's belief of invulnerability, especially to death. Adolescents will engage in risky behaviours, such as drinking and driving or unprotected sex, and feel they will not suffer any negative consequences. Elkind believed that adolescent egocentricity emerged in early adolescence and declined in middle adolescence, however, recent research has also identified egocentricity in late adolescent

Consequences of Formal Operational Thought

: As adolescents are now able to think abstractly and hypothetically, they exhibit many new ways of reflecting on information (Dolgin, 2011). For example, they demonstrate greater introspection or thinking about one's thoughts and feelings. They begin to imagine how the world could be which leads them to become idealistic or insisting upon high standards of behaviour. Because of their idealism, they may become critical of others, especially adults in their life. Additionally, adolescents can demonstrate hypocrisy, or pretend to be what they are not. Since they are able to recognize what others expect of them, they will conform to those expectations for their emotions and behaviour seemingly hypocritical to themselves. Lastly, adolescents can exhibit pseudo stupidity. This is when they approach problems at a level that is too complex, and they fail because the tasks are too simple. Their new ability to consider alternatives is not completely under control and they appear "stupid" when they are in fact bright, just not experienced.

Education

In early adolescence, the transition from elementary school to middle school can be difficult for many students, both academically and socially. Crusoe and Benner (2015) found that some students became disengaged and alienated during this transition which resulted in negative longterm consequences in academic performance and mental health. This may be because middle school teachers are seen as less supportive than elementary school teachers

(Brass, McKellar, North, & Ryan, 2019). Similarly, the transition to high school can be difficult. For example, high schools are larger, more bureaucratic, less personal, and there are less opportunities for teachers to get to know their students (Eccles & Roeser, 2016).

Peers:

Certainly, the beliefs and expectations about academic success supported by an adolescent's family play a significant role in the student's achievement and school engagement. However, research has also focused on the importance of peers in an adolescent's school experience. Specifically, having friends who are high-achieving, academically motivated and engaged promotes motivation and engagement in the adolescent, while those whose friends are unmotivated, disengaged, and low achieving promotes the same feelings (Shin & Ryan, 2014; Vaillancourt, Paiva, Véronneau, & Dishion, 2019).

Gender: Crosnoe and Benner (2015) found that female students earn better grades, try harder, and are more intrinsically motivated than male students. Further, Duchesne, Larose, and Feng (2019) described how female students were more oriented toward skill mastery, used a variety of learning strategies, and persevered more than males. However, more females exhibit worries and anxiety about school, including feeling that they must please teachers and parents. These worries can heighten their effort but lead to fears of disappointing others. In contrast, males are more confident and do not value adult feedback regarding their academic performance (Brass et al., 2019). There is a subset of female students who identify with sexualized gender stereotypes (SGS), however, and they tend to underperform academically. These female students endorse the beliefs that "girls" should be sexy and not smart. Nelson and Brown (2019) found that female students who support SGS, reported less desire to master skills and concepts, were more sceptical of the usefulness of an education, and downplayed their intelligence.

EMOTIONAL DURING ADOLESCENCE Traditional, adolescent has been thought 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. It is necessary, therefore, to look for other explanations of the emotional tension on characteristic of this age. On a spring day, 4-month-old Zack, cradled in the arms of his father, followed by 13-month-old Emily and 23-month-old Brenda, led by their mothers, arrived at the door of my

classroom. Which had been transformed into a playroom for the morning. My students and I spent the next hour watching closely for the wide variety of capacities that develop over the first 2 years. Especially captivating were the children's emotional reactions to people and things around them. As Zack's dad bounced him energetically on his knee and lifted him up in the air, Zack responded with a gleeful grin. A tickle followed by a lively kiss on the tummy produced an excited giggle. When I held a rattle in front of Zack, his brows knit, his face sobered, and he eyed it intently as he mobilized all to reach for it.

- Emotional patterns in adolescence the emotional patterns of adolescence, while similar to those of childhood (see Box 5-4), differ in the stimuli that give rise to the emotions and, even more important, in the degree of control the individual exercises 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...
- 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 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 another, as they did earlier. To achieve emotional maturity, adolescents must learn to get a perspective on situations which otherwise would lead to emotional reactions. 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 outlets 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 unfavourable, as they are toward laughing, unless the laughter is held in check and occurs only when the social group approves. •

SOCIAL CHANGES DURING ADOLESCENCE

One of 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 behaviour, new social groupings, new values in friendship selection, new values in social acceptance and rejection, and new values in the selection of leaders (56). • **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 behaviour 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 (96 109). 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. Hurlock's Benioff (67) have explained peer-group influence in adolescence in this way: The peer group is the adolescent's real world, providing him a stage upon which to try out himself and others. It is in the peer group that he continues to formulate and revise his concept of self; it is here that he is evaluated by others who are presumably his equals and

ANTECEDENT INFLUENCE ON GROWTH AND DEVELOPMENT

Hereditary Factors:

The child carries genetic endowments from his/her parents. It is genetically transmitted characteristics from one generation to the next.

Environmental Factors:

The child lives and grows in his environment. Environment consists of a wide range of stimuli, and it provides the necessary input and experiential base for development of the child.

Home Environment:

Home environment exerts tremendous influence on child's understanding of the external world. The child begins to acquire knowledge through interaction with parents and other family members.

Cultural Factors:

Culture refers to a system of beliefs, attitudes and values that are transmitted from one generation to the next.

socialization

Socioeconomic Status (SES):

The index of socioeconomic status is determined by parental education, occupation and income.

Normative influences:

Normative influences occur in a similar way for majority of people in a particular group. These influences may be biological or environmental.

Education and Training:

Each child is equipped with certain which need to be nurtured through proper education and training

ADULTHOOD AGE

Emerging Adulthood Defined Emerging adulthood is the period between the late teens and early twenties; ages 18-25, although some researchers have included up to age 29 in the definition (Society for the Study of Emerging Adulthood, 2016). Jeffrey Arnett (2000) argues that emerging adulthood is neither adolescence nor is its young adulthood. Individuals in this age period have left behind the relative dependency of childhood and adolescence but have not yet taken on the responsibilities of adulthood. "Emerging adulthood is a time of life when

many different directions remain possible, when little about the future is decided for certain, when the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period of the life course" (Arnett, 2000, p. 469). Arnett identified five characteristics of emerging adulthood that distinguished it from adolescence and young adulthood (Arnett, 2006).

- It is the age of identity exploration. In 1950, Erik Erikson proposed that it was during adolescence that humans wrestled with the question of identity. Yet even Erikson (1968) commented on a trend during the 20th century of a "prolonged adolescence" in industrialized societies. Today, most identity development occurs during the late teens and early twenties rather than adolescence. It is during emerging adulthood that people are exploring their career choices and ideas about intimate relationships, setting the foundation for adulthood.
- Arnett also described this time as the age of instability (Arnett, 2000; Arnett, 2006). Exploration generates uncertainty and instability. Emerging adults change jobs, relationships, and residences more frequently than other age groups.

- This is also the age of self-focus. Being self-focused is not the same as being "self-centered." Adolescents are more self-centered than emerging adults. Arnett reports that in his research, he found emerging adults to be very considerate of the feelings of others, especially their parents. They now begin to see their parents as people not just parents, something most adolescents fail to do (Arnett, 2006). Nonetheless, emerging adults focus more on themselves, as they realize that they have few obligations to others and that this is the time where they can do what they want with their life.
- This is also the age of feeling inbetween. When asked if they feel like adults, more 18- to 25-year-olds answer "yes and no" than do teens or adults over the age of 25 (Arnett, 2001). Most emerging adults have gone through the changes of puberty, are typically no longer in high school, and many have also moved out of their parents' home. Thus, they no longer feel as dependent as they did as teenagers. Yet, they may still be financially dependent on their parents to some degree, and they have not completely attained some of the indicators of adulthood, such as finishing their education, obtaining a good full-time job, being in a committed relationship, or being responsible for others. It is not surprising that Arnett found that 60% of 18- to 25-year-olds felt that in some ways they were adults, but in some ways, they were not (Arnett, 2001).
- Emerging adulthood is the age of possibilities. It is a time period of optimism as more 18- to 25-year-olds feel that they will someday get to where they want to be in life. Arnett (2000, 2006) suggests that this optimism is because these dreams have yet to be tested. For example, it is easier to believe that you will eventually find your soul mate when you have yet to have had a serious

relationship. It may also be a chance to change directions, for those whose lives up to this point have been difficult. The experiences of children and teens are influenced by the choices and decisions of their parents. If the parents are dysfunctional, there is little a child can do about it. In emerging adulthood, people can move out and move on. They have the chance to transform their lives and move away from unhealthy environments. Even those whose lives were happier and more fulfilling as children, now have the opportunity in emerging adulthood to become independent and make decisions about the direction they would like their life to take. Socioeconomic Class and Emerging Adulthood: The theory of emerging adulthood was initially criticized as only reflecting upper middle-class, college-attending young adults in the United States and not those who were working class or poor (Arnett, 2016). Consequently, Arnett reviewed results from the 2012 Clark University Poll of Emerging Adults, whose participants were demographically like the United States population. Results primarily indicated consistencies across aspects of the theory, including positive and negative perceptions Figure 7.1 Source 248 of the time-period and views on education, work, love, sex, and marriage. Two significant differences were found, the first being that emerging adults from lower socioeconomic classes identified more negativity in their emotional lives, including higher levels of depression. Secondly, those in the lowest socioeconomic group were more likely to agree that they had not been able to find sufficient financial support to obtain the education they believed they needed. Overall, Arnett concluded that emerging adulthood exists wherever there is a period between the end of adolescence and entry into adult roles, but acknowledging social, cultural, and historical contexts was also important.

The Physiological Peak

People in their mid-twenties to mid-forties are considered to be in early adulthood. By the time we reach early adulthood, our physical maturation is complete, although our height and weight may increase slightly. Those in their early twenties are probably at the peak of their physiological development, including muscle strength, reaction time, sensory abilities, and cardiac functioning. The reproductive system, motor skills, strength, and lung capacity are all operating at their best. Most professional athletes are at the top of their game during this stage, and many women have children in the early-adulthood years (Boundless, 2016). The aging process actually begins during early adulthood. Around the age of 30, many changes begin to occur in different parts of the body. For example, the lens of the eye starts to stiffen and thicken, resulting in changes in vision (usually affecting the ability to focus on close objects).

Sensitivity to sound decreases; this happens twice as quickly for men as for women. Hair can start to thin and become gray around the age of 35, although this may happen earlier for some individuals and later for others. The skin becomes drier, and wrinkles start to appear by the end of early adulthood. This includes a decline in response time and the ability to recover quickly from physical exertion. The immune system also becomes less adept at fighting off illness, and reproductive capacity starts to decline (Boundless, 2016).

Obesity

Although at the peak of physical health, a concern for early adults is the current rate of obesity. Results from the National Center for Health Statistics indicated that an estimated 70.7% of U.S. adults aged 20 and over were overweight in 2012 (CDC, 2015b) and by 2016, 39.8% were considered obese (Hales, Carroll, Fryar, & Ogden, 2017)). Body mass index (BMI), expressed as weight in kilograms divided by height in meters squared (kg/m^2), is commonly used to classify overweight (BMI 25.0–29.9), obesity (BMI greater than or equal to 30.0), and extreme obesity (BMI greater than or equal to 40.0). The current statistics are an increase from the 2013-2014 statistics that indicated that an estimated 35.1% were obese, and 6.4% extremely obese (Fryar, Carroll, & Ogden, 2014). The CDC also indicated that one's 20s are the prime time to gain weight as the average person gains one to two pounds per year from early adulthood into middle adulthood. The average man in his 20s weighs around 185 pounds and by his 30s weighs approximately 200 pounds. The average American woman weighs 162 pounds in her 20s and 170 pounds in her 30s. The American obesity crisis is also reflected worldwide (Wighton, 2016). In 2014, global obesity rates for men were measured at 10.8% and among women 14.9%. This translates to 266 million obese men and 375 million obese women in the world, and more people were identified as obese than underweight. Although obesity is seen throughout the world, more obese men and women live in China and the USA than in any other country. Figure 7.6 illustrates how waist circumference is also used as a measure of obesity. Figure 7.7 demonstrates the percentage growth for youth (2-19 years) and adults (20-60+ years) identified as obese between 1999 and 2016. Causes of Obesity: According to the Centers for Disease Control and Prevention (CDC) (2016), obesity originates from a complex set of contributing factors, including one's environment, behavior, and genetics. Societal factors include culture, education, food marketing and promotion, the quality of food, and the physical activity environment available. Behaviors leading to obesity include diet, the amount of physical activity, and medication use. Lastly, there does not appear to be a single gene responsible for obesity. Rather, research has identified variants in

several genes that may contribute to obesity by increasing hunger and food intake. Another genetic explanation is the mismatch between today's environment and "energy-thrifty genes" that multiplied in the distant past, when food source was unpredictable. The genes that helped our ancestors survive occasional famines are now being challenged by environments in which food is plentiful all the time. Overall, obesity most likely results from complex interactions among the environment and multiple genes.

A Healthy, But Risky Time

Doctor's visits are less frequent in early adulthood than for those in midlife and late adulthood and are necessitated primarily by injury and pregnancy (Berger, 2005). However, the top five causes of death in emerging and early adulthood are non-intentional injury (including motor vehicle accidents), homicide, and suicide with cancer and heart disease completing the list (Heron, & Smith, 2007). Rates of violent death (homicide, suicide, and accidents) are highest among young adult males, and vary by race and ethnicity. Rates of violent death are higher in the United States than in Canada, Mexico, Japan, and other selected countries. Males are 3 times more likely to die in auto accidents than are females (Frieden, 2011). Alcohol Abuse: A significant contributing factor to risky behavior is alcohol. According to the 2014 National Survey on Drug Use and Health (National Institute on Alcohol Abuse and Alcoholism (NIAAA), 2016) 88% of people ages 18 or older reported that they drank alcohol at some point in their lifetime; 71% reported that they drank in the past year; and 57% reported drinking in the past month. Additionally, 6.7% reported that they engaged in heavy drinking in the past month. Heavy drinking is defined as drinking five or more drinks on the same occasion on each of five or more days in the past 30 days. Nearly 88,000 people (approximately 62,000 men and 26,000 women) die from alcohol-related causes annually, making it the fourth leading preventable cause of death in the United States. In 2014, alcohol-impaired driving fatalities accounted for 9,967 deaths (31% of overall driving fatalities). The NIAAA defines binge drinking when blood alcohol concentration levels reach 0.08 g/dL. This typically occurs after four drinks for women and five drinks for men in approximately two hours. In 2014, 25% of people ages 18 or older reported that they engaged in binge drinking in the past month. According to the NIAAA (2015) "Binge drinking poses serious health and safety risks, including car crashes, drunk-driving arrests, sexual assaults, and injuries. Over the long term, frequent binge drinking can damage the liver and other organs," (p. 1). Alcohol and College Students: Results from the 2014 survey demonstrated a difference between the amount of alcohol consumed by college students and

those of the same age who are not in college (NIAAA, 2016). Specifically, 60% of full-time college students' ages 18–22 drank alcohol in the past month compared with 51.5% of other persons of the same age not in college. In addition, 38% of college students' ages 18–22 engaged in binge drinking; that is, five or more drinks on one occasion in the past month, compared with 33.5% of other persons of the same age. Lastly, 12% of college students' (ages 18–22) engaged in heavy drinking; that is, binge drinking on five or more occasions per month, in the past month. This compares with 9.5% of other emerging adults not in college. The consequences for college drinking are staggering, and the NIAAA (2016) estimates that each year the following occur: • 1,825 college students between the ages of 18 and 24 die from alcohol-related

Factors Affecting College Students' Drinking

: Several factors associated with college life affect a student's involvement with alcohol (NIAAA, 2015). These include the pervasive availability of alcohol, inconsistent enforcement of underage drinking laws, unstructured time, coping with stressors, and limited interactions with parents and other adults. Due to social pressures to conform and expectations when entering college, the first six weeks of freshman year are an especially susceptible time for students. Additionally, more drinking occurs in colleges with active Greek systems and athletic programs. Alcohol consumption is lowest among students living with their families and commuting, while it is highest among those living in fraternities and sororities. College Strategies to Curb Drinking: Strategies to address college drinking involve the individual-level and campus community as a whole. Identifying at-risk groups, such as first year students, members of fraternities and sororities, and athletes has proven helpful in changing students' knowledge, attitudes, and behavior regarding alcohol (NIAAA, 2015). Interventions include education and awareness programs, as well as intervention by health professionals. At the college-level, reducing the availability of alcohol has proven effective by decreasing both consumption and negative consequences. Figure 7.8 Source 256 Non-Alcohol Substance Use: Illicit drug use peaks between the ages of 19 and 22 and then begins to decline. Additionally, 25% of those who smoke cigarettes, 33% of those who smoke marijuana, and 70% of those who abuse cocaine began using after age 17 (Volkow, 2004). Emerging adults (18 to 25) are the largest abusers of prescription opioid pain relievers, anti-anxiety medications, and attention deficit hyperactivity disorder medication (National Institute on Drug Abuse, 2015). In 2016, opioid misuse within the past 12 months was reported by 3.6% of 12–17-year-olds and was twice as high among those 18-25 (Office of Adolescent Health, 2019). In 2014 more

than 1700 emerging adults died from a prescription drug overdose. This is an increase of four times since 1999. Additionally, for every death there were 119 emergency room visits. Daily marijuana use is at the highest level in three decades (National Institute on Drug Abuse, 2015). For those in college, 2014 data indicate that 6% of college students smoke marijuana daily, while only 2% smoked daily in 1994. For noncollege students of the same age, the daily percentage is twice as high (approximately 12%). Additionally, according to a recent survey by the National Institute of Drug Abuse (2018), daily cigarette smoking is lower for those in college in comparison to non-college groups (see Figure 7.10). Rates of violent death are influenced by substance use which peaks during emerging and early adulthood. Drugs impair judgment, reduce inhibitions, and alter mood, all of which can lead to dangerous behavior. Reckless driving, violent altercations, and forced sexual encounters are some examples. Drug and alcohol use increase the risk of sexually transmitted infections because people are more likely to engage in risky sexual behavior when under the influence. This includes having sex with someone who has had multiple partners, having anal sex without the use of a condom, having multiple partners, or having sex with someone whose history is unknown. Lastly, as previously discussed, drugs and alcohol ingested during pregnancy have a teratogenic effect on the developing embryo and fetus.

