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## **BLOCK 2**

### **Developmental Factors in Children and Adolescents**

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## UNIT 2 INTRODUCTION TO HUMAN DEVELOPMENT\*

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### Structure

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### 2.0 LEARNING OBJECTIVES

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After reading this unit, you will be able to,

- Familiarize with the recurring themes and issues in developmental psychology;
- Acquire knowledge about the major tenets of life span perspective of human development; and
- Explain the role of hereditary and environmental factors in the process of human development.

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### 2.1 INTRODUCTION

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The human species is the most complex and advanced of all life forms. Human's intriguing nature of understanding the world and the universe, has indeed created many a sciences. The term 'human development' is a field of science devoted to understanding the developmental process of human species from conception till death. This discipline has been established by scholars studying their own species. More often than not, their understanding is enhanced through their own personal thoughts and experiences. For instance, Jean Piaget is known to have studied and closely observed his own three children in developing his pioneering work on cognitive development in children. The study of human development further includes not merely descriptions of the life events, but also how humans play an active role in adjusting during life transitions. This Unit will focus on major themes of developmental psychology, the principles underlying lifespan development and the role of heredity and environment in individual differences.

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## 2.2 ISSUES AND THEMES IN DEVELOPMENTAL PSYCHOLOGY

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A number of questions arise when we commit ourselves to the study of human development. Is one's intelligence the result of genetic inheritance or the experiences that one has in life? Will a shy child in early years, grow up to be a shy adult? There are a number of issues and themes that need to be addressed at the outset of this field of study, which runs right through the experiences and theorizations on human development.

### 2.2.1 Nature-Nurture Issue

Nature refers to the hereditary influences on human characteristics which include physical characteristics, intellectual capacities, personality traits and patterns of social interactions. Nurture as a concept, encompasses all of the environmental factors, including physical and cultural environment that influences the developmental outcomes in an individual. After decades of arguments over this nature-nurture controversy, scholars in the field of human development have arrived at a common consensus that human development is the outcome of interaction between hereditary and environmental factors. You will read about it in detail, in section 2.4.

### 2.2.2 Continuous-Discontinuous Development

The continuous-discontinuous issue addresses how developmental events manifest a smooth progression across the life stages (continuity) or a series of distinct stages (discontinuity). Proponents of continuous development claim that development is gradual and cumulative; that each development event builds upon later development, such that later development can be predicted from the 'happenings' in earlier life stages. These changes are considered to be quantitative in nature, with a focus on the 'amount' of a trait that an individual has. An example of continuous development includes the instances of physical growth, such as height. Also, healthy peer relationships in adolescence can be traced back to healthy parent-child relationships.

Scholars emphasizing on the discontinuity approach consider development as occurring in distinct and abrupt changes, with an emphasis on qualitative experiences that are different at each stage. The discontinuity approach gives rise to "stage theories", where development is illustrated with a metaphor of 'climbing the stairs' where each step signifies an advanced way of functioning than the previous step. This suggests that the individual undergoes rapid changes as they step up to a different developmental stage, where change is considered to be sudden rather than gradual.

Psychologists, however, come to a common consensus that neither of the approaches completely describe development. It is suggested that there may be some developmental phenomenon better described as continuous and some better described as discontinuous.

### 2.2.3 Stability-Change

The stability-change issue concerns itself with the degree to which early traits and characteristics persist through out or can be subject to change. Experts who emphasize stability in development adopt the nativist perspective, asserting the role of genetic inheritance in development of traits and characteristics. Experts

also justify stability in development through the empiricist perspective, wherein psychological characteristics from early life experience cannot change. Thus, the nativist perspective states that a shy child will grow into a shy adult who will learn to be sociable if the situation demands. On the other hand, the empiricist perspective understands that shyness in a child develops as a result of unpleasant stressful experiences in early years which teaches the child to withdraw and avoid social situations altogether. Contemporary theorists assert that not only early life experiences, but later experiences have an influence on development as well. However, what remains unanswered, is the degree of change that can take place.