Gender

As previously discussed in chapter 4, gender is the cultural, social and psychological meanings associated with masculinity and femininity. A person's sense of self as a member of a particular gender is known as gender identity. Because gender is considered a social construct, meaning that it does not exist naturally, but is instead a concept that is created by cultural and societal norms, there are cultural variations on how people express their gender identity. For example, in American culture, it is considered feminine to wear a dress or skirt. However, in many Middle Eastern, Asian, and African cultures, dresses or skirts (often referred to as sarongs, robes, or gowns) can be considered masculine. Similarly, the kilt worn by a Scottish male does not make him appear feminine in his culture. For many adults, the drive to adhere to masculine and feminine gender roles, or the societal expectations associated with being male or female, continues throughout life. In American culture, masculine roles have traditionally been associated with strength, aggression, and dominance,

while feminine roles have traditionally been associated with passivity, nurturing, and subordination. Men tend to outnumber women in professions such as law enforcement, the military, and politics, while women tend to outnumber men in care-related occupations such as childcare, healthcare, and social work. These occupational roles are examples of stereotypical American male and female behavior, derived not from biology or genetics, but from our culture's traditions. Adherence to these roles may demonstrate fulfillment of social expectations, however, not necessarily personal preferences (Diamond, 2002). Consequently, many adults are challenging gender labels and roles, and the long-standing gender binary; that is, categorizing humans as only female and male, has been undermined by current psychological research (Hyde, Bigler, Joel, Tate, & van Anders, 2019). The term gender now encompasses a wide range of possible identities, including cisgender, transgender, agender, genderfluid, genderqueer, gender nonconforming, bigender, pangender, ambigender, nongendered, intergender, and Two-spirit which is a modern umbrella term used by some indigenous North Americans to describe gender-variant individuals in their communities (Carroll, 2016). Hyde et al. (2019) advocates for a conception of gender that stresses multiplicity and diversity and uses multiple categories that are not mutually exclusive.

Temperament and Personality in Adulthood

If you remember from chapter 3, temperament is defined as the innate characteristics of the infant, including mood, activity level, and emotional reactivity, noticeable soon after birth. Does one's temperament remain stable through the lifespan? Do shy and inhibited babies grow up to be shy adults, while the sociable child continues to be the life of the party? Like most developmental research the answer is more complicated than a simple yes or no. Chess and Thomas (1987), who identified children as easy, difficult, slow-to-warm-up or blended, found that children identified as easy grew up to become well-adjusted adults, while those who exhibited a difficult temperament were not as well-adjusted as adults. Kagan (2002) studied the temperamental category of inhibition to the unfamiliar in children. Infants exposed to unfamiliarity reacted strongly to the stimuli and cried loudly, pumped their limbs, and had an increased heart rate. Research has indicated that these highly reactive children show temperamental stability into early childhood, and Bohlin and Hagekull (2009) found that shyness in infancy was linked to social anxiety in adulthood. An important aspect of this research on inhibition was looking at the response of the amygdala, which is important for fear and anxiety, especially when confronted with possible threatening events in the environment. Using functional magnetic resonance imaging (fMRIs) young adults identified

as strongly inhibited toddlers showed heightened activation of the amygdala when compared to those identified as uninhibited toddlers (Davidson & Begley, 2012). The research does seem to indicate that temperamental stability holds for many individuals through the lifespan, yet we know that one's environment can also have a significant impact. Recall from our discussion on epigenesis or how environmental factors are thought to change gene expression by switching genes on and off. Many cultural and environmental factors can affect one's temperament, including supportive versus abusive child-rearing, socioeconomic status, stable homes, illnesses, teratogens, etc. Additionally, individuals often choose environments that support their temperament, which in turn further strengthens them (Cain, 2012). In summary, because temperament is genetically driven, genes appear to be the major reason why temperament remains stable into adulthood. In contrast, the environment appears mainly responsible for any change in temperament (Clark & Watson, 1999). Everybody has their own unique personality; that is, their characteristic manner of thinking, feeling, behaving, and relating to others (John, Robins, & Pervin, 2008). Personality traits refer to these characteristic, routine ways of thinking, feeling, and relating to others. Personality integrates one's temperament with cultural and environmental influences. Consequently, there are signs or indicators of these traits in childhood, but they become particularly evident when the person is an adult. Personality traits are integral to each person's sense of self, as they involve what people value, how they think and feel about things, what they like to do, and, basically, what they are like most every day throughout much of their lives.

Five-Factor Model: There are hundreds of different personality traits, and all of these traits can be organized into the broad dimensions referred to as the Five-Factor Model (John, Naumann, & Table 7.4

Descriptions of the Big Five Personality Traits	Dimension	Description	Examples of behaviors predicted by the trait
Openness to experience	A general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and variety of experience	Individuals who are highly open to experience tend to have distinctive and unconventional decorations in their home. They are also likely to have books on a wide variety of topics, a diverse music collection, and works of art on display.	Conscientiousness
Conscientiousness	A tendency to show selfdiscipline, act dutifully, and aim for achievement	Individuals who are conscientious have a preference for planned rather than spontaneous behavior.	Extraversion
Extraversion	The tendency to experience positive emotions and to seek out stimulation and the company of others	Extroverts enjoy being with people. In groups they like to talk, assert themselves, and draw attention to themselves.	Agreeableness
Agreeableness	A tendency to be compassionate and cooperative rather than suspicious and antagonistic toward others; reflects individual differences in		

general concern for social harmony Agreeable individuals value getting along with others. They are generally considerate, friendly, generous, helpful, and willing to compromise their interests with those of others. Neuroticism The tendency to experience negative emotions, such as anger, anxiety, or depression; sometimes called “emotional instability” Those who score high in neuroticism are more likely to interpret ordinary situations as threatening and minor frustrations as hopelessly difficult. They may have trouble thinking clearly, making decisions, and coping effectively with stress. Adapted from John, Naumann, and Soto (2008) 276 Soto, 2008). These five broad domains include: Openness, Conscientiousness, Extraversion,

Relationships with Parents and Siblings

In early adulthood the parent-child relationship has to transition toward a relationship between two adults. This involves a reappraisal of the relationship by both parents and young adults. One of the biggest challenges for parents, especially during emerging adulthood, is coming to terms with the adult status of their children. Aquilino (2006) suggests that parents who are reluctant or unable to do so may hinder young adults’ identity development. This problem becomes more pronounced when young adults still reside with their parents. Arnett (2004) reported that leaving home often helped promote psychological growth and independence in early adulthood. Sibling relationships are one of the longest-lasting bonds in people’s lives. Yet, there is little research on the nature of sibling relationships in adulthood (Aquilino, 2006). What is known is that the nature of these relationships change, as adults have a choice as to whether they will maintain a close bond and continue to be a part of the life of a sibling. Siblings must make the same reappraisal of each other as adults, as parents have to with their adult children. Research has shown a decline in the frequency of interactions between siblings during early adulthood, as presumably peers, romantic relationships, and children become more central to the lives of young adults. Aquilino (2006) suggests that the task in early adulthood may be to maintain enough of a bond so that there will be a foundation for this relationship in later life. Those who are successful can often move away from the “older-younger” sibling conflicts of childhood, toward a more equal relationship between two adults. Siblings that were close to each other in childhood are typically close in adulthood (Dunn, 1984, 2007), and in fact, it is unusual for siblings to develop closeness for the first time in adulthood. Overall, the majority of adult sibling relationships are close (Cicirelli, 2009)

Erikson: Intimacy vs. Isolation

Erikson's (1950, 1968) sixth stage focuses on establishing intimate relationships or risking social isolation. Intimate relationships are more difficult if one is still struggling with identity. Achieving a sense of identity is a life-long process, as there are periods of identity crisis and stability. However, once identity is established intimate relationships can be pursued. These intimate relationships include acquaintanceships and friendships, but also the more important close relationships, which are the long-term romantic relationships that we develop with another person, for instance, in a marriage (Hendrick & Hendrick, 2000).

Attraction Because most of us enter into a close relationship at some point, it is useful to know what psychologists have learned about the principles of liking and loving. A major interest of psychologists is the study of interpersonal attraction, or what makes people like, and even love, each other.

Similarity: One important factor in attraction is a perceived similarity in values and beliefs between the partners (Davis & Rusbult, 2001). Similarity is important for relationships because it is more convenient if both partners like the same activities and because similarity supports one's values. We can feel better about ourselves and our choice of activities if we see that our partner also enjoys doing the same things that we do. Having others like and believe in the same things we do makes us feel validated in our beliefs. This is referred to as consensual validation and is an important aspect of why we are attracted to others.

Self-Disclosure: Liking is also enhanced by self-disclosure, the tendency to communicate frequently, without fear of reprisal, and in an accepting and empathetic manner. Friends are friends because we can talk to them openly about our needs and goals and because they listen and respond to our needs (Reis & Aron, 2008). However, self-disclosure must be balanced. If we open up about our concerns that are important to us, we expect our partner to do the same in return. If the self-disclosure is not reciprocal, the relationship may not last.

Proximity: Another important determinant of liking is proximity, or the extent to which people are physically near us. Research has found that we are more likely to develop friendships with people who are nearby, for instance, those who live in the same dorm that we do, and even with people who just happen to sit nearer to us in our classes (Back, Schmukle, & Egloff, 2008). Proximity has its effect on liking through the principle of mere exposure, which is the tendency to prefer stimuli (including, but not limited to people) that we have seen more frequently. The effect of mere exposure is powerful and occurs in a wide variety of situations. Infants tend to smile at a photograph of someone they have seen before more than they smile at a photograph of

Figure 7.24 Birds of a Feather Flock Together

Source: 281 someone they are seeing for the first time (Brooks-Gunn & Lewis, 1981), and people prefer side-to-side reversed images of their own faces over their normal (nonreversed) face, whereas their friends prefer their normal face over the reversed one (Mita, Dermer, & Knight, 1977). This is expected on the basis of mere exposure, since people see their own faces primarily in mirrors, and thus are exposed to the reversed face more often. Mere exposure may well have an evolutionary basis. We have an initial fear of the unknown, but as things become familiar, they seem more similar and safer, and thus produce more positive affect and seem less threatening and dangerous (Harmon-Jones & Allen, 2001; Freitas, Azizian, Travers, & Berry, 2005). When the stimuli are people, there may well be an added effect. Familiar people become more likely to be seen as part of the ingroup rather than the outgroup, and this may lead us to like them more. Zebrowitz and her colleagues found that we like people of our own race in part because they are perceived as similar to us (Zebrowitz, Bornstad, & Lee, 2007).

Friendships

In our twenties, intimacy needs may be met in friendships rather than with partners. This is especially true in the United States today as many young adults postpone making long-term commitments to partners, either in marriage or in cohabitation. The kinds of friendships shared by women tend to differ from those shared by men (Tannen, 1990).

Friendships between men are more likely to involve sharing information, providing solutions, or focusing on activities rather than discussion problems or emotions. Men tend to discuss opinions or factual information or spend time together in an activity of mutual interest. Friendships between women are more likely to focus on sharing weaknesses, emotions, or problems. Women talk about difficulties they are having in other relationships and express their sadness, frustrations, and joys. These differences in approaches lead to problems when men and women come together. She may want to vent about a problem she is having; he may want to provide a solution and move on to some activity. But when he offers a solution, she thinks he does not care. Friendships between men and women become more difficult because of the unspoken question about whether the friendships will lead to a romantic involvement. Consequently, friendships may diminish once a person has a partner or single friends may be replaced with couple friends. Love Sternberg (1988) suggests that there are three main components of love: Passion, intimacy, and commitment (see Figure 7.25).

Love

relationships vary depending on the presence or absence of each of these components. Passion refers to the intense, physical attraction partners feel toward one another. Intimacy involves the ability to share feelings, psychological closeness and personal thoughts with the other. Commitment is the conscious decision to stay together. Passion can be found in the early stages of a relationship, but intimacy takes time to develop because it is based on knowledge of the partner. Once intimacy has been established, partners may resolve to stay in the relationship. Although many would agree that all three components are important to a relationship, many love relationships do not consist of all three. Let's look at other possibilities.

Liking

: In this relationship, intimacy or knowledge of the other and a sense of closeness is present. Passion and commitment, however, are not. Partners feel free to be themselves and disclose personal information. They may feel that the other person knows them well and can be honest with them and let them know if they think the person is wrong. These partners are friends. However, being told that your partner “thinks of you as a friend” can be a devastating blow if you are attracted to them and seeking a romantic involvement. Infatuation: Perhaps, this is Sternberg's version of "love at first sight". Infatuation consists of an immediate, intense physical attraction to someone. A person who is infatuated finds it hard to think of anything but the other person. Brief encounters are played over and over in one's head; it may be difficult to eat and there may be a rather constant state of arousal. Infatuation is rather short-lived, however, lasting perhaps only a matter of months or as long as a year or so. It tends to be based on physical attraction and an image of what one “thinks” the other is all about.

Fatuous Love: However, some people who have a strong physical attraction push for commitment early in the relationship. Passion and commitment are aspects of fatuous love. There is no intimacy, and the commitment is premature. Partners rarely talk seriously or share their ideas. They focus on their intense physical attraction and yet one, or both, is also talking of making a lasting commitment. Sometimes this is out of a sense of insecurity and a desire to make sure the partner is locked into the relationship. Empty Love: This type of love may be found later in a relationship or in a relationship that was formed to meet needs other than intimacy or passion, including financial needs, childrearing assistance, or

attaining/maintaining status. Here the partners are committed to staying in the relationship for the children, because of a religious conviction, or because there are no alternatives. However, they do not share ideas or feelings with each other and have no physical attraction for one another.

Romantic Love: Intimacy and passion are components of romantic love, but there is no commitment. The partners spend much time with one another and enjoy their closeness but have not made plans to continue. This may be true because they are not in a position to make such commitments or because they are looking for passion and closeness and are afraid it will die out if they commit to one another and start to focus on other kinds of obligations.

Companionate Love: Intimacy and commitment are the hallmarks of companionate love. Partners love and respect one-another and they are committed to staying together. However, their physical attraction may have never been strong or may have just died out over time. Nevertheless, partners are good friends and committed to one another.

Consummate Love: Intimacy, passion, and commitment are present in consummate love. This is often perceived by western cultures as “the ideal” type of love. The couple shares passion: the spark has not died, and the closeness is there. They feel like best friends, as well as lovers, and they are committed to staying together.

283 Adult Lifestyles Singlehood: Being single is the most common lifestyle for people in their early 20s, and there has been an increase in the number of adults staying single. In 1960, only about 1 in 10 adults aged 25 or older had never been married, in 2012 that had risen to 1 in 5 (Wang & Parker, 2014). While just over half (53%) of unmarried adults say they would eventually like to get married, 32 percent are not sure, and 13 percent do not want to get married. It is projected that by the time current young adults reach their mid-40s and 50s, almost 25% of them may not have married. The U.S. is not the only country to see a rise in the number of single adults. Table 7.6 lists some of the reasons young adults give for staying single. In addition, adults are marrying later in life, cohabitating, and raising children outside of marriage in greater numbers than in previous generations. Young adults also have other priorities, such as education, and establishing their careers. This may be reflected by changes in attitudes about the importance of marriage. In a recent Pew Research survey of Americans, respondents were asked to indicate which of the following statements came closer to their own views:

- “Society is better off if people make marriage and having children a priority”
- “Society is just as well off if people have priorities other than marriage and children”

Slightly more adults endorsed the second statement (50%) than those who chose the first (46%), with the remainder either

selecting neither, both equally, or not responding (Wang & Parker, 2014). Young adults aged 18-29 were more likely to endorse this view than adults age 30 to 49; 67 percent and 53 percent respectively. In contrast, those age 50 or older were more likely to endorse the first statement (53 percent). Hooking Up: United States demographic changes have significantly affected the romantic relationships among emerging and early adults. As previously described, the age for puberty has declined, while the times for one's first marriage and first child have been pushed to older ages. This results in a "historically unprecedented time gap where young adults are physiologically able to reproduce, but not psychologically or socially ready to settle down and begin a family and child rearing," (Garcia, Reiber, Massey, & Merriwether, 2012, p. 172). Consequently, according to Bogle (2007, 2008) traditional forms of dating have shifted to more casual hookups that involve uncommitted sexual encounters.

Table 7.6 Reasons for Staying Single Have not met the right person 30% Do not have financial stability 27% Not ready to settle down 22% Too young to marry 22% Based on Data from Wang & Parker (2014) Pew Research Center Figure 7.26 Source 284 Even though most research on hooking up involves college students, 70% of sexually active 12- 21 year olds reported having had uncommitted sex during the past year (Grello, Welsh, Harper, & Dickson, 2003). Additionally, Manning, Giordano and Longmore (2006) found that 61% of sexually active seventh, ninth, and eleventh graders reported being involved in a sexual encounter outside of a dating relationship.

Friends with Benefits: Hookups are different than those relationships that involve continued mutual exchange. These relationships are often referred to as Friends with Benefits (FWB) or "Booty Calls." These relationships involve friends having casual sex without commitment. Hookups do not include a friendship relationship. Bisson and Levine (2009) found that 60% of 125 undergraduates reported a FWB relationship. The concern with FWB is that one partner may feel more romantically invested than the other (Garcia et al., 2012). Hooking up

Gender Differences: When asked about their motivation for hooking up, both males and females indicated physical gratification, emotional gratification, and a desire to initiate a romantic relationship as reasons (Garcia & Reiber, 2008). Although males and females are more similar than different in their sexual behaviors, a consistent finding among the research is that males demonstrate a greater permissiveness to casual sex (Oliver & Hyde, 1993). In another study involving 16,288 individuals across 52 nations, males reported a greater desire of sexual partner variety than females, regardless of relationship status or sexual orientation (Schmitt et al., 2003). This difference can be attributed to gender role expectations for both

males and females regarding sexual promiscuity. Additionally, the risks of sexual behavior are higher for females and include unplanned pregnancy, increased sexually transmitted diseases, and susceptibility to sexual violence (Garcia et al., 2012). Although hooking up relationships have become normalized for emerging adults, some research indicates that the majority of both sexes would prefer a more traditional romantic relationship (Garcia et al., 2012). Additionally, Owen and Fincham (2011) surveyed 500 college students with experience with hookups, and 65% of women and 45% of men reported that they hoped their hookup encounter would turn into a committed relationship. Further, 51% of women and 42% of men reported that they tried to discuss the possibility of starting a relationship with their hookup partner. Casual sex has also been reported to be the norm among gay men, but they too indicate a desire for romantic and companionate relationships (Clarke & Nichols, 1972). Emotional Consequences of Hooking up: Concerns regarding hooking up behavior certainly are evident in the research literature. One significant finding is the high comorbidity of hooking up and substance use. Those engaging in non-monogamous sex are more likely to have used marijuana, cocaine, and alcohol, and the overall risks of sexual activity are drastically increased with the addition of alcohol and drugs (Garcia et al., 2012). Regret has also been expressed, and those who had the most regret after hooking up also had more symptoms of depression (Welsh, Grello, & Harper, 2006). Hook ups were also found to lower self-esteem, increase guilt, and foster feelings of using someone or feeling used. Females displayed more negative reactions than males, and this may be due to females identifying more emotional involvement in sexual encounters than males. Hooking up can best be explained by a biological, psychological, and social perspective. Research indicates that emerging adults feel it is necessary to engage in hooking up behavior as part of the sexual script depicted in the culture and media. Additionally, they desire sexual gratification. However, they also want a more committed romantic relationship and may feel regret with uncommitted sex. Online Dating: The ways people are finding love has changed with the advent of the Internet. Nearly 50 million Americans have tried an online dating website or mobile app (Bryant & Sheldon, 2017). Online dating has also increased dramatically among those age

Parenthood

Parenthood is undergoing changes in the United States and elsewhere in the world. Children are less likely to be living with both parents, and women in the United States have fewer children than they did previously. The average fertility rate of women in the United States

was about seven children in the early 1900s and has remained relatively stable at 2.1 since the 1970s (Hamilton, Martin, & Ventura, 2011; Martinez, Daniels, & Chandra, 2012). Not only are parents having fewer children, the context of parenthood has also changed. Parenting outside of marriage has increased dramatically among most socioeconomic, racial, and ethnic groups, although college-educated women are substantially more likely to be married at the birth of a child than are mothers with less education (Dye, 2010). People are having children at older ages, too. This is not surprising given that many of the age markers for adulthood have been delayed, including marriage, completing education, establishing oneself at work, and gaining financial independence. In 2014 the average age for American first-time mothers was 26.3 years (CDC, 2015a). The birth rate for women in their early 20s has declined in recent years, while the birth rate for women in their late 30s has risen. In 2011, 40% of births were to women ages 30 and older. For Canadian women, birth rates are even higher for women in their late 30s than in their early 20s. In 2011, 52% of births were to women ages 30 and older, and the average first-time Canadian mother was 28.5 years old (Cohn, 2013). Improved birth control methods have also enabled women to postpone motherhood. Despite the fact that young people are more often delaying childbearing, most 18- to 29-year-olds want to have children and say that being a good parent is one of the most important things in life (Wang & Taylor, 2011). Influences on Parenting

: Parenting is a complex process in which parents and children influence on another. There are many reasons that parents behave the way they do. The multiple influences on parenting are still being explored. Proposed influences on parenting include Parent characteristics, child characteristics, and contextual can sociocultural characteristics. (Belsky, 1984; Demick, 1999). Parent Characteristics: Parents bring unique traits and qualities to the parenting relationship that affect their decisions as parents. These characteristics include the age of the parent, gender, beliefs, personality, developmental history, knowledge about parenting and child development, and mental and physical health. Parents' personalities affect parenting behaviors. Mothers and fathers who are more agreeable, conscientious, and outgoing are warmer and provide more structure to their children. Parents who are more agreeable, less anxious, and less negative also support their children's autonomy more than parents who are anxious and less agreeable (Prinz, Stams, Dekovic, Reijntes, & Belsky, 2009). Parents who have these personality traits appear to be better able to respond to their children positively and provide a more consistent, structured environment for their children. Figure 7.33 Source 294 Parents' developmental histories, or their experiences as children, also affect their

parenting strategies. Parents may learn parenting practices from their own parents. Fathers whose own parents provided monitoring, consistent and age-appropriate discipline, and warmth were more likely to provide this constructive parenting to their own children (Kerr, Capaldi, Pears, & Owen, 2009). Patterns of negative parenting and ineffective discipline also appear from one generation to the next. However, parents who are dissatisfied with their own parents' approach may be more likely to change their parenting methods with their own children.

Child Characteristics: Parenting is bidirectional. Not only do parents affect their children, but children also influence their parents. Child characteristics, such as gender, birth order, temperament, and health status, affect parenting behaviors and roles. For example, an infant with an easy temperament may enable parents to feel more effective, as they are easily able to soothe the child and elicit smiling and cooing. On the other hand, a cranky or fussy infant elicits fewer positive reactions from his or her parents and may result in parents feeling less effective in the parenting role (Eisenberg et al., 2008). Over time, parents of more difficult children may become more punitive and less patient with their children (Clark, Kochanska, & Ready, 2000; Eisenberg et al., 1999; Kiff, Lengua, & Zalewski, 2011). Parents who have a fussy, difficult child are less satisfied with their marriages and have greater challenges in balancing work and family roles (Hyde, Else-Quest, & Goldsmith, 2004). Thus, child temperament, as previously discussed in chapter 3, is one of the child characteristics that influences how parents behave with their children. Another child characteristic is the gender of the child. Parents respond differently to boys and girls. Parents often assign different household chores to their sons and daughters. Girls are more often responsible for caring for younger siblings and household chores, whereas boys are more likely to be asked to perform chores outside the home, such as mowing the lawn (Grusec, Goodnow, & Cohen, 1996). Parents also talk differently with their sons and daughters, providing more scientific explanations to their sons and using more emotion words with their daughters (Crowley, Callanan, Tenenbaum, & Allen, 2001).

Contextual Factors and Sociocultural Characteristics: The parent-child relationship does not occur in isolation. Sociocultural characteristics, including economic hardship, religion, politics, neighborhoods, schools, and social support, also influence parenting. Parents who experience economic hardship are more easily frustrated, depressed, and sad, and these emotional characteristics affect their parenting skills (Conger & Conger, 2002). Culture also influences parenting behaviors in fundamental ways. Although promoting the development of skills necessary to function effectively in one's community is a universal goal of parenting, the specific skills necessary vary widely from culture to culture. Thus, parents have different goals for their children

that partially depend on their culture (Tamis-LeMonda et al., 2008). Parents vary in how much they emphasize goals for independence and individual achievements, maintaining harmonious relationships, and being embedded in a strong network of social relationships. Other important contextual characteristics, such as the neighborhood, school, and social networks, also affect parenting, even though these settings do not always include both the child and the parent (Bronfenbrenner, 1989). Culture is also a contributing contextual factor, as discussed previously in chapter four. For example, Latina mothers who perceived their neighborhood as more dangerous showed less warmth with their children, perhaps because of the greater stress associated with living a threatening environment (Gonzales et al., 2011)

Middle adulthood

or midlife, refers to the period of the lifespan between early adulthood and late adulthood. Although ages and tasks are culturally defined, the most common age definition is from 40-45 to 60-65. This may be the least studied time of the lifespan, and research on this developmental period is relatively new as many aspects of midlife are still being explored. In the United States, the large Baby Boom cohort (those born between 1946 and 1964) are now midlife adults (and some even late adults) and this has led to increased interest in this developmental stage. We do know that this stage reflects both developmental gains and losses and that there are considerable individual differences, but there is still much to learn about this age group.

Learning Objectives:

Physical Development in Middle Adulthood • Explain the difference between primary and secondary aging • Describe sensory changes that occur during middle adulthood • Identify health concerns in middle adulthood • Explain what occurs during the climacteric for females and males • Describe sexuality during middle adulthood • Explain the importance of sleep and consequences of sleep deprivation • Describe the importance of exercise and nutrition for optimal health • Describe brain functioning in middle adulthood Each person experiences age-related physical changes based on many factors: biological factors, such as molecular and cellular changes, and oxidative damage are called primary aging, while aging that occurs due to controllable factors, such as an unhealthy lifestyle including lack of physical exercise and poor diet, is called secondary aging (Busse, 1969). These factors are shown in Figure 8.1 Getting out of shape is not an inevitable part of aging; it is probably due to the fact that

middleaged adults become less physically active and have experienced greater stress. Smoking tobacco, drinking alcohol, poor diet, stress, physical inactivity, and chronic disease, such as diabetes or arthritis, reduce overall health. However, there are things can be done to combat many of these changes by adopting healthier lifestyles. Figure 8.1

Contributors to Aging Source 308 Physical Changes Hair: When asked to imagine someone in middle adulthood, we often picture someone with the beginnings of wrinkles and gray or thinning hair. What accounts for these physical changes? Hair color is due to a pigment called melanin which is produced by hair follicles (Martin, 2014). With aging, the hair follicles produce less melanin, and this causes the hair to become gray. Hair color typically starts turning lighter at the temples, but eventually all the hair will become white. For many, graying begins in the 30s, but it is largely determined by your genes. Gray hair occurs earlier in white people and later in Asians. Genes also determine how much hair remains on your head. Almost everyone has some hair loss with aging, and the rate of hair growth slows with aging. Many hair follicles stop producing new hairs and hair strands become smaller. Men begin showing signs of balding by 30 and some are nearly bald by 60. Male-pattern baldness is related to testosterone and is identified by a receding hairline followed by hair loss at the top of the head. Women can also develop femalepatterned baldness as their hair becomes less dense and the scalp becomes visible (Martin, 2014). Sudden hair loss, however, can be a symptom of a health problem. Skin: Skin continues to dry out and is prone to more wrinkling, particularly on the sensitive face area. Wrinkles, or creases in the skin, are a normal part of aging. As we get older, our skin dries and loses the underlying layer of fat, so our face no longer appears smooth. Loss of muscle tone and thinning skin can make the face appear flabby or drooping. Although wrinkles are a natural part of aging and genetics plays a role, frequent sun exposure and smoking will cause wrinkles to appear sooner. Dark spots and blotchy skin also occur as one ages and are due to exposure to sunlight (Moskowitz, 2014). Blood vessels become more apparent as the skin continues to dry and get thinner. Sarcopenia: The loss of muscle mass and strength that occurs with aging is referred to as sarcopenia (Morley, Baumgartner, Roubenoff, Mayer, & Nair, 2001). Sarcopenia is thought to be a significant factor in the frailty and functional impairment that occurs when older. The decline of growth and anabolic hormones, especially testosterone, and decreased physical activity have been implicated as causes of sarcopenia (Proctor, Balagopal, & Nair, 1998). This decline in muscle mass can occur as early as 40 years of age and contributes significantly to a decrease in life quality, increase in health care costs, and early death in older adults

(Karakelides & Nair, 2005). Exercise is certainly important to increase strength, aerobic capacity, and muscle protein synthesis, but unfortunately it does not reverse all the age-related changes that occur. The Figure 8.2 Andre Agassi Source 309 muscle-to-fat ratio for both men and women also changes throughout middle adulthood, with an accumulation of fat in the stomach area. Lungs: The lungs serve two functions: Supply oxygen and remove carbon dioxide. Thinning of the bones with age can change the shape of the rib cage and result in a loss of lung expansion. Age related changes in muscles, such as the weakening of the diaphragm, can also reduce lung capacity. Both of these changes will lower oxygen levels in the blood and increase the levels of carbon dioxide. Experiencing shortness of breath and feeling tired can result (NIH, 2014b). In middle adulthood, these changes and their effects are often minimal, especially in people who are non-smokers and physically active. However, in those with chronic bronchitis, or who have experienced frequent pneumonia, asthma other lung related disorders, or who are smokers, the effects of these normal age changes can be more pronounced.

Sensory Changes Vision

: A normal change of the eye due to age is presbyopia, which is Latin for “old vision.” It refers to a loss of elasticity in the lens of the eye that makes it harder for the eye to focus on objects that are closer to the person. When we look at something far away, the lens flattens out; when looking at nearby objects tiny muscle fibers around the lens enable the eye to bend the lens. With age these muscles weaken and can no longer accommodate the lens to focus the light. Anyone over the age of 35 is at risk for developing presbyopia. According to the National Eye Institute (NEI) (2016), signs that someone may have presbyopia include: • Hard time reading small print • Having to hold reading material farther than arm’s distance • Problems seeing objects that are close • Headaches • Eyestrain Another common eye problem people experience as they age are floaters, little spots or “cobwebs” that float around the field of vision. They are most noticeable if you are looking at the sky on a sunny day, or at a lighted blank screen. Floaters occur when the vitreous, a gel-like substance in the interior of the eye, slowly shrinks. As it shrinks, it becomes somewhat stringy, and these strands can cast tiny shadows on the retina. In most cases, floaters are harmless, more of an annoyance than a sign of eye problems. However, floaters that appear suddenly, or that darken and obscure vision can be a sign of more serious eye problems, such a retinal tearing,

Health Concerns Heart Disease:

According to the most recent National Vital Statistics Reports (Kochanek, Murphy, Xu, & Arias, 2019) heart disease continues to be the number one cause of death for Americans as it claimed 23% of those who died in 2017. It is also the number one cause of death worldwide (World Health Organization, 2018). Heart disease develops slowly over time and typically appears in midlife (Hooker & Pressman, 2016). Heart disease can include heart defects and heart rhythm problems, as well as narrowed, blocked, or stiffened blood vessels referred to as cardiovascular disease. The blocked blood vessels prevent the body and heart from receiving adequate blood. Atherosclerosis, or a buildup of fatty plaque in the arteries, is the most common cause of cardiovascular disease. The plaque buildup thickens the artery walls and restricts the blood flow to organs and tissues. Cardiovascular disease can lead to a heart attack, chest pain (angina), or stroke (Mayo Clinic, 2014a). Figure 8.5 illustrates atherosclerosis. Symptoms of cardiovascular disease differ for men and women. Males are more likely to suffer chest pain, while women are more likely to demonstrate shortness of breath, nausea, and extreme fatigue. Symptoms can also include pain in the arms, legs, neck, jaw, throat, abdomen or back (Mayo Clinic, 2014a). According to the Mayo Clinic (2014a) there are many risk factors for developing heart disease, including medical conditions, such as high blood pressure, high cholesterol, diabetes, and obesity. Other risk factors include:

- Advanced Age-increased risk for narrowed arteries and weakened or thickened heart muscle.
- Sex-males are at greater risk, but a female's risk increases after menopause.
- Family History-increased risk, especially if male parent or brother developed heart disease before age 55 or female parent or sister developed heart disease before age 65.
- Smoking-nicotine constricts blood vessels and carbon monoxide damages the inner lining.
- Poor Diet-a diet high in fat, salt, sugar, and cholesterol.

Figure 8.5 Atherosclerosis Source 312

- Excessive Alcohol Consumption-alcohol can raise the level of bad fats in the blood and increase blood pressure
- Stress-unrelieved stress can damage arteries and worsen other risk factors.
- Poor Hygiene-establishing good hygiene habits can prevent viral or bacterial infections that can affect the heart. Poor dental care can also contribute to heart disease. Complications of heart disease can include heart failure, when the heart cannot pump enough blood to meet the body's needs, and a heart attack, such as when a blood clot blocks the blood flow to the heart. This blockage can damage or destroy a part of the heart muscle, and atherosclerosis is a factor in a heart attack. Treatment for heart disease includes medication, surgery, and lifestyle changes including exercise, healthy diet, and refraining from smoking. Sudden cardiac arrest is the unexpected loss of heart functioning, breathing, and consciousness, often caused by an arrhythmia or abnormal heartbeat. The heartbeat may be too quick, too slow, or irregular.

With a healthy heart, it is unlikely for a fatal arrhythmia to develop without an outside factor, such as an electric shock or illegal drugs. If not treated immediately, sudden cardiac arrest can be fatal and result in sudden cardiac death.

Hypertension

, or high blood pressure, is a serious health problem that occurs when the blood flows with a greater force than normal. One in three American adults (70 million people) have hypertension and only half have it under control (Nwankwo, Yoon, Burt, & Gu, 2013). It can strain the heart, increase the risk of heart attack and stroke, or damage the kidneys (CDC, 2014a). Uncontrolled high blood pressure in early and middle adulthood can also damage the brain's white matter (axons) and may be linked to cognitive problems later in life (Maillard et al., 2012). Normal blood pressure is under 120/80 (see Table 8.1). The first number is the systolic pressure, which is the pressure in the blood vessels when the heart beats. The second number is the diastolic pressure, which is the pressure in the blood vessels when the heart is at rest. High blood pressure is sometimes referred to as the silent killer, as most people with hypertension experience no symptoms. Making positive lifestyle changes can often reduce blood pressure. Risk factors for high blood pressure include:

- Family history of hypertension
- Diet that is too high in sodium, often found in processed foods, and too low in potassium

Cancer:

After heart disease, cancer was the second leading cause of death for Americans in 2017 as it accounted for 21.3% of all deaths (Kochanek et al., 2016). According to the National Institutes of Health (2015), cancer is the name given to a collection of related diseases in which the body's cells begin to divide without stopping and spread into surrounding tissues. These extra cells can divide, and form growths called tumors, which are typically masses of tissue. Cancerous tumors are malignant, which means they can invade nearby tissues. When removed malignant tumors may grow back. Unlike malignant tumors, benign tumors do not invade nearby tissues. Benign tumors can sometimes be quite large, and when removed usually do not grow back. Although benign tumors in the body are not cancerous, benign brain tumors can be life threatening. Cancer cells can prompt nearby normal cells to form blood vessels that supply the tumors with oxygen and nutrients, which allows them to grow. These blood vessels also remove waste products from the tumors. Cancer cells can also hide from the immune system, a network of organs, tissues, and specialized cells that protects the

body from infections and other conditions. Lastly, cancer cells can metastasize, which means they can break from where they first formed, called the primary cancer, and travel through the lymph system or blood to form new tumors in other parts of the body. This new metastatic tumor is the same type as the primary tumor (National Institutes of Health, 2015). Figure 8.6 illustrates how cancers can metastasize. Cancer can start almost anywhere in the human body. While normal cells mature into very distinct cell types with specific functions, cancer cells do not and continue to divide without stopping. Further, cancer cells are able to ignore the signals that normally tell cells to stop dividing or to begin a process known as programmed cell death which the body uses to get rid of unneeded cells. With the growth of cancer cells, normal cells are crowded out and the body is unable to work the way it is supposed to. For example, the cancer cells in lung cancer form tumors which interfere with the functioning of the lungs and how oxygen is transported to the rest of the body. There are more than 100 types of cancer. The American Cancer Society assembles a list of the most common types of cancers in the United States. To qualify for the 2016 list, the estimated annual incidence had to be 40, 000 cases or more. The most common type of cancer on the list is breast cancer, with more than 249,000 new cases expected in 2016. The next most common Figure 8.6 Source 314 cancers are lung cancer and prostate cancer. Table 8.2 lists the estimated number of new cases and deaths for each common cancer type for 2019 (American Cancer Society, 2019).