### Check Your Progress 1

#### Q1. State the following as true or false:

- i) Stage theories of development represent the discontinuity approach to human development. (True/False)
- ii) The continuity approach to development captures qualitative experiences whereas the discontinuity approach to development captures quantitative experiences. (True/False)
- iii) Not only early life experiences, but later life experiences also influence development. (True/False)
- iv) The nativist perspective states that a child acquires shyness owing to early life experiences and hence, learns to withdraw from social situations in adulthood. (True/False)

## 2.3 LIFESPAN DEVELOPMENT

In the study of human development, much of the research in the first half of the 20<sup>th</sup> century was focused on infancy, childhood and adolescence. It was assumed that development was very rapid and fast paced during the infancy and childhood period, reached its peak in adolescence, and ceased after the adolescent period. The period of adulthood witnessed a plateau followed by a decline in development in late adulthood. However, with the advances in medicine and technology, the life expectancy of an individual increased from 60 to 80 years and above. In addition, the older adults were not only increasing in numbers, many were also living a healthy and productive life. These observation compelled researchers to look at adult years as significant to the process of development. The period of 1950s and 1960s saw a spurt in research generated in the direction of development in adult years and beyond. This added notion that development is lifelong, is the focus of the lifespan perspective of development. Lifespan Developmental Psychology aims to understand the patterns of stability and changes in psychological traits across the life course, with focus on the development within the individual and between individuals. **Paul B. Baltes** (1939-2006), a German psychologist specialized in lifespan perspective aging. He elaborated the life span perspectives further into the following principles.

### 2.3.1 Principles of Lifespan Development

- a) Development is lifelong – Development covers the entire lifespan, from conception till death. The life span perspective asserts that no single age period dominates development. Rather each age period has its set criteria for development, bringing with it unique opportunities and challenges. In order to understand developmental events of any one particular period, it becomes

imperative to look back at development in the preceding age period, and to look forward to the development in the next age period.

- b) Development is multi-dimensional – Each age period brings with it changes in the three major dimensions of development, i.e., biological, cognitive and socio-emotional. These dimensions are not distinct, rather they overlap and interact to contribute to the development experiences at each age period. For example in middle adulthood, there are a lot of biological changes like greying/thinning of hair, menopause in women, and weight gain. There are also cognitive changes evidenced like improvement in spatial reasoning, verbal abilities, and abstract reasoning. Individuals in middle adulthood also go through social and emotional changes like personality tends to stabilize, and relationships become more intimate. This represents the concept of multidimensionality of development in the lifespan perspective.
- c) Development is multi-directional – Development in any particular domain does not necessarily have to follow a linear pattern, rather the pattern may show an increase or decrease in efficacy across an individual's lifespan. Baltes refers to a process known as '*selective optimization with compensation*' wherein particular functions are prioritized, thereby reducing the capacity of other particulars. Individuals limit the number of activities they engage in, perform select activities in which they can maximize from the minimal energy that is left. This gain/loss concept can further be explained with the help of the 'intellectual capacities' in adult years. Intelligence has been broadly classified as 'fluid' and 'crystallized', with 'fluid intelligence' meaning the ability to learn new responses in a quick and abstract manner, and 'crystallized intelligence' refers to accumulated knowledge that is acquired throughout one's life. In adult years, while 'crystallized intelligence' increases with age and 'fluid intelligence' decreases with age.
- d) Development is plastic – The lifespan perspective asserts that development is plastic at all ages, although it gradually declines with age. Plasticity also witnesses individual variations. Some adapt easily to changes owing to a greater exposure of variations in life experiences.
- e) Development is multidisciplinary – A single discipline cannot encompass the totality of all the developmental aspects. The lifespan perspective suggests a combination of disciplines for the study of the developmental process. Scholars from the discipline of psychology, sociology, education, anthropology, economics, history and medical sciences can contribute to important concepts pertaining to development that provide for integrated knowledge of the developmental processes across the lifespan.
- f) Development is contextual – The lifespan perspective states that development is embedded in multiple contexts. Like individuals, contexts also change. There are two types of influences exerted by contexts, which can be categorised into two – normative influences and non-normative influences. These categories work simultaneously, connecting and combining in unique ways, creating pathways of change that show variations.
  - i) Normative influences: Events that are typical of each individual. There are two types of normative influences: age-graded and history-graded influences. Age-graded influences are correlated with biological age such as menopause, onset of puberty, entering school, taking retirement; and history-graded influences are related with certain time period that define a broader context, like World War II and the present pandemic situation (COVID-19) across the world.

- ii) Non-normative influences: Events that are unique to an individual's life and do not associate with any specific developmental period. Examples include, obtaining a higher degree or a job overseas, death of a child or divorce.

### Check Your Progress 2

**Each of the following sentences describe one principle of lifespan development. Against each sentence, write down the appropriate developmental principle:**

- i) In adolescence, puberty evidences physical and physiological changes like hormonal changes, cognitive changes like ability to think abstractly, and psychosocial changes like the growing preference for peers in one's life. ....
- ii) The process of selective optimization with compensation takes place. ....
- iii) There is no single development period that dominates human development. ....
- iv) The normative and non-normative influences interact to produce unique variations in individual development. ....

## 2.4 INDIVIDUAL DIFFERENCES: THE ROLE OF HEREDITY AND ENVIRONMENT

### Box 2.1: Do it yourself activity

List down a set of characteristics that describe you (for instance, tall, fat, intelligent, lazy, helpful, and other such characteristics). Against each characteristic, write down H if you have inherited these characteristics from your parents or other family members, and E if you have developed these characteristics owing to the environmental influences on you (for instance, your family, schooling, peers, hobbies, etc.).

Human development is a complex process that interweaves the genetic factors with the environmental influences in a manner that no two individuals ever experience the same life. The nature-nurture issue in human development literature points out towards the extent to which genetic inheritance (nature) and environmental influences (nurture) result in the unique individual that we are. Scholars who emphasize on the dominant role of nature in development assert that we possess a genetic blueprint that underlines commonalities in our development. For instance, growth is rapid in infancy as compared to childhood, we walk before we talk and so on. It is in the case of extreme environments (like malnourishment, parental neglect, etc.) that hinders the process of development which otherwise is considered to be basic growth tendencies hard wired genetically into human beings. On the other extreme, we have psychologists who strongly assert the role of nurture in development. Environmental experiences can be broadly be classified into biological environment (nutrition, health care, and safety), and social environment (cultural forces, family, school, religion, media). For example, researchers have revealed how parental styles shape children's experiences and personality. After decades of debate over the issue of nature versus nurture, the scholars of human development and developmental psychology have arrived at

a consensus that development results from an interaction of nature and nurture. It would however be interesting to ascertain the degree of influence of nature and nurture on specific aspects of development. Behavioural genetics is a newly emerging field of study which determines the degree to which behaviour is a result of genetic inheritance or the person's experiences.

**BOX 2.2: Did you know?**

There is a field devoted to the study of individual differences termed as 'Differential Psychology'. Differential psychology requires general knowledge of psychology in humans and other species like chimpanzees and rats. The APA dictionary of psychology defines differential psychology as "the branch of psychology that studies the nature, magnitude, causes, and consequences of psychological differences between individuals and groups, as well as the methods of assessing these differences". This field of study basically tries to address the questions of individual differences in how we think and feel, what we want, what we need, and what we do.

### 2.4.1 The Role of Genetic Inheritance

At the time of conception, when the egg and the sperm unite through the process of fertilization, it leads to formation of a zygote and initiating the development of a new organism. The resulting single cell called as zygote, is made up of 46 chromosomes. The single cell soon starts to multiply itself, first into two, then four and so on and as a result, a mass of cell is formed which takes the form of a foetus. There are twins that are born under two unusual condition, one set of twins born from the same egg (monozygotic or identical twins) who end up inheriting the same 46 chromosomes and hence are identical and of the same sex. In another condition, more than one egg gets released and fertilized and hence the result is fraternal or dizygotic twins who are non-identical, and do not share the same genetic makeup. Numerous studies on twins have been carried out by experts from the field of human development to study the influence of nature and nurture on identical and non-identical twins.