Cholesterol is a waxy fatty substance carried by lipoprotein molecules in the blood. It is created by the body to create hormones and digest fatty foods and is also found in many foods. Your body needs cholesterol, but too much can cause heart disease and stroke. Two important kinds of cholesterol are low-density lipoprotein (LDL) and high-density lipoprotein (HDL). A third type of fat is called triglycerides. Your total cholesterol score is based on all three types of lipids (see Table 8.3). Total cholesterol is calculated by adding HDL plus LDL plus 20% of the Triglycerides. LDL cholesterol makes up the majority of the body's cholesterol, however, it is often referred to as "bad" cholesterol because at high levels it can form plaque in the arteries leading to heart attack and stroke. HDL cholesterol, often referred to as "good" cholesterol, absorbs cholesterol and carries it back to the liver, where it is then flushed from the body. Higher levels of HDL can reduce the risk of heart attack and stroke. Triglycerides are a type of fat in the blood used for energy. High levels of triglycerides can also increase your risk for heart disease and stroke when coupled with high LDL and low HDL. All adults 20 or older should have their cholesterol checked. In early adulthood,

doctors may check every few years if the numbers have previously been normal, and there are no other signs of heart disease. In middle adulthood, this may become part of the annual check-up (CDC, 2015). Table 8.3 Normal Levels of Cholesterol Normal Total Cholesterol Less than 200mg/dl* LDL Less than 100mg/dl HDL 40mg/dl or higher Triglycerides Less than 150mg/dl *Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dl) of blood. Source: adapted from CDC (2015). Table 8.2 2019 Estimates of Cancer Types Cancer Type Estimated New Cases Estimated Death

Climacteric

The climacteric, or the midlife transition when fertility declines, is biologically based but impacted by the environment. During midlife, men may experience a reduction in their ability to reproduce. Women, however, lose their ability to reproduce once they reach menopause. Female Sexual and Reproductive Health: Perimenopause refers to a period of transition in which a woman's ovaries stop releasing eggs and the level of estrogen and progesterone production decreases.

MENOPAUSE is defined as 12 months without menstruation. The average age of menopause is approximately 51, however, many women begin experiencing symptoms in their 40s. These symptoms occur during perimenopause, which can occur 2 to 8 years before menopause (Huang, 2007). A woman may first begin to notice that her periods are more or less frequent than before. After a year without menstruation, a woman is considered menopausal and no longer capable of reproduction. Symptoms: The symptoms that occur during perimenopause and menopause are typically caused by the decreased production of estrogen and progesterone (North American Menopause Society, 2016). The shifting hormones can contribute to the inability to fall asleep. Additionally, the declining levels of estrogen may make a woman more susceptible to environmental factors and stressors which disrupt sleep. A hot flash is a surge of adrenaline that can awaken the brain from sleep. It often produces sweat and a change of temperature that can be disruptive to sleep and comfort levels. Unfortunately, it may take time for adrenaline to recede and allow sleep to occur again (National Sleep Foundation, 2016). The loss of estrogen also affects vaginal lubrication which diminishes and becomes waterier and can contribute to pain during intercourse. The vaginal wall also becomes thinner, and less elastic. Estrogen is also important for bone formation and growth, and decreased estrogen can cause osteoporosis resulting in decreased

bone mass. Depression, irritability, and weight gain are often associated with menopause, but they are not menopausal (Avis, Stellato & Crawford, 2001; Rossi, 2004). Weight gain can occur due to an increase in intra-abdominal fat followed by a loss of lean body mass after menopause (Morita et al., 2006). Consequently, women may need 325 to change their lifestyle to counter any weight gain. Depression and mood swings are more common during menopause in women who have prior histories of these conditions rather than those who have not. Additionally, the incidence of depression and mood swings is not greater among menopausal women than non-menopausal women. Figure 8.12 identifies symptoms experienced by women during menopause, however, women vary greatly in the extent to which these symptoms are experienced. Most American women go through menopause with few problems (Carroll, 2016). Overall, menopause is not seen as universally distressing (Lachman, 2004). Hormone Replacement Therapy: Concerns about the effects of hormone replacement has changed the frequency with which estrogen replacement and hormone replacement therapies have been prescribed for menopausal women. Estrogen replacement therapy was once commonly used to treat menopausal symptoms. However, more recently, hormone replacement therapy has been associated with breast cancer, stroke, and the development of blood clots (NIH, 2007). Most women do not have symptoms severe enough to warrant estrogen or hormone replacement therapy. If so, they can be treated with lower doses of estrogen and monitored with more frequent breast and pelvic exams. There are also some other ways to reduce symptoms. These include avoiding caffeine and alcohol, eating soy, remaining sexually active, practicing relaxation techniques, and using water-based lubricants during intercourse.

Menopause and Ethnicity: In a review of studies that mentioned menopause, symptoms varied greatly across countries, geographic regions, and even across ethnic groups within the same region (Palacios, Henderson, & Siseles, 2010). For example, the Study of Women's Health across the Nation (SWAN) examined 14,906 white, African American, Hispanic, Japanese American, and Chinese American women's menopausal experiences (Avis et al., 2001). After controlling for age, educational level, general health status, and economic stressors, white women were more likely to disclose symptoms of depression, irritability, forgetfulness, and headaches compared to women in the other racial/ethnic groups. African American women experienced more night sweats, but this varied across research sites. Finally, Chinese American and Japanese American reported fewer menopausal symptoms when compared to the women in the other groups. Overall, the Chinese and Japanese group

reported the fewest symptoms, while Figure 8.13 Source 326 white women reported more mental health symptoms and African American women reported more physical symptoms. Cultural Differences: Cultural influences seem to also play a role in the way menopause is experienced. Further, the prevalence of language specific to menopause is an important indicator of the occurrence of menopausal symptoms in a culture. Hmong tribal women living in Australia and Mayan women report that there is no word for "hot flashes" and both groups did not experience these symptoms (Yick-Flanagan, 2013). When asked about physical changes during menopause, the Hmong women reported lighter or no periods. They also reported no emotional symptoms and found the concept of emotional difficulties caused by menopause amusing (Thurston & Vissandjee, 2005). Similarly, a study with First Nation women in Canada found there was no single word for "menopause" in the Oji-Cree or Ojibway languages, with women referring to menopause only as "that time when periods stop" (Madden, St Pierre-Hansen & Kelly, 2010). While some women focus on menopause as a loss of youth, womanhood, and physical attractiveness, career-oriented women tend to think of menopause as a liberating experience. Japanese women perceive menopause as a transition from motherhood to a more whole person, and they no longer feel obligated to fulfill certain expected social roles, such as the duty to be a mother (Kagawa-Singer, Wu, & Kawanishi, 2002). In India, 94% of women said they welcomed menopause. Aging women gain status and prestige and no longer have to go through self-imposed menstrual restrictions, which may contribute to Indian women's experiences (Kaur, Walia, & Singh, 2004). Overall, menopause signifies many different things to women around the world and there is no typical experience. Further, normalizing rather than pathologizing menopause is supported by research and women's experiences. Male Sexual and Reproductive Health: Although males can continue to father children throughout middle adulthood, erectile dysfunction (ED) becomes more common. Erectile dysfunction refers to the inability to achieve an erection or an inconsistent ability to achieve an erection (Swierzewski, 2015). Intermittent ED affects as many as 50% of men between the ages of 40 and 70. About 30 million men in the United States experience chronic ED, and the percentages increase with age

Midlife Crisis

In 1978 Daniel Levinson published a book entitled *The Seasons of a Man's Life* in which he presented a theory of development in adulthood. Levinson's work was based on in-depth interviews with 40 men between the ages of 35-45. Levinson (1978) indicated that adults go through stages and have an image of the future that motivates them. This image is called "the

dream” and for the men interviewed, it was a dream of how their career paths would progress and where they would be at midlife. According to Levinson the midlife transition (40-45) was a 339 time of reevaluating previous commitments; making dramatic changes if necessary; giving expression to previously ignored talents or aspirations; and feeling more of a sense of urgency about life and its meaning. By the time the men entered middle adulthood (45-50), they believed they committed to the new choices made and placed one’s energies into these commitments. Levinson believed that a midlife crisis was a normal part of development as the person is more aware of how much time has gone by and how much time is left. The future focus of early adulthood gives way to an emphasis on the present in midlife, and the men interviewed had difficulty reconciling the “dream” they held about the future with the reality they experienced. Consequently, they felt impatient and were no longer willing to postpone the things they had always wanted to do. Although Levinson believed his research demonstrated the existence of a midlife crisis, his study has been criticized for his research methods, including small sample size, similar ages, and concerns about a cohort effect. In fact, other research does not support his theory of the midlife crisis. Vaillant (2012) believed that it was the cross-sectional design of Levinson’s study that led to the erroneous conclusion of an inevitable midlife crisis. Instead, he believed that longitudinal studies of an individual’s entire life were needed to determine the factors associated with optimum health and potential. Vaillant was one of the main researchers in the 75-year-old Harvard Study of Adult Development, and he considered a midlife crisis to be a rare occurrence among the participants (Vaillant, 1977). Additional findings of this longitudinal study will be discussed in the next chapter on late adulthood. Most research suggests that most people in the United States today do not experience a midlife crisis. Results of a 10-year study conducted by the MacArthur Foundation Research Network on Successful Midlife Development, based on telephone interviews with over 3,000 midlife adults, suggest that the years between 40 and 60 are ones marked by a sense of well-being. Only 23% of their participants reported experiencing a midlife crisis. The crisis tended to occur among the highly educated and was triggered by a major life event rather than out of a fear of aging (Research Network on Successful Midlife Development, 2007). Stress We all know that stress plays a major role in our mental and physical health, but what exactly is stress? The term stress is defined as a pattern of physical and psychological responses in an organism after it perceives a threatening event that disturbs its homeostasis and taxes its abilities to cope with the event (Hooker & Pressman, 2016). Stress was originally derived from the field of mechanics where it is used to describe materials under pressure. The word was first used in a psychological

manner by researcher Hans Selye, who was examining the effect of an ovarian hormone that he thought caused sickness in a sample of rats. Surprisingly, he noticed that almost any injected hormone produced this same sickness. He smartly realized that it was not the hormone under investigation that was causing these problems, but instead the aversive experience of being handled and injected by researchers led to high physiological arousal, and eventually to health problems like ulcers. Selye (1946) coined the term stressor to label a stimulus that had this effect on the body (that is, causing stress).

Social Relationships and Stress:

Research has shown that the impact of social isolation on our risk for disease and death is similar in magnitude to the risk associated with smoking regularly (Holt-Lunstad, Smith, & Layton, 2010; House, Landis, & Umberson, 1988). In fact, the importance of social relationships for our health is so significant that some scientists believe our body has developed a physiological system that encourages us to seek out our relationships, especially in times of stress (Taylor et al., 2000). Social integration is the concept used to describe the number of social roles that you have (Cohen & Willis, 1985). For example, you might be a daughter, a basketball team member, a Humane Society volunteer, a coworker, and a student. Maintaining these different roles can improve your health via encouragement from those around you to maintain a healthy lifestyle. Those in your social network might also provide you with social support (e.g., when you are under stress). This support might include emotional help (e.g., a hug when you need it), tangible help (e.g., lending you money), or advice. By helping to improve health behaviors and reduce stress, social relationships can have a powerful, protective impact on health, and in some cases, might even help people with serious illnesses stay alive longer (Spiegel, Kraemer, Bloom, & Gottheil, 1989).

Caregiving and Stress:

A disabled child, spouse, parent, or other family member is part of the lives of some midlife adults. According to the National Alliance for Caregiving (2015), 40 million Americans provide unpaid caregiving. The typical caregiver is a 49-year-old female currently caring for a 69 year-old female who needs care because of a long-term physical condition. Looking more closely at the age of the recipient of caregiving, the typical caregiver for those 18-49 years of age is a female (61%) caring mostly for her own child (32%) followed by a spouse or

partner (17%). When looking at older recipients (50+) who receive care, the typical caregiver is female (60%) caring for a parent (47%) or spouse (10%). Caregiving places enormous stress on the caregiver. Caregiving for a young or adult child with special needs was associated with poorer global health and more physical symptoms among both fathers and mothers (Seltzer, Floyd, Song, Greenberg, & Hong, 2011). Marital relationships are also a factor in how the caring affects stress and chronic conditions. Fathers who were caregivers identified more chronic health conditions than non-caregiving fathers, regardless of marital quality. In contrast, caregiving mothers reported higher levels of chronic conditions when they reported a high level of marital strain (Kang & Marks, 2014). Age can also make a difference in how one is affected by the stress of caring for a child with special needs. Using data from the Study of Midlife in the United States, Ha, Hong, Seltzer and Greenberg (2008) found that older parents were significantly less likely to experience the negative effects of having a disabled child than younger parents. They concluded that an age-related weakening of the stress occurred over time. This follows with the greater emotional stability noted at midlife. Currently 25% of adult children, mainly baby boomers, provide personal or financial care to a parent (Metlife, 2011). Daughters are more likely to provide basic care and sons are more likely to provide financial assistance. Adult children 50+ who work and provide care to a parent are more likely to have fair or poor health when compared to those who do not provide care. Some adult children choose to leave the work force, however, the cost of leaving the work force early to care for a parent is high. For females, lost wages and social security benefits equals \$324,044, while for men it equals \$283,716 (Metlife, 2011). This loss can jeopardize the adult child's financial future. Consequently, there is a need for greater workplace flexibility for working caregivers.

Spousal Care: Certainly, caring for a disabled spouse would be a difficult experience that could negatively affect one's health. However, research indicates that there can be positive health effect for caring for a disabled spouse. Beach, Schulz, Yee and Jackson (2000) evaluated health related outcomes in four groups: Spouses with no caregiving needed (Group 1), living with a disabled spouse but not providing care (Group 2), living with a disabled spouse and providing care (Group 3), and helping a disabled spouse while reporting caregiver strain, including elevated levels of emotional and physical stress (Group 4). Not surprisingly, the participants in Group 4 were the least healthy and identified poorer perceived health, an increase in health-risk behaviors, and an increase in anxiety and depression symptoms.

Erikson: Generativity vs Stagnation

According to Erikson (1950, 1982) generativity encompasses procreativity, productivity, and creativity. This stage includes the generation of new beings, new products, and new ideas, as well as self-generation concerned with further identity development. Erikson believed that the stage of generativity, during which one established a family and career, was the longest of all the stages. Individuals at midlife are primarily concerned with leaving a positive legacy of themselves, and parenthood is the primary generative type. Erikson understood that work and family relationships may be in conflict due to the obligations and responsibilities of each, but he believed it was overall a positive developmental time. In addition to being parents and working, Erikson also described individuals being involved in the community during this stage. A sense of stagnation occurs when one is not active in generative matters, however, stagnation can motivate a person to redirect energies into more meaningful activities. Erikson identified “virtues” for each of his eight stages, and the virtue emerging when one achieves generativity is “Care”. Erikson believed that those in middle adulthood should “take care of the persons, the products, and the ideas one has learned to care for” (Erikson, 1982, p. 67). Further, Erikson believed that the strengths gained from the six earlier stages are essential for the generational task of cultivating strength in the next generation. Erikson further argued that generativity occurred best after the individual had resolved issues of identity and intimacy (Peterson & Duncan, 2007). Research has demonstrated that generative adults possess many positive characteristics, including good cultural knowledge and healthy adaptation to the world (Peterson & Duncan, 2007). Using the Big 5 personality traits, generative women and men scored high on conscientiousness, extraversion, agreeableness, openness to experience, and low on neuroticism (de St. Aubin & McAdams, 1995; Peterson, Smirles, & Wentworth, 1997). Additionally, women scoring high in generativity at age 52, were rated high in positive personality characteristics, satisfaction with marriage and motherhood, and successful aging at age 62 (Peterson & Duncan, 2007). Similarly, men rated higher in generativity at midlife were associated with stronger global cognitive functioning (e.g., memory, attention, calculation), stronger executive functioning (e.g., response inhibition, abstract thinking, cognitive flexibility), and lower levels of depression in late adulthood (Malone, Liu, Vaillant, Rentz, & Waldinger, 2016). Erikson (1982) indicated that at the end of this demanding stage, individuals may withdraw as generativity is no longer expected in late adulthood. This releases elders from the task of care taking or working. However, not

feeling needed or challenged may result in stagnation, and consequently one should not fully withdraw from generative tasks as they enter Erikson's last stage in late adulthood. Figure 8.29 Generativity at Midlife Source 345 Midlife Relationships The sandwich generation refers to adults who have at least one parent age 65 or older and are either raising their own children or providing support for their grown children. According to a recent Pew Research survey, 47% of middle-aged adults are part of this sandwich generation (Parker & Patten, 2013). In addition, 15% of middle-aged adults are providing financial support to an older parent while raising or supporting their own children (see Figure 8.30). According to the same survey, almost half (48%) of middle-aged adults, have supported their adult children in the past year, and 27% are the primary source of support for their grown children. Seventy-one percent of the sandwich generation is age 40-59, 19% were younger than 40, and 10% were 60 or older. Hispanics are more likely to find themselves supporting two generations; 31% have parents 65 or older and a dependent child, compared with 24% of whites and 21% of blacks (Parker & Patten, 2013). Women are more likely to take on the role of care provider for older parents in the U.S. and Germany (Pew Research, 2015). About 20% of women say they have helped with personal care, such as getting dressed or bathing, of aging parents in the past year, compared with 8% of men in the U.S. and 4% in Germany. In contrast, in Italy men are just as likely (25%) as women (26%) to have provided personal care. The Pew survey found that almost 33% of the sandwich-generation adults were more likely to say they always feel rushed, while only 23% of other adults said this. However, the survey suggests that those who were supporting both parents and children reported being just as happy as those middle-aged adults who did not find themselves in the sandwich generation (Parker & Patten, 2013). Adults who are supporting both parents and children did report greater financial strain (see Figure 8.31). Only 28% reported that they were living comfortably versus 41% of those who were not also supporting their parents. Almost 33% were just making ends meet, compared with 17% of those who did not have the additional financial burden of aging parents.

Kinkeeping:

At midlife adults may find themselves as a kinkeeper. In all families there is a person or persons who keep the family connected and who promote solidarity and continuity in the family (Brown & DeRycke, 2010). Who in your own family do you count on to organize

family gatherings? Who knows the history of your family? Who do people turn to in your family for advice and support? Who works to strengthen the bonds between members of your family? These are your family's kinkeepers, and they are usually women (Leach & Braithwaite, 1996; Brown & DeRycke, 2010). Leach and Braithwaite found that 86% of their respondents named a woman as their family's kinkeeper, and Brown and DeRycke found that mothers, maternal grandmothers, and paternal grandmothers were more likely to be a family's kinkeeper than were fathers, young adult children, and grandfathers combined. Brown and DeRycke also found that among young adults, women were more likely to be a kinkeeper than were young adult men. Kinkeeping can be a source of distress when it interferes with other obligations (Gerstel & Gallagher, 1993). Gerstel and Gallagher found that on average, kinkeepers provide almost a full week of work each month to kinkeeping (almost 34 hours). They also found that the more activities the kinkeeper took on, and the more kin they helped the more stress and higher the levels of depression a kinkeeper experienced. However, unlike other studies on kinkeeping, Gerstel and Gallagher also included a number of activities that would be considered more "caregiving," such as providing transportation, making repairs, providing meals, etc. in addition to the usual activities of kinkeeping.

Empty nest: The empty nest, or post-parental period refers to the time period when children are grown up and have left home (Dennerstein, Dudley & Guthrie, 2002). For most parents this occurs during midlife. This time is recognized as a "normative event" as parents are aware that their children will become adults and eventually leave home (Mitchell & Lovegreen, 2009). The empty nest creates complex emotions, both positive and negative, for many parents. Some theorists suggest this is a time of role loss for parents, others suggest it is one of role strain relief (Bouchard, 2013). The role loss hypothesis predicts that when people lose an important role in their life they experience a decrease in emotional well-being. It is from this perspective that the concept of the empty nest syndrome emerged, which refers to great emotional distress experienced by parents, typically mothers, after children have left home. The empty nest syndrome is linked to the absence of alternative roles for the parent in which they could establish their identity (Borland, 1982). In Bouchard's (2013) review of the research, she found that few parents reported loneliness or a big sense of loss once all their children had left home. In contrast, the role stress relief hypothesis suggests that the empty nest period should lead to more positive changes for parents, as the responsibility of raising children has been lifted. The role strain relief hypothesis was supported by many studies in

Bouchard's (2013) review. A consistent finding throughout the research literature is that raising children has a negative impact on the quality of marital relationships (Ahlborg, Misvaer, & Möller, 2009; Bouchard, 2013). Most studies have reported that marital satisfaction often increases during the launching phase of the empty nest period, and that this satisfaction endures long after the last child has left home (Gorchoff, John, & Helson, 2008). However, most of the research on the post-parental period has been with American parents. A number of studies in China suggest that empty-nesters, especially in more rural areas of China, 347 report greater loneliness and depression than their counterparts with children still at home (Wu et al., 2010). Family support for the elderly by their children is a cherished Chinese tradition (Wong & Leung, 2012). With children moving from the rural communities to the larger cities for education and employment this may explain the more pessimistic reaction of Chinese parents than in American samples

Middle Adult Lifestyles

Singlehood: According to a Pew Research study, 16 per 1,000 adults age 45 to 54 and 7 per 1000 age 55 and over have never-married in the U. S. (Wang & Parker, 2014). However, some of them may be living with a partner. In addition, some singles at midlife may be single through divorce or widowhood. DePaulo (2014) has challenged the idea that singles, especially the always single, fair worse emotionally and in health when compared to those married. DePaulo suggests there is a bias in how studies examine the benefits of marriage. Most studies focus on comparisons between married versus not married, which do not include a separate comparison between those always single, and those who are single because of divorce or widowhood. Her research has found that those who are married may be more satisfied with life than the divorced or widowed, but there is little difference between married and always single, especially when comparing those who are recently married with those who have been married for four or more years. It appears that once the initial blush of the honeymoon wears off, those who are wedded are no happier or healthier than those who remained single. This might also suggest that there may be problems with how the "married" category is also seen as one homogeneous group. Figure 8.33 349

Online Dating: Montenegro (2003) surveyed over 3,000 singles aged 40–69, and almost half of the participants reported their most important reason for dating was to have someone to talk to or do things with. Additionally, sexual fulfillment was also identified as an important

goal for many. Alterovitz & Mendelsohn (2013) reviewed online personal ads for men and women over age 40 and found that romantic activities and sexual interests were mentioned at similar rates among the middle-age and young-old age groups, but less for the old-old age group.

Marriage: As you read in Chapter 7, there has been a number of changes in the marriage rate as more people are cohabitating, more are deciding to stay single, and more are getting married at a later age. As you can see in Figure 8.34, 48% of adults aged 45-54 are married; either in their first marriage (22%) or have remarried (26%). This makes marriage the most common relationship status for middle-aged adults in the United States. Marital satisfaction tends to increase for many couples in midlife as children are leaving home (Landsford, Antonucci, Akiyama, & Takahashi, 2005). Not all researchers agree. They suggest that those who are unhappy with their marriage are likely to have gotten divorced by now, making the quality of marriages later in life only look more satisfactory (Umberson, Williams, Powers, Chen, & Campbell, 2005).

Divorce: Livingston (2014) found that 27% of adults aged 45 to 54 were divorced (see Figure 8.32). Additionally, 57% of divorced adults were women. This reflects the fact that men are more likely to remarry than are women. Two-thirds of divorces are initiated by women (AARP, 2009). Most divorces take place within the first 5 to 10 years of marriage. This timeline reflects people's initial attempts to salvage the relationship. After a few years of limited success, the couple may decide to end the marriage. It used to be that divorce after having been married for 20 or more years was rare, but in recent years the divorce rate among more long-term marriages has been increasing. Brown and Lin (2013) note that while the divorce rate in the U.S. has declined since the 1990s, the rate among those 50 and older has doubled. They suggest several reasons for the "graying of divorce". There is less stigma attached to divorce today than in the past. Some older women are outlearning their spouses, and thus may be more financially capable of supporting themselves, especially as most of their children have grown. Finally, given increases in human longevity, the prospect of living several more years or decades with an incompatible spouse may prompt middle-aged and older adults to leave the marriage. Figure 8.34 350 Gottman and Levenson (2000) found that the divorces in early adulthood were angrier and conflictual, with each partner blaming the other for the failures in the marriage. In contrast, they found that at midlife divorces tended to be more about having grown apart, or a cooling off of the relationship. A survey by AARP (2009) found that men and women had diverse motivations for getting a divorce. Women

reported concerns about the verbal and physical abusiveness of their partner (23%), drug/alcohol abuse (18%), and infidelity (17%). In contrast, men mentioned they had simply fallen out of love (17%), no longer shared interests or values (14%), and infidelity (14%). Both genders felt their marriage had been over long before the decision to divorce was made, with many of the middle-aged adults in the survey reporting that they stayed together because they were still raising children. Females also indicated that they remained in their marriage due to financial concerns, including the loss of health care (Sohn, 2015). However, only 1 in 4 adults regretted their decision to divorce. The effects of divorce are varied. Overall, young adults struggle more with the consequences of divorce than do those at midlife, as they have a higher risk of depression or other signs of problems with psychological adjustment (Birditt & Antonucci, 2013). Divorce at midlife is more stressful for women. In the AARP (2009) survey, 44% of middle-aged women mentioned financial problems after divorcing their spouse, in comparison only 11% of men reported such difficulties. However, a number of women who divorce in midlife report that they felt a great release from their day-to-day sense of unhappiness. Hetherington and Kelly (2002) found that among the divorce enhancers, those who had used the experience to better themselves and seek more productive intimate relationships, and the competent loners, those who used their divorce experience to grow emotionally, but who choose to stay single, the overwhelming majority were women.

Dating Post-Divorce: Most divorced adults have dated by one year after filing for divorce (Anderson et al., 2004; Anderson & Greene, 2011). One in four recent filers report having been in or were currently in a serious relationship, and over half were in a serious relationship by one year after filing for divorce. Not surprisingly, younger adults were more likely to be dating than were middle aged or older adults, no doubt due to the larger pool of potential partners from which they could draw. Of course, these relationships will not all end in marriage. Teachman (2008) found that more than two thirds of women under the age of 45 had cohabited with a partner between their first and second marriages. Dating for adults with children can be more of a challenge. Courtships are shorter in remarriage than in first marriages. When couples are "dating", there is less going out and more time spent in activities at home or with the children. So, the couple gets less time together to focus on their relationship. Anxiety or memories of past relationships can also get in the way. As one Talmudic scholar suggests "when a divorced man marries a divorced woman, four go to bed." (Secombe & Warner, 2004). Post-divorce parents gatekeep, that is, they regulate the flow of information about their new romantic partner to their children, in an attempt to balance their

own needs for romance with consideration regarding the needs and reactions of their children. Anderson et al. (2004) found that almost half (47%) of dating parents gradually introduce their children to their dating partner, giving both their romantic partner and children time to adjust and get to know each other. Many parents who use this approach do so to avoid their children having to keep meeting someone new until it becomes clearer that this relationship might be more than casual.

Grandparents

In addition to maintaining relationships with their children and aging parents, many people in middle adulthood take on yet another role, becoming a grandparent. The role of grandparent varies around the world. In multigenerational households, grandparents may play a greater role in the day-to-day activities of their grandchildren. While this family dynamic is more common in Latin America, Asia, and Africa, it has been on the increase in the U.S. (Pew Research Center, 2010). Figure 8.36 Source 353 The degree of grandparent involvement also depends on the proximity of the grandparents' home to the grandchildren. In developed nations, the greater mobility of the society can mean that grandparents may live long distances from their grandchildren. Technology has brought grandparents and their more distant grandchildren together. Sorenson and Cooper (2010) found that many of the grandfathers they interviewed would text, email, or Skype with their grandchildren in order to stay in touch. Cherlin and Furstenberg (1986) described three styles of grandparents. Thirty percent of grandparents were remote as they rarely saw their grandchildren. Usually, they lived far away from the grandchildren but may also have had a distant relationship. Contact was typically made on special occasions, such as holidays or birthdays. Fifty-five percent of grandparents were described as companionate as they did things with their grandchildren but had little authority or control over them. They preferred to spend time with them without interfering in parenting. They were more like friends to their grandchildren. Fifteen percent of grandparents were described as involved as they took a very active role in their grandchild's life. The involved grandparent had frequent contact with and authority over the grandchild, and their grandchildren might even have lived with them. Grandmothers, more so than grandfathers, played this role. In contrast, more grandfathers than grandmothers saw their role as family historian and family advisor (Neugarten and Weinstein, 1964). Bengtson (2001) suggests that grandparents adopt different styles with different grandchildren, and

over time may change styles as circumstances in the family change. Today more grandparents are the sole care providers for grandchildren or may step in at times of crisis. With these changes grandparents are redefining how they see their role in the family with fewer adopting a more formal role (Hayslip, Henderson & Shore, 2003). Early research on grandparents has routinely focused on grandmothers, with grandfathers often becoming invisible members of the family (Sorensen & Cooper, 2010). Yet, grandfathers stress the importance of their relationships with their grandchildren as strongly as do grandmothers (Waldrop et al., 1999). For some men, this may provide them with the opportunity to engage in activities that their occupations, as well as their generation's views of fatherhood and masculinity, kept them from engaging in with their own children (Sorenson & Cooper, 2010). Many of the grandfathers in Sorenson and Cooper's study felt that being a grandfather was easier and a lot more enjoyable. Even among grandfathers that took on a more involved role, there was still a greater sense that they could be more light-hearted and flexible in their interactions with their grandchildren. Many grandfathers reported that they were more openly affectionate with their grandchildren than they had been with their own children. Figure 8.37 Source 354

Friendships

Adults of all ages who reported having a confidante or close friend with whom they could share personal feelings and concerns, believed these friends contributed to a sense of belonging, security, and overall wellbeing (Dunér & Nordstrom, 2007). Having a close friend is a factor in significantly lower odds of psychiatric morbidity including depression and anxiety (Harrison, Barrow, Gask, & Creed, 1999; Newton et al., 2008). The availability of a close friend has also been shown to lessen the adverse effects of stress on health (Kouzis & Eaton, 1998; Hawkey et al., 2008; Tower & Kasl, 1995). Additionally, poor social connectedness in adulthood is associated with a larger risk of premature mortality than cigarette smoking, obesity, and excessive alcohol use (Holt-Lunstad, Smith, & Layton, 2010). Female friendships and social support networks at midlife contribute significantly to a woman's feeling of life satisfaction and well-being (Borzumato-Gainey, Kennedy, McCabe, & Degges-White, 2009). Degges-White and Myers (2006) found that women who have supportive people in their life experience greater life satisfaction than do those who live a more solitary life. A friendship network or the presence of a confidant have both been identified for their importance to women's mental health (Baruch & Brooks-Gunn, 1984). Unfortunately, with numerous caretaking responsibilities at home, it may be difficult for women to find time and energy to enhance the friendships that provide an increased sense of

life satisfaction (Borzumato-Gainey et al., 2009). Emslie, Hunt and Lyons (2013) found that for men in midlife, the shared consumption of alcohol was important to creating and maintaining male friends. Drinking with friends was justified as a way for men to talk to each other, provide social support, relax, and improve mood. Although the social support provided when men drink together can be helpful, the role of alcohol in male friendships can lead to health damaging behavior from excessive drinking. The importance of social relationships begins in early adulthood by laying down a foundation for strong social connectedness and facilitating comfort with intimacy (Erikson, 1959). To determine the impact of the quantity and quality of social relationships in young adulthood on middle adulthood, Carmichael, Reis, and Duberstein (2015) assessed individuals at age 50 on measures of social connection (types of relationships and friendship quality) and psychological outcomes (loneliness, depression, psychological well-being). Results indicated that the quantity of social interactions at age 20 and the quality, not quantity, of social interaction at age 30 predicted midlife social interactions. Those individuals who had high levels of social information seeking (quantity) at age 20 followed by less quantity in social relationships but greater emotional closeness (quality), resulted in positive psychosocial adjustment at midlife.

Workplace Friendships:

Friendships often take root in the workplace, due to the fact that people are spending as much, or more, time at work than they are with their family and friends (Kaufman & Hotchkiss, 2003). Often, it is through these relationships that people receive mentoring and obtain social support and resources, but they can also experience conflicts and the potential for misinterpretation when sexual attraction is an issue. Indeed, Elsesser and Peplau (2006) found that many workers reported that friendships grew out of collaborative work projects, and these friendships made their days more pleasant. In addition to those benefits, Riordan and Griffeth (1995) found that people who worked in an environment where friendships could develop and be maintained were more likely to report higher levels of job satisfaction, job involvement, and organizational commitment, and they were less likely to leave that job. Similarly, a Gallup poll revealed that employees who had close friends at work were almost 50% more satisfied with their jobs than those who did not (Armour, 2007). Figure 8.39 Source 356 Women in Midlife In Western society, aging for women is much more stressful than for men as society emphasizes youthful beauty and attractiveness (Slevin, 2010). The

description that aging men are viewed as “distinguished” and aging women are viewed as “old” is referred to as the double standard of aging (Teuscher & Teuscher, 2006). Since women have traditionally been valued for their reproductive capabilities, they may be considered old once they are postmenopausal. In contrast, men have traditionally been valued for their achievements, competence and power, and therefore are not considered old until they are physically unable to work (Carroll, 2016). Consequently, women experience more fear, anxiety, and concern about their identity as they age, and may feel pressure to prove themselves as productive and valuable members of society (Bromberger, Kravitz, & Chang, 2013). Attitudes about aging, however, do vary by race, culture, and sexual orientation. In some cultures, aging women gain greater social status. For example, as Asian women age, they attain greater respect and have greater authority in the household (Fung, 2013). Compared to white women, Black and Latina women possess less stereotypes about aging (Schuler et al., 2008). Lesbians are also more positive about aging and looking older than heterosexual women (Slevin, 2010). The impact of media certainly plays a role in how women view aging by selling antiaging products and supporting cosmetic surgeries to look younger (Gilleard & Higgs, 2000).

Religion and Spirituality

Grzywacz and Keyes (2004) found that in addition to personal health behaviors, such as regular exercise, healthy weight, and not smoking, social behaviors, including involvement in religious-related activities, have been shown to be positively related to optimal health. However, it is not only those who are involved in a specific religion that benefit, but so too do those identified as being spiritual. According to Greenfield, Vaillant, and Marks (2009) religiosity refers to engaging with a formal religious group’s doctrines, values, traditions, and co-members. In contrast, spirituality refers to an individual’s intrapsychic sense of connection with something transcendent (that which exists apart from and not limited by the material universe) and the subsequent feelings of awe, gratitude, compassion, and forgiveness. Research has demonstrated a strong relationship between spirituality and psychological well-being, irrespective of an individual’s religious participation (Vaillant, 2008). Additionally, Sawatzky, Ratner, & Chiu (2005) found that spirituality was related to a higher quality of life for both individuals and societies. Based on reports from the 2005 National Survey of Midlife in the United States, Greenfield et al. (2009) found that higher levels of spirituality were associated with lower levels of negative affect and higher levels of positive affect.

LATE ADULTHOOD

PHYSICAL DEVELOPMENT LATE ADULTHOOD

LEARNINGOBJECTIVES

- Review the physical and neurological changes
- Characteristic of late adulthood.

Key Points

- During late adulthood the skin continues to lose elasticity, reaction time slows further, muscle strength and mobility diminishes, hearing and vision decline, and the immune system weakens.
- The aging process generally results in changes and lower functioning in the brain, leading to problems like decreased intellectual function and neurodegenerative diseases such as Alzheimer's.
- Many of the changes in the bodies and minds of older adults are due in part to a reduction in the size of the brain as well as loss of brain plasticity.

- Memory degenerates in old age, so older adults have a harder time remembering and attending to information. In general, an older person's procedural memory tends to remain stable, while working memory declines.