*Developmental Genetics* is a field of study that attempts to ascertain the extent to which genetics has a role to play in the lifespan developmental process of an individual. Geneticists are interested to study how genes transmit human characteristics and how family members have certain genes in common. Genes are made up of a chemical called as deoxyribonucleic acid (DNA). The DNA molecule consists of two strands, each containing sugars and phosphates. The two thin strands twist around each other like a spiral staircase. The steps of the staircase that link the two strands are amines or bases. Amines are the organic structures that have the genetic codes and that regulate a cell's life. Each section of DNA comprises of same sequence of amines which is called as gene. The genes are placed in rod-shaped structures which are chromosomes, found in the cell nucleus. Each cell of the human body has a total of 46 chromosomes, 23 from the mother's egg and 23 from the father's sperm. 22 pairs of chromosomes that determine most of the human characteristics are called autosomes and the last pair of chromosomes termed as sex chromosomes determines the sex of an individual.

The genetic transmission of traits is controlled by more than one pair of genes, and this process is called polygenic inheritance. Genes that influence a particular trait (e.g. the eye colour or the hair colour) are known as dominant genes and genes that are likely to express only if paired with an identical gene, are called recessive genes. Hence, in case of a dominant and recessive gene, the dominant gene

influences the expression of trait and in case of two recessive genes, the expression of that trait is determined by the recessive genes. Many genetic disorders are transmitted through recessive genes, such as *sickle cell anaemia* and *Tay-sachs disease*. Often genetic disorders also arise because of chromosomal abnormalities such as presence of an extra chromosome in the 21st pair causes *Down syndrome*, and an extra sex chromosome in the 23rd pair leads to *Klinefelter's syndrome*.

### 2.4.2 The Role of Environmental Factors

For decades, psychology has been known to give significance to individual variables. An individual does not function in isolation, rather a healthy or a deficient state is always the result of the complex interaction of the individual with his/her environment. Neither the isolated individual, nor the isolated environment, but an interplay of the individual with his/her environment is crucial in understanding of psychological processes. Putting the traditional preferences aside, psychologists in the recent past have started acknowledging the importance of social factors along with the intra-individual forces.

**Kurt Lewin** (German-American psychologist, 1890-1947) in his field theory attempted to explain how an individual's actions at a given time are a result of his/her momentary position in the social field. Taking the example of an individual's transition from childhood to adolescence, Lewin explains how the social environment of the adolescent comprises of a number of regions, some in the neighbourhood, some accessible and some inaccessible. The adolescent's behaviour is then the function of the region in which he/she is at a given time. When a new region becomes accessible to an adolescent, it is an unfamiliar territory that often causes 'uncertainty of behaviour'. Hence, transitions between different age periods in development become sources of conflict when the direction of attaining goals seem to be unclear. Lewin considered 'life space' as comprising of all the possible influences on an individual, that is, the person and his/her environment. Postulating a formula for the same, Lewin stated that behaviour is a result of an interaction of the person with his/her environment at a given moment. ( $B = F \{P, E\}$ ), where B is behaviour, F is function, P is person and E is the environment.

**Durganand Sinha's Ecological Model (1977)** explains the development of children in Indian context. It classifies environmental influences into two layers: i) the upper and more visible layer, and ii) the supporting and surrounding layer; the following section provides a description of these group of factors that have an impact on the child's development.

#### I) The upper and visible layer

Following Sinha's ecological model, the upper and the more visible layer comprises of influences of and interactions at home, school, and peers. This is the immediate environment of the child that has a direct effect on the child's development.

- i) **Family** – In the Western World, the influences of family on child's development is predominantly painted by the parental styles and interactions. **Diana Baumrind**, a developmental psychologist, pioneered in research on parental styles in the 1960s. She classified parenting styles into four types – authoritative, authoritarian, permissive and neglectful. With this, followed a succession of studies that attempted to correlate parental styles with the child's behaviour or performance. However, these correlational studies could not establish a definite cause-and-effect relationship and an

idea that took precedence is how a child's temperament can determine the style of parenting. The same parent is seen as engaging in use of different strategies with the younger and the older child. Although, parents are the first important relationships that children have, which forms the basis of future interpersonal relations. However, parents alone do not influence the development of the child at the home front.

In many Indian households, the child's upbringing is largely governed or influenced by the grandparents who generally have the time and freedom in the upbringing of the younger generation. Indian culture is valued for its respect to elders and loyalty to one's group and these values are inculcated within the child by his/her interactions with the grandparent(s). Young children are taught to appreciate their family tradition and learn about the moral and religious values from the older generation. This is the classic display of 'dual parenting' in the Indian context.

It has been a common notion that families in India are of a joint structure. Traditionally, it was indeed true but in the present times, we have a rising trend of nuclear families, with the joint family structure limited to a specific groups in the society. Whether joint or nuclear structure, family ties are considered a strength and boon to Indians. Regardless of the number of members in the household, Indian families are characterized by their relations with their extended family members. Based on its vastness and diversity, there are regional variations in kinship system in India. Next to the family, the kinship group plays an active role in daily life events, social gatherings and festivities.

A child's early development is a function of the home environment that provides the child with a nurturing, safe and stimulating environment much needed for the optimal development in the early years of life. Home environment is largely defined by the socio-economic background of the family, which in turn affects the child positively or negatively. For instance, children in richer households have an early access to toys and books that provide for a rich, engaging and stimulating environment. Even before their entry into the pre-school system, these children have early experiences that prepares them for better learning in a school environment. Engaging in activities like pretend play, reading and telling stories to children, and drawing with the child, are some of the crucial events necessary for the cognitive development of the child. The educational level of the parents also plays an important role in providing early positive experiences to the child. A home environment also has to be a place of safety. Adult supervision prevents a child from any physical or emotional harm. A joint-family system ensures for informal child care and supervision. Families of dual career couples often hire help to look after the young children at home. Dual career couples from lower middle-income groups who cannot afford professional child care or do not have help from extended family, result in situations where the child is left alone at home, often an elder sibling taking care of the young one. Also at times, when residing in a densely populated area, children are left to the supervision of an elder sibling, which may increase a child's vulnerability to abuse or subject to negligence.

- ii) **Peers** – Children below 3 years of age may respond to other children but the interaction is not sustained for long. Interestingly, early childhood is marked by 'free-play', highlighted by exploration and manipulation of objects in one's surroundings. Middle childhood brings about a lot of

changes in the amount of time and quality of the child-child interactions, where the child acquires social reputation, learns to differentiate social networks, and friendship slowly starts gaining centrality in relationships. The early exchanges that a child has with a fellow age mate, are significant in establishing competencies of cooperation, collaboration, and development of tolerance.

For preschoolers, interacting with children of different temperament, different demands and issues – assist in the development of cognitive and social abilities required for adjusting in varied social settings. Social reputations get formed as children acquire the schema for appropriate and inappropriate behaviours. Children who are shy or aggressive, earn a poor reputation among age mates, and they consistently have a low self-esteem and a poor self-regard. At around 4-5 years of age, the concept of a ‘close’ friend starts to form. A close friend is one with whom the child spends more time in school. The behaviour of the child toward friends and other age mates also starts to differentiate. Middle childhood increasingly also witnesses the formation of dyads and triads, and these small groups get formed more commonly owing to common interests. Typically these groups comprise of the same-gender age mates.

Acceptance and rejection by age mates in the early and middle childhood causes significant distress in adult relationships. Social isolation – the perceived lack of social connectedness – has a negative impact on physical and mental health of the child. Educational actions become need of the hour to create a school environment of belongingness that can help catalyse a social change that is desirable for all.