Key Terms

- **Cerebellum:** Part of the hindbrain in vertebrates; in humans it lies between the brainstem and the cerebrum and plays an important role in sensory perception, motor output, balance, and posture.
- **Alzheimer's disease:** A disorder involving loss of mental functions resulting from brain-tissue changes; a form of senile dementia.
- **Corpus callosum:** In mammals, a broad band of nerve fibers that connects the left and right hemispheres of the brain.
- **Neurodegenerative:** Of, pertaining to, or resulting in the progressive loss of nerve cells and of neurologic function.

Physical Changes

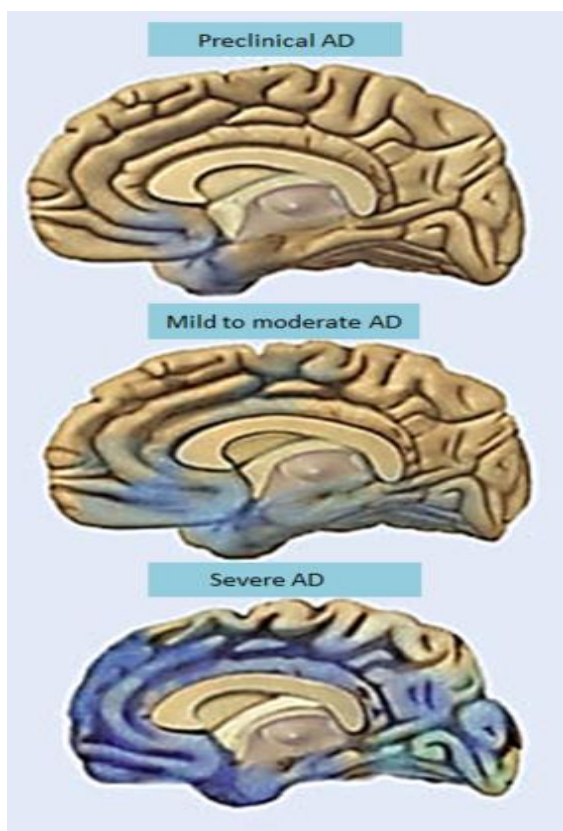
Late adulthood is the stage of life from the 60s onward; it constitutes the last stage of physical change. Average life expectancy in the United States is around 80 years; however, this varies greatly based on factors such as socioeconomic status, region, and access to medical care. In general, women tend to live longer than men by an average of five years. During late adulthood the skin continues to lose elasticity, reaction time slows further, and muscle strength diminishes. Hearing and vision—so sharp in our twenties—decline significantly; cataracts, or cloudy areas of the eyes that result in vision loss, are frequent. The other senses, such as taste, touch, and smell, are also less sensitive than they were in earlier years. The immune system is weakened, and many older people are more susceptible to illness, cancer, diabetes, and other ailments. Cardiovascular and respiratory problems become more common in old age. Seniors also experience a decrease in physical mobility and a loss of balance, which can result in falls and injuries.

Changes in the Brain

The aging process generally results in changes and lower functioning in the brain, leading to problems like memory loss and decreased intellectual function. Age is a major risk factor for most common neuro-degenerative diseases, including mild cognitive impairment,

Alzheimer's disease, cerebrovascular disease, Parkinson's disease, and Lou Gehrig's disease.

While a great deal of research has focused on diseases of aging, there are only a few informative studies on the molecular biology of the aging brain. Many molecular changes are due in part to a reduction in the size of the brain, as well as loss of brain plasticity. *Brain plasticity* is the brain's ability to change structure and function. The brain's main function is to decide what information is worth keeping and what is not; if there is an action or a thought that a person is not using, the brain will eliminate space for it.



Photos depicting the progression of Alzheimer's disease: Alzheimer's disease (AD) is a neurodegenerative disease and is the most common form of dementia in older adults.

Brain size and composition change along with brain function. Computed tomography (CT) studies have found that the cerebral ventricles expand as a function of age in a process known as *ventriculomegaly*. More recent MRI studies have reported age-related regional decreases in cerebral volume. The brain begins to lose neurons in later adult years; the loss of neurons within the cerebral cortex occurs at different rates, with some areas losing neurons more quickly than others. The frontal lobe (which is responsible for the integration of information,

judgement, and reflective thought) and corpus callosum tend to lose neurons faster than other areas, such as the temporal and occipital lobes. The cerebellum, which is responsible for balance and coordination, eventually loses about 25 percent of its neurons as well.

CHANGES IN MEMORY

Memory also degenerates with age, and older adults tend to have a harder time remembering and attending to information. In general, an older person's procedural memory stays the same, while working memory declines. *Procedural memory* is memory for the performance of particular types of action; it guides the processes we perform and most frequently resides below the level of conscious awareness. In contrast, *working memory* is the system that actively holds multiple pieces of transitory information in the mind where they can be manipulated. The reduced capacity of the working memory becomes evident when tasks are especially complex. *Semantic memory* is the memory of understanding things, of the meaning of things and events, and other concept-based knowledge. This type of memory underlies the conscious recollection of factual information and general knowledge about the world, and remains relatively stable throughout life.

Cognitive Development in Late Adulthood

Cognitive abilities such as memory may see a decline in late adulthood.

LEARNING OBJECTIVES

Review the cognitive changes characteristic of late adulthood.

Key Points

- During old age, a general decline in memory is very common, due to the decrease in speed of encoding, storage, and retrieval of memory.
- Neurocognitive disorder, formerly called dementia, is a broad category of brain diseases that cause a gradual long-term decrease in the ability to think and remember.

- There is no cure for neurocognitive disorder, but there are many strategies to improve quality of life for people with this disorder, such as daily exercise programs and cognitive or behavioral therapies.

Key Terms

- **Dementia:** A broad category of brain diseases that cause a long-term decrease in the ability to think and remember to the extent that a person's daily functioning is affected.

As an individual age into late adulthood, psychological and cognitive changes can sometimes occur. A general decline in memory is very common, due to the decrease in speed of encoding, storage, and retrieval of information. This can cause problems with short-term memory retention and with the ability to learn new information. In most cases, this absent-mindedness should be considered a natural part of growing older rather than a psychological or neurological disorder.



Intelligence: Cognitive ability changes over the course of a person's lifespan, but keeping the mind engaged and active is the best way to keep thinking sharp.

Distinct from a normal decline in memory is dementia, a broad category of brain diseases that cause a gradual long-term decrease in the ability to think and remember to the extent that a person's daily functioning is affected. While the term "dementia" is still often used in lay situations, in the DSM-5 it has been renamed "neurocognitive disorder," with various degrees of severity.

Alzheimer's disease is the most common type of neurocognitive disorder, accounting for 50% to 70% of cases. Neurocognitive disorders most commonly affect memory, visual-spatial ability, language, attention, and executive function (e.g., judgment and problem-solving). Most of these disorders are slow and progressive; by the time a person shows signs of the disease, the changes in their brain have already been happening for a long time. About 10% of people with dementia have what is known as *mixed dementia*, which is usually a combination of Alzheimer's disease and another type of dementia.

There is no cure for dementia, but for people who suffer from these disorders and for their caregivers, many measures can be taken to improve their lives. These can include education and support for the caregiver and daily exercise programs or cognitive or behavioral therapies for the person with the disorder.

Socio-emotional Development in Late Adulthood

Growing older means confronting many psychological, emotional, and social issues that come with entering the last phase of life.

LEARNING OBJECTIVES

Review the socioemotional changes and crises characteristic of late adulthood.

Key Points

- As people age, they become more dependent on others. Older adults may struggle with feelings of guilt, shame, or depression because of their increased dependency, especially in societies where the elderly are viewed as a burden.
- Many older adults contend with feelings of loneliness and isolation as their loved ones pass away, which can negatively impact their health and well-being. Staying active and involved in life can help to counteract these challenges.

- According to Erikson, the final stage of life is marked by a crisis over *integrity vs. despair*. People who believe they have had a positive impact on the world feel a sense of integrity, while those who feel they have not measured up to certain standards develop a sense of despair.
- According to Elisabeth Kübler-Ross, people go through five distinct stages of grief upon dealing with death and dying: denial, anger, bargaining, depression, and acceptance.

Key Terms

- **Socio-emotional selectivity theory:** A life-span theory of motivation which maintains that as time horizons shrink, as they typically do with age, people become increasingly selective, investing greater resources in emotionally meaningful goals and activities.

Hospice: The provision of palliative care for terminally ill patients, either at a specialized facility or at a residence, along with support for the family.

Changes in Memory

- As people approach the end of life, changes occur, and special challenges arise. Growing older means confronting many psychological, emotional, and social issues that come with entering the last phase of life.

Increased Dependency

As people age, they become more dependent on others. Many elderly people need assistance in meeting daily needs as they age, and over time they may become dependent on caregivers such as family members, relatives, friends, health professionals, or employees of senior housing or nursing care. Many older adults spend their later years in assisted living facilities or nursing homes, which can have social and emotional impacts on their well-being. Older adults may struggle with feelings of guilt, shame, or depression because of their increased dependency, especially in societies where caring for the elderly is viewed as a burden. If an elderly person has to move away from friends, community, their home, or other familiar aspects of their life in order to enter a nursing home, they may experience isolation,

depression, or loneliness. Increased dependency can also put older adults at risk of elder abuse. This kind of abuse occurs when a caretaker intentionally deprives an older person of care or harms the person in their charge. The elderly may be subject to many different types of abuse, including physical, emotional, or psychological. Approximately one in ten older adults report being abused, and this number rises in the cases of dementia or physical limitations.

Despite the increasing physical challenges of old age, many new assistive devices made especially for the home have enabled more old people to care for themselves and accomplish activities of daily living (ADL). Some examples of devices are a medical alert and safety system, shower seat (preventing the person from getting tired in the shower and falling), bed cane (offering support to those with unsteadiness getting in and out of bed), and ADL cuff (used with eating utensils for people with paralysis or hand weakness). Advances in this kind of technology offer increasing options for the elderly to continue functioning independently later into their lives.

Loneliness and Connection

A central aspect of positive aging is believed to be social connectedness and social support. As we get older, socio-emotional selectivity theory suggests that our social support and friendships dwindle in number, but remain as close as, if not closer than, in our earlier years (Carstensen, 1992). Many older adults contend with feelings of loneliness as their loved ones, partners, or friends pass away or as their children or other family members move away and live their own lives. Loneliness and isolation can have detrimental effects on health and psychological well-being. However, many adults counteract loneliness by having active social lives, living in retirement communities, or participating in positive hobbies. Staying active and involved in life counteracts loneliness and helps increase feelings of self-esteem and self-worth.



Social relationships in old age:

Research has shown that social support is important as we age, especially as loss and death become more common.

Erikson: Integrity vs. Despair

As people enter the final stages of life, they have what Erik Erikson described as a crisis over *integrity versus despair*. In other words, they review the events of their lives and try to come to terms with the mark (or lack thereof) that they have made on the world. People who believe they have had a positive impact on the world through their contributions live the end of life with a sense of integrity. Those who feel they have not measured up to certain standards—either their own or others'—develop a sense of despair.

Confronting Death

People perceive death, whether their own or that of others, based on the values of their culture. People in the United States tend to have strong resistance to the idea of their own death and strong emotional reactions of loss to the death of loved ones. Viewing death as a loss, as opposed to a natural or tranquil transition, is often considered normal in the United States. Elisabeth Kübler-Ross (1969), who worked with the founders of hospice care, described in her theory of grief the process of an individual accepting their own death. She proposed five stages of grief in what became known as the **Kübler-Ross model**: *denial*, *anger*, *bargaining*, *depression*, and *acceptance*.

- **Denial:** People believe there must be some mistake. They pretend death isn't happening, perhaps live life as if nothing is wrong, or even tell people things are fine. Underneath this facade, however, is a great deal of fear and other emotions.
- **Anger:** After people start to realize death is imminent, they become angry. They believe life is unfair and usually blame others (such as a higher power or doctors) for the state of being they are experiencing.
- **Bargaining:** Once anger subsides, fear sets in again. Now, however, people plead with life or a higher power to give them more time, to let them accomplish just one more goal, or for some other request.
- **Depression:** The realization that death is near sets in, and people become extremely sad. They may isolate themselves, contemplate suicide, or otherwise refuse to live life. Motivation is gone and the will to live disappears.
- **Acceptance:** People realize that all forms of life, including the self, come to an end, and they accept that life is ending. They make peace with others around them, and they make the most of the time they have remaining.

While most individuals experience these stages, not all people go through every stage. The stages are not necessarily linear and may occur in different orders or reoccur throughout the grief process. Some psychologists believe that the more a dying person fights death, the more likely they are to remain stuck in the denial phase, making it difficult for the dying person to face death with dignity. However, other psychologists believe that not facing death until the very end is an adaptive coping mechanism for some people.

Whether due to illness or old age, not everyone facing death or the loss of a loved one experiences the negative emotions outlined in the Kübler-Ross model (Nolen-Hoeksema & Larson, 1999). For example, research suggests that people with religious or spiritual beliefs are better able to cope with death because of their belief in an afterlife and because of social support from religious or spiritual associations (Hood, Spilka, Hunsberger, & Corsuch, 1996; McIntosh, Silver, & Wortman, 1993; Paloutzian, 1996; Samarel, 1991;

How Culture and Society Impact the Elderly

Depending on culture, aging can be seen as an undesirable phenomenon or as an accumulation of wisdom and status.

LEARNINGOBJECTIVES

Analyse the effects of societal perception on treatment of the elderly.

Key Points

- How people view and perceive the aging process varies greatly from culture to culture.
- Ageism is a common form of discrimination in the United States and other societies that includes negative views and stereotypes about the elderly. This type of discrimination can have a significant negative impact on the care and well-being of elderly people.
- Traditionally, elder care has been the responsibility of family members and was provided within an extended-family home. However, increasingly in modern societies, elder care is being provided by state or charitable institutions.
- Assisted living facilities allow the elderly to keep a sense of independence while providing them with care and supervision necessary to stay safe.
- While countries like the United States and Japan focus more on independent care, Indian culture places greater emphasis on respect and family care for the elderly.
- People also perceive death based on the values of their culture. In the United States, it is fairly normal to view death as a loss and something to be feared, as opposed to a natural or tranquil transition.

Key Terms

- **Culture:** The beliefs, values, behaviour, and material objects that constitute a people's way of life.

- Prejudice: An adverse judgment or opinion formed beforehand or without knowledge of the facts.
- Self-fulfilling prophecy: A prediction that, by being voiced, causes itself to come true.

How people view and perceive the aging process varies greatly from culture to culture. Depending on cultural norms, beliefs, and standards, aging can be seen as an undesirable phenomenon, reducing beauty and bringing one closer to death, or as an accumulation of wisdom and status worthy of respect. In some cases, numerical age is important (whether good or bad), whereas in other cases the stage in life that one has reached (adulthood, independence, marriage, retirement, career success) is deemed more important than numerical age.



Cultural views on aging: Depending on the culture, aging can be seen as an undesirable phenomenon or as an accumulation of wisdom and respect.

Aging and Ageism

Ageism (also spelled "agism") involves stereotyping and discriminating against individuals or groups on the basis of their age. The term was coined in 1969 by Robert Neil Butler to describe discrimination against seniors, and it operates similarly to the way that sexism and racism operate. Butler defined ageism as a combination of three connected elements: *prejudicial attitudes* toward older people, old age, and the aging process; *discriminatory practices* against older people; and *institutional practices and policies* that perpetuate stereotypes about elderly people.

Research on age-related attitudes in the United States consistently finds that negative attitudes exceed positive attitudes toward older people because of their looks and behavior. In his study *Aging and Old Age*, Posner (1997) discovered “resentment and disdain of older people” in American society. The stereotypes, discrimination, and devaluing of the elderly seen in ageism can have significant effects on the elderly, affecting their self-esteem, emotional well-being, and behavior. After repeatedly hearing the stereotype that older people are useless, older people may begin to feel like dependent, non-contributing members of society. They may start to perceive themselves in the same ways that others in society see them. Studies have also specifically shown that when older people hear these stereotypes about their supposed incompetence and uselessness, they perform worse on measures of competence and memory; in effect, these stereotypes become a self-fulfilling prophecy.

According to Cox, Abramson, Devine, and Hollon (2012), old age is a risk factor for depression caused by such prejudice. When people are prejudiced against the elderly and then become old themselves, their anti-elderly prejudice turns inward, causing depression. Research has found that people who hold more ageist attitudes or negative age-related stereotypes are more likely to face higher rates of depression as they get older. Old-age depression results in the over-65 population having one of the highest rates of suicide.

Eldercare

The form of eldercare provided varies greatly among countries and is changing rapidly. Even within the same country, regional differences exist with respect to care for the elderly, often depending on the resources available in a given community or area. However, it has been observed that globally the elderly consumes the most health expenditures out of any other age group. Traditionally, eldercare was the responsibility of family members and was provided within an extended family home. Increasingly in U.S. society, eldercare is being provided by state or charitable institutions.

In developed countries such as the United States, nearly one million elderly citizens are helped by assisted living facilities. These facilities allow the elderly to keep a sense of independence while providing them with the care and supervision necessary to stay safe. Other elderly people are cared for by members of their family; however, eldercare in the United States is often viewed as a burden by family members who are busy living their own lives, making assisted living and respite-care facilities a commonly chosen option.

7 Cultural Views on Aging and Death

While countries like the United States and Japan focus more on independent care, Indian culture places greater emphasis on respect and family care for the elderly. In contrast to the United States, many countries view elderly citizens, especially men, in very high regard. Traditional values demand honor and respect for older people, who are considered to be wiser from experience. In China, several studies have noted the attitude of filial piety, or deference and respect to one's parents and ancestors in all things, as defining all other virtues.

People also perceive death, whether their own or that of others, based on the values of their culture. People in the United States tend to have strong resistance to the idea of their own death and strong emotional reactions of loss to the death of loved ones. Viewing death as a loss and something to be feared, as opposed to a natural or tranquil transition, is often considered normal in the United States.

PHYSICAL DEVELOPMENT IN OLD AGE

PHYSICAL CHANGE IN OLD AGE : While it is unquestionably true that physical changes do occur with and that these changes are, for the most part, in the direction of deterioration, individual difference are so marked that no two people of the same age are necessarily at some state of deterioration. Furthermore, within the same individual there are variation in the rate

of aging of different parts of the body. The organs of reproduction, for example, age sooner than the other organs.