- iii) **Teachers** – Formal education commencing from elementary school provides children with experiences that make them independent from their parents, and help them acquire negotiation skills in their relationships with teachers and classmates. The cognitive abilities of flexible thinking and effective recall that develop, further assists the child in their pursuit of academic and co-curricular goals. Teachers play an integral role in the socio-emotional and cognitive development of children. The role of a teacher in preschool setting changes drastically when the child shifts to elementary school. The primary focus shifts from providing warmth and nurturance to imparting discipline and instructions. The classroom structures also undergo changes, with higher number of children in a single class, thereby reducing the opportunities for a one-to-one teacher-child interaction. As teachers emerge from the role of alternate caregivers in the preschool years, their positive affect and openness to communication leads to healthy teacher-child relationship. These in turn help the child in his/her academic and behavioural development. Children who have had healthy teacher-child relationships, are more effective in handling of emotions, engaging in classroom activities, effective interactions with others and enjoy the process of learning.
- iv) **Internet use** – In the recent times, rapid advancements in information and communications technology has resulted in digitalization. This has affected all aspects of our lives, including those of children. With the proliferation of social media sites, the child’s first precious and private moments of life are open for the world to see. In present times, the pandemic (COVID-19) crisis resulted in online schooling and examinations which has increased the child’s onscreen presence almost threefold. Apart from classes, the child’s homework also requires screen time and with outdoor activities’ restriction, a child also

has playtime 'onscreen'. While the crisis situation may be temporary, one cannot rule out the habits that got formed due to lifestyle changes (because of lockdown and restricted situation for a substantial period of time) and how to undo these habits once normalcy resumes. Children are at an increasing risk of developing 'digital dependency' and 'screen addiction'.

A large majority of children living in India are unable to reap the benefits of digitalization. Owing to reasons such as poverty, geographic isolation, unavailability of technological gadgets, children who need this technology the most are actually the most deprived. They do not benefit from online learning and other benefits and hence are unable to break the intergenerational viscous cycle of disadvantage. This will result in new divides that prevent a section of children from realising their potential.

There is a dark side to the internet that threatens the child's safety, privacy, and well-being, with increasing instances of cyberbullying that causes already vulnerable children to become easily victimized. There is a lack of awareness among children and adolescents about their online safety, and credibility of online relationships. It is need of the hour to create digital awareness in a manner that both protects and empowers the growing child.

## **II) The surrounding and supporting layer**

According to Sinha's ecological model, the surrounding and supporting layer comprises of geographical and physical environment and institutional factors like caste, class and the community resources available for use based on the position of that individual in the society. These are macro level factors comprising of the physical and social environment which have an indirect influence on the child's development.

The socioeconomic factors have an impact on the way an infant and young child is reared by the parents. There are significant differences in the child rearing practices as one moves up in the caste/class hierarchy. Children in a joint-family structure display a greater level of collective and interdependence as compared to children from nuclear households who possess qualities like individuality and self-reliance. Religion also differ in their emphasis on development on traits like obedience and submission to authority as opposed to initiative and independent decision-making. Moving from a highly collectivistic culture to an evolving individualistic culture, Indian mothers have specific child rearing strategies that tend to encourage obedience and passivity in children and enjoy the physical dependence of the child, thereby prolonging the process of self-reliance. Gender-specific differences and stereotypes are also observed in child rearing practices of an Indian child. Indian culture places the highest values on the birth of a boy and this in turn determines how the mother, family, neighbourhood and community at large, interact with the child. Young child's response to crowded spaces is highly culture specific, affecting their cognitive and behavioural development. Crowding in educational institutes is seen to negatively affect the child's school achievement scores, cause delays in psychomotor development, engaging less in cooperative play and engaging more as onlookers. Crowding at home is also seen to negatively impact parent-child interaction. Crowded homes provide fewer opportunities for interpersonal communication between the parent and child, with parents experiencing difficulties in monitoring and regulating the child's behaviour. Crowding in residential and educational facilities creates a breeding ground for aggression in children, increase in family conflicts and a more frequent use of punitive measures to discipline the child.

A growing body of research has also evidenced significant effects of elements of the physical environment like toxins and pollutants that affect the child's cognitive and socio-emotional development. For instance, lead exposure causes phenomenal damage to a child's I.Q and externalizing behaviours. It has been estimated that a higher number of children in developing countries record an elevated lead in blood levels. Various other environmental hazards like air pollution, noise pollution, shortage of clean water as a resource, and lack of proper waste management system cause further impairment in child's socio-emotional development and is often a reason for cognitive deficits.

### Check Your Progress 3

1) Kurt Lewin's concept of 'Life Space' meant –

a) the upper and more visible layer of factors	c) all possible influences of an individual and his/her environment
b) an individual's immediate environment	d) a region occupied by the individual at any given moment.

2) An effective teacher-child relationship results in –

a) enjoyment in the process of learning	c) a close bond with the parents
b) better adjustment in school	d) effective regulation of emotions

- i) a and d
- ii) a, b, and c
- iii) a, b, and d
- iv) c and d

3) List the four parenting styles proposed by Diana Baumrind.

4) Complete the following by considering that brown hair colour is a dominant gene and blonde hair colour is a recessive gene.

- i) Only one parent passes the brown hair colour gene to the child, the child's hair colour will be .....
- ii) Both the parents pass the brown hair colour gene to their child, the child's hair colour will be .....
- iii) If the child receives a brown hair colour gene from mother and blonde hair colour gene from father, the child's hair colour will be .....
- iv) Both the parents pass the blonde hair colour gene to their child, the child's hair colour will be .....

## 2.5 SUMMARY

Now that we have come to the end of this unit, let us recapitulate all the major points that we have learnt.

- Experts in the field of human development do not take any extreme stance on any of the issues pertaining to human development. Development is the result

of an interplay of heredity and environment, and that not all developmental phenomenon can be either continuous or discontinuous. Some aspects of development are subject to change and some that remain fairly stable throughout life.

- Lifespan Developmental Psychology aims to understand the patterns of stability and change in psychological traits across the life course, with focus on the development within the individual and between individuals.
- Each age period brings with it changes in the three major dimensions of development, i.e., biological, cognitive and socio-emotional.
- Development in any particular domain does not necessarily have to follow a linear pattern, rather the pattern may show an increase or decrease in efficacy across an individual's lifespan.
- The lifespan perspective states that development is embedded in multiple contexts.
- Geneticists are interested to study how genes transmit human characteristics and how family members have certain genes in common.
- Following Sinha's ecological model, the upper and the more visible layer comprises of influences of and interactions at home, school, and peers. This is the immediate environment of the child that has a direct effect on the child's development.
- As per Sinha's ecological model, the surrounding and supporting layer comprises of the geographical and physical environment and institutional factors like caste, class and the community, resources available for use, based on the position of that individual in the society.

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## 2.6 KEYWORDS

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**Durganand Sinha's Ecological Model:** Designed for an understanding of child's development in the Indian context. The ecology of the child was conceptualised into two concentric layers – i) the upper and the more visible layers, and ii) the surrounding and supporting layers.

**Parenting styles:** A cluster of attitudes or a pattern of parental authority communicated to the child that creates an emotional context for the expression of parental behaviour.

**Cyber bullying:** Known as online bullying, is a form of bullying or harassment using electronic means, and more common among teenagers owing to the rapid expansion of digital technology.

**Digital dependency:** Overuse of the internet or electronics to the point that one's life is affected. Examples include, social media dependency, smart phone dependency and internet addiction.

**On-screen Addiction:** Implies compulsion to engage in screen use that results in impairment of daily functions, leading to decreased productivity and deficits in social relationships, physical health or emotional wellbeing.

**Nativism and Empiricism:** Nativists claim that all our understanding of the world is innate whereas empiricists believe that all knowledge is based on experience.

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## 2.7 REVIEW QUESTIONS

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- 1) Briefly describe the emerging themes and issues related to the study of human development.
- 2) Explain principles of lifespan perspective of development.
- 3) Discuss the influence of parents, peers, teachers and internet use on child's development.
- 4) How does the cultural and physical environment affect the child's development?