SOME COMMON PROBLEM UNIQUE To OLD AGE

- Physical helplessness, which necessitates dependency on other.
- Economic insecurity severe enough to necessitate a complete change in pattern of living.
- Establishing living condition in accordance with changes in economics or condition.
- Making new friends to replace those who have died or moved away or who are invalided.
- Developing new activities to occupy increased leisure time.
- Learning to treat grown children as adults.
- Becoming involved in community activities planned for the elderly.
- Deriving enjoyment from activity suited to the elderly and willingness substitute them for activities formerly enjoyed but now too strenuous.
- Being “victimized” or Taken advantage of by salespersons, hoodlums, and criminal because they unable to defend themselves. The major physical changes that occur in old age are described below and attempt is made to point out why they may be regarded as “major” Change. Changes in appearances Bischof has said that aging” proceeding from bifocals to trifocals and dentures to death”. This suggests that the most obvious signs aging are changes in the face. Even though women can use cosmetics to cover up some of the telltale signs of aging on the face. Many cannot be camouflaged, as Change in other areas of the body can. The hands also give away a person’s age. Like the face, they change more with aging than the rest of the body, and these changes are also less subject to camouflage. The changes in appearance that normally occur during old age. Will not all people show all these signs of aging nor do all of them appear simultaneously, sooner or later they will become apparent if the individual lives long enough.

CHANGES IN APPEARANCE DURING OLD AGE:

Head Region:

- The nose elongates.

- The mouth changes shape as a person results of tooth loss or the necessity of wearing dentures. • The eyes seem dull and lustierless and often have a watery look.
- A double or triple chin develops.
- The cheeks become Pendulous, wrinkled, and baggy.
- The skin becomes wrinkled and dry, and dark spots, moles or warts may appear.
- The hair on the head Becomes thin trans grey or white, and tough, bristly hair appears in the nose ears and eyebrows.
- The soldiers stoop and thus seem smaller.
- The abdomen bulges and droops.
- The hips seem flabbier and broader than they died earlier.
- The waistline broadens, giving the trunk a sacklike appearances.
- The woman breasts become flabby and droop.

Limbs :

- The upper arm become flabby and heavy while the lower are seems to shrink in diameter.
- The legs become flabby and the veins prominent especially around the ankles.
- The hands become scrawny, and the veins on the back of the hand are prominent.
- The feet become larger as a result sagging muscles and corns bunions, and callouses often appear.
- The names of the hands and feet become thick thought and brittle.

Internal changes

Although internal changes are not as readily observable as external ones, they are nevertheless as pronounced and as widespread. Changes in the skeleton are due to hardening of the bones, deposits of mineral salt, and modification of the internal structure of the bones. As a result of these changes, the bones become brittle and are subject to fractures and breaks, which are increasingly slow to heal as age progress. Changes in the nervous system are especially marked in the case of the brain. In old age there is a lose in brain weight the lateral ventricles tend to be dilated, and the ribbon of cortical tissue narrowed Central nervous

system changes come early in the aging period. They are reflected first in a decrease in the speed of learning and later in a decline in intellectual Powers. The viscera go through a marked transformation with advancing age. Atrophy is particularly marked in the spleen, liver, testes, heart, lungs, pancreas, and kidneys, perhaps the most marked change of all is in the heart. In the early years of life, the heart is positioned more nearly in the centre of the chest than it is advanced age. It increases in bulk with age and continues to grow even after the body has ceased to do so. Therefore, the ratio of heart weight to body weight decreases with age. As a result of an increase in fibrous tissue from deposits of fat and calcium and because of changes in the quality of elastic tissue the valves gradually become less soft and pliable. The gastrointestinal tract, the urinary tract, and the smooth-muscle organs generally are the least and last affected by aging.

Changes in Physiological Functions

There are also changes in the functioning of the Organs. Regulation of body temperature is influenced by impairment of the regulatory devices. Old people cannot tolerate extremes of temperature, either hot or cold, because of the decreased vascularity of the skin. Reduced metabolic rate and lessened muscular vigour. Also make regulation of body temperature difficult. When an old person becomes short of breath as a result of unusual exertion, it takes longer to restore breathing and heart action to normal than it did when younger, Pulse rate and oxygen consumption are more varied among the elderly than among younger people. Elevated blood pressure due to the increased rigidity of the walls of the aorta and central arteries is quite common in old age. Elderly people excrete less urine, and there is less creatinine in their Urine than in that of younger adults.

In old age, there is a decline in the amount of sleep needed and in the quality of sleep, by age sixty or seventy the daily amount is reduced an hour or two, and brief periods of rest and sleep generally replace the longer periods of sleep of the younger person. Most old people suffer from insomnia, especially women. Digestive changes are perhaps the most marked of the changes in the regulatory functions. Difficulties in eating are due partly to loss of teeth, which is fairly universal in old age, and also to the fact that the senses of smell and taste become less acute, making even the best food seem somewhat tasteless (1) Gradual atrophy of the glands lining the walls of the stomach and bowels results in a decrease in the ferments and juices that aid in digestion. Thus, the old person needs more fluids to lubricate and to dissolve food elements. Strength and the ability to work decrease as muscular flabbiness and

general weakness make it more difficult for old people to use their muscles. The ability to do strenuous work for a short period of time diminishes with age, while the ability to withstand a long, steady grind increases: It also takes the older person longer to recover from physical fatigue and from fatigue caused by continued mental work or nervous strain. As a result, most old people learn to cut down on any work that requires either strength or speed.

Sensory Changes

All the sense organs function less efficiently in old age than they did when the individual was younger. However, because sensory changes are slow and gradual in most cases, the individual has an opportunity to make adequate adjustments to them. Furthermore, glasses and hearing aids can almost completely compensate for impaired vision or hearing loss. The eyes and ears, which are the most useful of all the sense organs, are also the most seriously affected by old age, although changes occur in the functioning of all the sense organs.

Sexual Changes:The male climacteric comes later than the menopause and requires more time. Generally, there is a decline in sexual potency during the sixties which continues as age advances. Like the menopause, it is accompanied by a decline in gradual.

COMMON CHANGES IN SENSORY FUNCTIONING IN OLD AGE

Vision:There is a commiserate decline in the ability to see at low levels of illumination and a decline in colour sensitivity Most old people suffer from presbyopia-farsightedness which is due to the diminishing elasticity of the lenses.

Hearing: Old people lose the ability to hear extremely high tones, as a result of atrophy of the nerve and end organs in the basal turn of the cochlea, although most can hear tones below high as well as younger people. Men tend to experience greater hearing loss in old age than women Taste Marked changes in taste in old age are due to atrophy of the taste buds in the tongue and the inner surface of the cheeks. This atrophy he comes progressively more widespread with advancing age

Smell: The sense of smell becomes less acute with age, partly as a result of the atrophy of cells in the nose and partly because of the increased hastiness of the nostrils Touch As the skin becomes drier and harder, the sense of touch becomes less and less acute. Sensitivity to pain The decline in the sensitivity to pain occurs at different rates in different parts of the body. There is a greater decline, for example, in the forehead and arms than in the legs Functioning, which is responsible for the changes that occur during the climacteric. The male

climacteric has two common effects. First, there is a waning of the secondary sex characteristics. The voice, for example, becomes higher in pitch, the hair on the face and body becomes less luxuriant, and the heavy musculature gives way to a general flabbiness. In general, older men are less "masculine than they were in the prime of life, just as women are less "feminine" after the menopausal changes have taken place. Second, the male climacteric affects sexual functioning. However, even though sexual potency has declined, there is not necessarily a decline in sexual desire or in the ability to have intercourse. There is evidence that cultural influences are more important in the waning of the sex drive than physical changes. Cultural influences produce anxieties, which in turn affect attitudes toward sex and sexual behaviour. Men and women often refrain from continuing sexual relations in old age or from remarrying because of unfavourable social attitudes toward sex among older people and because of doubts about their sexual capacities. To avoid having their pride hurt, men especially are likely to refrain from sexual activity as they grow older. The strength of the sex drive in old age will depend largely upon the individual's general health. And the kind of sexual adjustments made earlier in life. Those who made poor sexual adjustments when they were younger have been found to lose the sex drive earlier than those who made better adjustments.

CHANGES IN MOTOR ABILITIES IN OLD AGE

Most old people are aware that they move more slowly and are less well coordinated in movements than they were when they were younger. These changes in motor abilities are due partly to physical causes and partly to psychological causes. The physical causes of changes in motor abilities include a decrease in strength and energy, which is a normal accompaniment of the physical changes that take place with age; lack of muscular tone; stiffness of the joints; and tremors of the hands, forearms, head, and lower jaw. The psychological causes of changes in motor abilities stem from the awareness of "slipping and from feelings of inferiority experienced when comparisons are made with younger people in terms of strength, speed, and skills. Emotional tension, stemming from these psychological causes, may hasten the changes in motor abilities or decrease the motivation to attempt to do what might still be done (43). There is evidence that practice and activity will ward off, to some extent at least, decline in motor abilities. Those who continue to exercise are, on the whole, speedier and better coordinated than those who fail to do so, As Spirduso has claimed. From the results of a study in which the effects of practice were noted, "Certainly these results strongly support vigorous sports participation as a significant factor in retarding the onset

of aging”. However, even under the most favourable conditions and with the strongest motivation, few individuals can hope that their motor abilities will continue at the same level they reached when they were younger. While all motor abilities decline to some extent, some decline earlier and more rapidly than others. The changes in motor abilities that have the most important effect on personal and social adjustments.

CHANGES IN MENTAL ABILITIES IN OLD AGE

As Baltes and Schale have commented, “During the past few decades, the psychology of intellectual aging has been beset by a stereotype of decline”. Psychologists, from the results of their studies, have confirmed the popular belief that, with the trend toward decline in other areas, there would automatically be decline in mental abilities as well. Today, these popular beliefs and stereotypes are not only being questioned by scientists but scientific attention is being directed toward improving techniques to measure the so-called mental decline that supposedly occurs with the onset of old age. These studies are also looking for individual differences in mental changes between people of the same chronological ages but with different intellectual abilities to date, evidence points to the fact that changes in mental abilities are less than has been believed and that there are marked individual differences in these changes. The popular stereotype of mental decline as one of the outstanding characteristics of old age is gradually being weakened, but it still exists and will do so until further evidence disproves it entirely or certainly changes it radically. Causes of Changes in Mental Abilities in the past it was assumed that mental deterioration inevitably accompanied physical deterioration.

COMMON CHANGES IN MOTOR ABILITIES IN OLD AGE

Strength Decline in strength is most pronounced in the flexor muscles of the forearms and in the muscles which raise the body. Elderly people tire quickly and require a longer time to recover from fatigue than younger people. Speed decrease in speed with aging is shown in tests of reaction time and skilled movements, such as handwriting. It is especially marked after age sixty. Learning new skills even when the elderly believes that learning new skills will benefit them personally, they learn more slowly than younger people and the end results tend to be less satisfactory. Awkwardness old people tend to become awkward and clumsy, which causes them to spill and drop things, to trip and fall, and to do things in a careless, untidy manner. The breakdown in motor skills proceeds in inverse order to that in which the skills were learned, with the earliest learned skills being retained longest. That physical

decline does contribute to mental decline has been shown by the fact that sex-hormone treatment of elderly women can result in improvement in the ability to think, to learn new material, to memorize, and to remember-and in increased willingness to expend intellectual energy. On the other hand, some pathological conditions, such as hypertension, lead to intellectual loss with aging, although, as Wilkie and Eisdorfer have emphasized such loss is not part of the "normal" aging process". Lack of environmental stimulation also affects the rate of mental decline. In mental as in motor learning, continuation of practice through the years slows down the rate of decline. Those who continue to work as they reach the latter years of life have more normal brain functioning and do better on intelligence tests than those who are 65 speed of reaction and of movement decline sharply as age advances. (Adapted from I. Hodgkins). Influence of age on the speed of reaction and movement in females. (Journal of Gerontology. 1962 17. 185-389. Used by permission.) What may be interpreted as poor comprehension resulting from intellectual decline may be due primarily to poor hearing. As hearing decreases, many elderly people fail to grasp what others say and their responses suggest that they are not as mentally as they formerly were.

How Great Is Mental Decline in Old Age? It is important to recognize that the mental decline associated with old age may not be as great as popularly supposed or as reported in earlier studies. As has been pointed out, there is a growing belief that what is assumed to be a decline in mental ability may be the result of discrepancies in the choice of groups at different age levels for comparisons and of the differences between education now and at the time the elderly groups were school-children. Schaie et al. have emphasized the importance of this: Conventional cross-sectional studies confound historical generational with individual (ontogenetic) change components. Since such designs sample individual differing not only in age but also in terms of generation-related environmental backgrounds, the resulting age differences provide most inappropriate evidence for ontogenetic change other conditions may account, to some extent, for the apparent mental decline that accompanies age. Most old people, for example, are not familiar with testing, are not sympathetic toward it, and refuse to be tested. This biases the samplings used for studies and usually means that institutionalized persons must be used for studies of old-age groups, thus giving an unfair sampling of the old-age population and an inaccurate picture of how mental abilities are affected by aging. In addition, since it is known that speed of action slows down with advancing age, tests of mental ability that emphasize the time element are unfair to elderly subjects. In measuring mental abilities, the ability to cope with mental tasks must be considered free from the

influence of speed and other factors that may obscure mental abilities. Because of the contradictory evidence available today about decline in mental abilities, Horn and Donaldson have warned : There are results which caution against the view that all of the abilities which are believed to be involved in intelligence necessarily decline or decline in the same way: some abilities may decline little or not at all. Also, there are results which caution against supposing that decline necessarily occurs for all subjects or necessarily sets in as early as might be supposed from considerations of cross-sectional data alone. The only way to measure the amount of decline precisely is to have an accurate record of the individual's abilities at their peak and then to determine from this standard the percentage of decline that sets in at different ages. To date, as has been stressed earlier. Few studies have been made using the longitudinal method; most have been made using samples from different age levels- the cross-sectional method. One longitudinal study reported decline to be far less than is popularly believed.

Variations in Mental Change: As in all other areas of decline, there are marked individual variations in mental decline. There is no one age at which the decline begins and no specific pattern of decline that is characteristic of all old people. In general, those of higher intellectual levels experience relatively less decrease in mental efficiency than those of lower levels. Studies of gifted individuals carried out over a long period of time, for exam increase no change decrease vocabulary similarities Digit Backward Digit Forward Tests Block design tapping digit symbol substitution, Changes in test scores for different mental abilities between the ages of sixty-four and eighty-four years. (Adapted from J. E. Blum, J. L. Fosshage, and L. F. Jarvik. Intellectual changes and sex differences in octo denarian's: A twenty-five-year longitudinal study of aging. *Development Psychology*, 1972, Used by permission). Ple, have provided evidence that mental decline sets in later than is popularly believed, Just as there are differences in the rate of mental decline among different individuals of the same chronological age, so there are also differences within the same individual in the rate of decline of different mental abilities. Even when the element of speed is eliminated and the tests are given as power tests to measure different mental abilities, declines of varying degrees have been found. In summarizing the results of their stud les, Schaie et al. have reported: In abilities heavily dependent upon educational and acculturation output systems (such as Verbal Meaning, Reasoning, Numbers, etc.) there was a negligible amount of genuine longitudinal change. The strong cross-sectional age decrements reported in the conventional literature for these abilities' simply are a consequence of whatever

cultural change factors produce higher and higher intellectual performance in successive generations. Abilities mediated by formal education systems should not show any pronounced aging decrements. That occur with advancing age and the apparent reasons for these changes.

CHANGES IN INTERESTS IN OLD AGE

Like the physical, psychological, and lifestyle changes in old age, changes in interests are inevitable. There is a close correlation between the number of interest's people at all ages have and the success of their adjustments. This, in term, determines how happy or unhappy they will be. In old age, this is just as true as at other ages in the life span. It is important to recognize, however, that adjustments in old age are markedly influenced by whether changes in interests are voluntary or involuntary. If elderly people want to change their interests because of health, financial situation, or any other reason, they will be better satisfied than if they must give up activities because of unfavourable attitudes on the part of the social group. Like the interests of people at every age level, An analysis of different mental abilities, as measured by tests, has revealed the characteristic changes.

OLD AGE: "We are considered to be late adulthood from the time we reach our mid-sixties until death, we will define late adulthood from age 65-100 and beyond. This is the longest development stage across the lifespan."

Personal and Social Adjustments:

Old age 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 regret fully, 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 old age. However, it is recognized that chronological age is a poor criterion to use in marking off the beginning of old age 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 old age. The last stage in the life span is frequently sub divided 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 of middle age - and " old " after they reach the age seventy - meaning, according to standard diction Aries, advanced far in years of life and having lost the vigour of youth.

CHARACTERISTICS OF OLD AGE

Like every other period in the life span, old age 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 old age, however, are far more likely to lead to poor adjustments than to good and to unhappiness rather than to happiness. That is why old age is even more dreaded in the American culture of today than middle age. Old Age 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 evolutionary in that they lead to maturity of structure and functioning. In the latter part of life, by contrast, they are mainly involutinal, 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's.

The period during old age 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 old age when a more or less complete physical breakdown takes place and when there is mental dis organization. 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 die before deterioration sets in. Decline comes partly from physical and partly from psychological factors. The physical cause of de cline is a change in the body cells due not to a specific disease but to the aging process. Decline may also have psychological causes. Unfavourable attitudes toward oneself, other people, work, and life in general can lead to senility, just as changes in the brain tissue can. Individuals who have no sustaining interests after retirement are likely to become depressed and disorganized. As a result, they go downhill both physically and mentally and may soon die. How the individual copes with the strains and stresses of living will also affect the rate of decline. 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 behaviour 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.

Concepts of old age

- ▶ Till now there is neither a universal definition of old age nor any measuring scale, on the basis of which it can be said that above which age a person will be said to be old. Some scholars have considered the beginning of old age as "the mother from the age of 55 years, while some scholars have considered old age from the age of 60". In different countries, people of different ages are placed in the category of old age based on social beliefs, government laws and life expectancy.
- ▶ Characteristics of old age
- ▶ 1. Small family size
- ▶ Old age is the final stage in the family life cycle. In this stage, parents give education to their children and make them worthy. Children become financially independent and self-dependent. They get married. Children leave the parental home and settle in separate households and form a new family. Parents are almost relieved of the responsibilities of their children. Now it becomes small and now only two old couples are left in it.
- ▶ 2. New role playing
- ▶ In old age, parents also have to share new responsibilities and responsibilities because the size of the family increases in the joint family. New relatives come for the marriage of sons and daughters. They have to be welcomed and welcomed. There is a need to adjust for the marriage of children. They have to get married and have to adjust with new relatives. There is a new role to play as Grandparents, Grandparents. The problems caused by the 'Generation Gap' also have to be reconciled.
- ▶ 3. Behavioural changes
- ▶ In old age, tremendous changes are seen in the personality of a person. Most of the elderly become irritable and angry. They get angry on the matter and expect to be

persuaded. Their behaviour becomes like that of stubborn children. That is why it is said that 'boy and boot' are the same. The difference lies only in their experience. Where the drivers are 'inexperienced', here old age is the emperor of experiences. This is the reason why 'lad and old man' are close friends, and they like to be with each other.

- ▶ 4. Feeling of loneliness
- ▶ Most of you Buddhas of retirement are filled with despair.
- ▶ Because their sons and daughters get married and settle down in their own homes. Being a nuclear family, the life of the elderly becomes suffocating. Despite all this, if their life partner dies, the situation becomes even more dire. Especially, the old woman gets surrounded by sadness, depression, despair, sadness and loneliness. The longing, joy, gaiety and enthusiasm to live life in his mind, everything ends. She keeps grumbling inside.
- ▶ Mental changes
- ▶ Mental changes are also clearly visible in old age. See also the habit of 'forgetfulness' in them. The main reason for this is the weakening of the "fibers of the nervous system". Its 'Nervous System' gets degraded in functionality. Many old people lose their mental balance, and they start behaving like crazy and neurotic. The main reason for mental change is also the 'Generation Gap'.

CHANGES IN OLD AGE

Like the physical, psychological, and lifestyle changes in old age, changes in interests are inevitable. Several conditions are responsible for this. There is a close correlation between the number of interest's people at all ages have and the success of their adjustments. This, in turn, determines how happy or unhappy they will be. In old age, this is justas true as at other ages in the life span.

It is important to recognize, however, that adjustments in old age are markedly influenced by whether changes in interests are voluntary or involuntary. If elderly people want to change their interests because of health, financial situation, or any other reason, they will be better

satisfied than if they must give up activities because of unfavourable attitudes on the part of the social group.

Vocabulary

Deterioration in vocabulary is very slight in old age because elderly people constantly use words most of which were learned in childhood or adolescence. Learning new words in old age is more infrequent than frequent.

Mental Rigidity

Mental rigidity is far from universal in old age, in contradiction to the stereotype of the elderly as mentally rigid. When mental rigidity sets in during middle age, it tends to become more pronounced with advancing age partly because the elderly learn more slowly and with more difficulty than they did earlier and partly because they believe that old values and ways of doing things are better than new ones. This is not mental rigidity in the strict use of the term but a carefully reasoned decision

They may become egocentric and self-centered to the point where they think more about themselves than about others and have little regard for others interests and wishes.

Even when they are in good physical condition, older people are often preoccupied with their health and with the bodily processes. They tend to complain about their health and to exaggerate any ailment they may have. They also show their preoccupation with themselves by talking endlessly about their past expecting to be waited on, and wanting to be the center of attention.

OLD AGE PERSONAL AND SOCIAL ADJUSTMENT

SOME COMMON CONDITIONS AFFECTING CHANGE OF INTERESTS IN OLD AGE

Health

Changes in health and energy are reflected in an increased interest in sedentary pursuits and a decreased interest in activities requiring strength and energy.

Social Status

Older people of the higher social groups usually have a wider range of interests than those of the lower groups. Many of these are carry-overs of interests developed earlier in life.

Economic Status

Older people who have inadequate money to meet their daily needs often have to give up many of the interests that are important to them and concentrate on the ones they can afford, regardless of whether they are meaningful to them or meet their needs.

Place of Residence

Where elderly people live have a marked influence on whether their earlier interests will persist or change. If they live in their own homes with family members, their interests are far more likely to remain static than if they go to live with married children or in a retirement home.

Interest in Appearance Although some old people are as concerned about their appearance as they were when they were younger, many show little interest in how they look. They may cease to care about their clothes or become careless about grooming. While few are dirty and slovenly in appearance, most elderly people do not take the time and trouble to make the most of their looks or to camouflage signs of physical aging as well as they could. There are a number of explanations for decline in interest in appearance with advancing age.

Sex

Women, as a group, have more interests in old age than do men, just as they do throughout adult hood. Because of the few interests they developed when they were younger, many older men, after retirement, find it difficult to cultivate interests to occupy their time.

Marital Status

Just as unmarried men and women in early adult hood and middle age have more time and money to cultivate interests than do those who are married, so do the unmarried in old age. Some of their interests may be new but most are carry-overs from younger years.

Values

As values change, so do interests at every age. In old age, value changes are common and usually toward conservatism. This affects the relative value they place on their interests. Older people, for example, may come to value social contacts rather than hobbies as compensation for the loneliness caused by loss of a spouse. more socially active people are, the more incentive they have to be careful about their looks. Socially withdrawn people, by contrast, have far less motivation to keep up their appearance. The economic status of the elderly is an important factor in the degree of interest they have in appearance. When every penny must be counted and when some of the necessities of life must be skimmed on, money to improve one's appearance is considered a luxury that cannot be afforded. Place of residence also plays an important role in determining how great an interest the elderly have in their appearance. Those who live alone have lar less interest than those who live with grown children or in homes for the retired elderly.

The sex of the elderly influences their attitudes toward appearance. Old men, as a group, tend to be more interested in their appearance than old women.

Interest in money, which starts towane during middle age, generally is revived and becomes more intense as old age progresses Retirement or unemployment may leave the elderly with greatly reduced incomes or with no income at all unless they are eligible for social security or welfare relief. This focuses their attention on money d stimulates their interest in how they can get more money or make ends meet with what they have.

When the income of elderly people is drastically reduced, their interest in money is focused not on what they want to buy and on the purchase of status symbols, as is often true in the earlier years, but on how they can maintain their independence-how they can live where and how they want to without relying on relatives or charity.

In order to maintain the pattern of life they prefer, even when simpler than what they had grown accustomed, many older people are forced to cut down their expenditures for clothes and grooming aids, for social activities and recreations, and for membership in different community organizations. Travel and vacations away from home, except when visiting friends or relatives, often becomes impossible for many elderly people.

Recreational Interests

Elderly men and women tend to remain interested in the recreational activities they enjoyed in early adulthood, and they change these interests only when necessary. Changes that do occur consist mainly of a gradual narrowing down of interests, rather than a radical change in pattern, and a shift toward more sedentary forms of recreation. Causes of Changed Recreational Activities.

OLD AGE PERSONAL AND SOCIAL ADJUSTMENTS

Elderly men and women tend to express the recreational interests they developed when they were younger, changing them only when failing health or some other obstacle forces them to do so.

COMMON CONDITIONS RESPONSIBLE FOR CHANGES IN RECREATIONAL ACTIVITIES

Health

As health gradually fails and as physical disabilities such as poor eyesight set in the individual acquires an interest in recreational activities that require a minimum of strength and energy and can be moved in the home

Economic Status

Reduced income after retirement may force the cutting down on or elimination of recreational activities, such as movie going that cost money. This is especially true of people in the lower socioeconomic groups.

Marital Status

Elderly people who have been accustomed to engaging in recreations with their spouses must make radical changes in their patterns after the loss of mental ability and less participation in physical activities. Social disengagement in old age is commonly expressed in a narrowing down of the sources of social contact and a decline in social participation. For most older people this means a radical change in the pattern of social life they established during early adulthood and carried on, with only minor changes, through middle age.

Kinds of Social Disengagement Social disengagement may be voluntary or involuntary. In the case of voluntary social disengagement, elderly people withdraw from social activities because they feel that such activities no longer meet their needs. As their interest in themselves increases, their interest in others and their social interests are limited to their immediate families. The most socially isolated elderly people are.

Loss of a spouse through divorce or death. A woman accustomed to playing cards or going to community clubs with her husband may have to cultivate new recreational interests when she is left alone.

Sex

Women tend to cultivate a wide range of recreational interests throughout life, many of which are sedentary in nature and thus can be carried into old age. Men, by contrast, tend to limit their recreational interests to sports, which they must give up when their health fails. Thus, they have a paucity of recreational interests in old age and may depend mainly on television.

Living Conditions

Elderly persons who live in a home for the aged have recreations provided for them that are suited to their physical and mental abilities. Those who live in their own homes or with a named child have fewer opportunities for recreation, especially if their economic status is poor or if failing health or transportation problems prevent them from participating in community-sponsored recreational activities the more ingrown they become and the fewer opportunities they have to keep up to date. As a result, they become boring to others. This further adds to their social isolation.

Involuntary social disengagement comes when elderly people want and need social contacts but are deprived of the opportunities to have them because of conditions over which they have little or no control. When, for example, many of their contemporaries have died or have moved away or are physically or economically unable to do things with them, elderly people no longer have the companionship they formerly enjoyed.

Elderly people may also lack the strength of the means of transportation to see their friends. If they're income is limited, they may not be able to participate in church or other community activities, and they often find it difficult or impossible to keep up with the pace set by their younger relatives or friends Equally.

OLD AGE PERSONAL AND SOCIAL ADJUSTMENTS

Unfavourable social attitude toward the elderly which contributes its share to their involuntary social engagement. In discussing attitudes toward older people in social situations, Kalish has said We Americans like to invest our efforts, money, and emotional involvements in people who will pay off. Society is contrived so that older people are very unlikely to pay off. As a set of shrinkages of sources of social contact, the family circle usually constitutes the

nucleus of older people's social lives. The older they are the more they must rely on members of their family for companionship. This is especially true of those whose friends die before they do. Social Participation With advancing age, participation in social activities declines and its scope narrows. There are many reasons for decline in social participation with advancing age. While declining is believed to be the main reason, not always the case other reasons are as important and sometimes even more important.

Their participation is limited mainly to the non-occupationally oriented organizations. This partly accounts for the fact that elderly people tend to discontinue their membership in community organizations or to become less active in them.

A change in the individual's status, due either to loss of a spouse or to retirement, is likely to affect friendships and social participation. For example, fewer men and women are widowed during their sixties than during their seventies and thus the social life of people in their sixties is usually dominated by married couples. During the seventies, by contrast, more are widowed, and most men are retired.

The same principle holds true in the case of retirement. Men or women who retire earlier than others of their age groups or than their friends are deviant in the sense that they do not fit into the social life dominated by those who still work. After most of their friends retire, they find that there is more time for socialization and shared interests.

One of the advantages of institutional living for the elderly is that it provides opportunities for contacts with contemporaries which they usually do not have if they live in their own homes or in the homes of grown children. The social advantages of institutional living for the elderly will be discussed further in the following chapter,

Religious Interests

Although it is popularly believed that people turn to religion as life draws to a close there is little evidence to support this belief. While elderly people may become more religious as death approaches, or if they are seriously disabled, the average elderly person does not necessarily turn to religion in the sense that it becomes a new interest or a new focal point.

There is evidence that the quality of church membership plays a more important role in the individual's adjustments in old age than membership per se. Those who joined voluntarily when they were younger and who have been active participants tend to be better adjusted in

old age than are those whose interest and activity in religious organizations have been limited. Religion, as Moberg has explained, is only one factor in the adjustment to old age, but it is an important one. The relationship between church attendance and personal adjustment in old age may be affected more by the social experiences the church offers than by the religious experiences. The church offers opportunities for social life and companionship, thus satisfying the older person's need to belong and to feel useful, and it minimizes feelings of loneliness. In addition, religion alleviates anxieties about death and the afterlife. As Moberg has pointed out. "A sense of serenity and decreased fear of death tend to conservative religious beliefs".

Whatever the reasons for interest in religion, attendance at church, and participation in religious organizations, there is evidence that these contribute to good adjustment in old age . There is also evidence, as Covalt has pointed out, that "The religious have a reference group that gives them support and security, the nonreligious are more likely to lack such social support (46)

Interest in Death

During childhood adolescence, and to a lesser extent-early adulthood, interest in death revolves more around life after death than around what causes a person to die. As a result of religious training in the home, Sunday school, church, or syne

SOME COMMON EFFECTS OF RELIGIOUS CHANGES DURING OLD AGE

Religious Tolerance

With advancing age, the individual adheres less strictly to religious dogmas and adopts a more lenient attitude toward the church, the clergy, and people of different faith

Changes in religious beliefs during old age are generally in the direction of acceptance of the traditional beliefs associated with the individual's faith.

Religious Observances

Decline in church attendance and participation in church activities in old age is due less to lack of interest than to factors such as failing health, lack of transportation, embarrassment about not having proper clothing or being able to contribute money and feeling unwanted by the younger members of the church organizations. Women continue to participate in church activities more than men do because of the opportunities they offer for social contacts. Many young people have distinct concepts of heaven or hell and about the afterlife (81) As people become older, they usually become less interested in life after death and more concerned about death per se and about their own death. This is especially true of elderly people whose physical or mental condition has begun to deteriorate. When health fails, they tend to concentrate on death and to become preoccupied with it. This is in direct contrast to younger people to whom death seems very far away and is thus of little concern to them. When interest in death shifts from interest in the afterlife, characteristic of the younger years, to interest in the individual's own death, characteristic of the old-age stage of the life span, research studies have shown that this interest takes many forms. Five major questions that almost all elderly people ask themselves or others at some time or other.

However, it is interesting to note that when these questions dominate interests in death among the elderly, they may and often do state fear death because of the uncertainty about whether there is an afterlife and what it will be like "When Will I Die?" The first question about death that is of profound interest to many elderly people is "When will I die? While they know that no one can predict this with any degree of accuracy-not even the ablest doctors or life insurance actuaries-they try to estimate approximately how much longer they have to live on the basis of the longevity of family members and the present state of their health.

Even elderly people who have no fear of death may want to know how much time they have left because of what they regard as "unfinished business in their lives-a trip they had always planned to take or a project they want to complete. Many older people want their doctors to be frank about impending death so that they can tend to this unfinished business or settle their affairs.

"What Is Likely to Cause My Death?" The second question about death that concerns many elderly people is: "What is likely to cause my death? While statistics show that heart disease,

cancer, strokes, and accidents are the most common causes of death among the elderly, many die from other causes.

Interest in the question of what will cause death in the individual's case centers around four major areas of concern. First, elderly people wonder whether they can do anything to ward off their deaths, even for a short time. For example, if they know they are in danger of having a stroke because of high blood pressure, they may try to lower it by relaxing, by carefully prescribed diets, by losing weight, and by taking medication prescribed by their doctors. The second concern about what will cause death stems from the desire to take care of unfinished business, as discussed above. Knowing the probable cause of their death will give them some idea of the time remaining for them to accomplish or complete the unfinished business because some diseases progress more rapidly than others.

Financial consideration is the third concern. Their death will be a slow and painful process and will involve great medical expenses for them and their families.

Fourth, many elderly people want to know what the cause of their deaths will be because this determines whether their last days will be painful or whether they have a good chance of remaining mentally alert and physically active to the end. This is important because it will inform their decisions about what medical treatment they will seek, whether they will be willing to undergo an operation, or whether they will consider committing

suicide.

"What Can I Do to Die as I Wish to Die!" The question about death that many elderly people ask is "What can I do to die as I wish to die." In the past, most men and women accepted the belief that death is a matter of "God's will" and that the individual should have no voice in the matter.

Today there is a growing tendency, fostered by those who believe in euthanasia and backed by the theories of some members of the medical, psychological, psychiatric, and legal professions, as well as by some members of the clergy, to believe that people should have some say about how they will die and even when they will die.

Proponents of euthanasia or "mercy killing" believe that those who are suffering from a painful, curable disease or who are hopelessly injured should be put to death or be allowed to die peacefully, by doing nothing to prolong their lives, such as performing surgery.

"Am I Justified in Taking My Life? The question that some elderly people ask themselves is whether they are justified in taking their lives. For one reason or other, they find life has become unbearable in spite of strong religious prohibitions and unfavourable social attitudes toward suicide. Elderly people who believe they have the right to die in dignity and peace and be spared a long debilitating illness that may sap the energies and financial resources of family members sometimes feel they are justified in taking their own lives while still physically and mentally able to do so. They believe, however, that they are justified in this only after a careful and accurate medical diagnosis has shown that there is no hope of recovery.

Even if earlier moral and religious training emphasized the wrongful nature of suicide, their personal beliefs may be strong enough to counteract any feeling of guilt about committing such an act. More and more people in the American culture of today are accepting the belief that there are times when suicide is justified.

How Can I Have a "Good" Death? The fifth question many elderly people ask is how they can have a good death. While a "good" death may have different meanings for different people, most elderly people agree that it can be considered "good" if, as Schulz has pointed out, three important personal needs are met. The first of these needs is control of pain. While modern medicine is unable to control all pain every elderly person wants to have as painless as possible.

The second important need is maintenance of longevity by giving an elderly person about to die an opportunity to participate in decision making. This may be whether or not to operate or whether or not to continue to use life-saving measures when there is adequate medical evidence that the patient will never again be physically or mentally normal.

Sex Differences in Interest in Death. The few references there are in sex differences suggest that elderly men differ interests in death than elderly women. For the most part, men focus their attention on their own deaths—what will cause them, when they will occur, etc. While they may be interested in the deaths of their wives, children, close friends, and relatives, their interest is primarily egocentric. In the case of women, interest in death is likewise egocentric in the sense that their concern is how death will affect them and the pattern of their lives. Their interest, however, is concentrated on their husbands' deaths rather than on their own. Many engage in what has been called a "rehearsal for widowhood." In this rehearsal, their concern is focused on how they will manage financially when their husbands die, where they will live, what they will do with their time, etc. While some women, unquestionably, are interested in their own deaths, more, it has been reported, are interested in the deaths of the husbands.

HAZARDS TO PERSONAL AND SOCIAL ADJUSTMENTS IN OLD AGE

At few times during the life span are there more potentially serious hazards to good personal and social adjustment than there are in old age. This is due partly to the physical and mental decline that makes the elderly more vulnerable to potential hazards than they were earlier, and partly to lack of recognition of these potential hazards on the part of the social group. The result is that few attempts are made to warn the elderly or to prepare them for these hazards as they grow older.

Reference-Human Development Life-span Approach by (F . Philip Rice)