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## 2.9 WEB RESOURCES

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Lally M. & Valentine-French, S. (2019). Lifespan Development: A Psychological Perspective- Second Edition. <https://open.umn.edu/opentextbooks/textbooks/540>

Baltes, P.B., Linderberger, U., & Staudinger, U.M. (2006) Life Span Theory in Developmental Psychology. Publisher: Wiley. [https://www.researchgate.net/publication/236150264\\_Life\\_Span\\_Theory\\_in\\_Developmental\\_Psychology](https://www.researchgate.net/publication/236150264_Life_Span_Theory_in_Developmental_Psychology)

Darling, N. (2007). Ecological Systems Theory: The Person in the Centre of the Circle. *Research in Human Development*, 4(3-4), 203-217. [https://www.researchgate.net/publication/241730257\\_Ecological\\_Systems\\_Theory\\_The\\_Person\\_in\\_the\\_Center\\_of\\_the\\_Circles](https://www.researchgate.net/publication/241730257_Ecological_Systems_Theory_The_Person_in_the_Center_of_the_Circles)

**Answers to Check Your Progress**

**Check your Progress 1**

- Q1. i) True  
ii) False  
iii) True  
iv) False

**Check your Progress 2**

- i) Development is multi-dimensional  
ii) Development is multi-directional  
v) Development is life long  
vi) Development is contextual

**Check your Progress 3**

Q1. (c) All possible influences of an individual and his/her environment

Q2. a, b, and d

Q3. authoritative, authoritarian, permissive and neglectful.

- Q4. i) brown  
ii) brown  
iii) brown  
iv) blonde

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## UNIT 3 DEVELOPMENTAL THEORIES\*

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### Structure

- 3.0 Learning Objectives
- 3.1 Introduction
- 3.2 Developmental theories
  - 3.2.1 Approaches to Cognitive Development
  - 3.2.2 Theories of language Development
  - 3.2.3 Theories of Psychosocial Development
  - 3.2.4 Ecological Systems Theory
- 3.3 Summary
- 3.4 Keywords
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- 3.6 References and Further Reading
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### 3.0 LEARNING OBJECTIVES

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After reading this Unit, you will be able to:

- Gain insight into major psychosocial theories of development that explains growth and changes in childhood years;
- Discuss major theoretical frameworks pertaining to cognitive development in children and adolescents; and
- Ascertain the role of ecological perspective in human development, both from western and Indian theories.

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### 3.1 INTRODUCTION

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The main focus for experts in the field of human development, are the behavioural changes that occur in individuals across the different phases of life span, and to study the individual differences and similarities within the same. It aims not only to describe the intra-individual changes that take place but also to explain how these changes came about and to find out ways to modify these changes so as to be considered as optimal. As a student of school psychology, it is important to note that these developmental changes are occurring constantly in an everchanging context. With the constant interplay of heredity and environmental forces, the healthy development of an individual is the result of a multitude of factors. Developmental theorists and neuroscience experts assert that the first few years of life comprising of the infancy and childhood phases, are the most crucial to the overall and lifelong development of an individual. One of the primary roles of a school psychologist is to cater to the developmental needs of a growing child. It is important to acquire the basic knowledge about the salient features of development so that it is possible to function as a school psychologist. In the previous Unit, you learnt about the issues, and principles of developmental psychology and the role of heredity and environment in individual differences. In this Unit, you will learn about various developmental theories related to cognitive and psychosocial development.

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## 3.2 DEVELOPMENTAL THEORIES

The mid-twentieth century witnessed a surge of developmental theories that eventually led to the establishment of study of human development as a formal discipline. Following are some of the prominent theories that are completely or partially still followed for an in-depth understanding of human development.

### 3.2.1 Approaches to Cognitive Development

Cognitive development concerns how humans acquire, organize, store and use the knowledge in their interactions with the world. Below are described important theoretical perspectives that have contributed to our understanding of the process of human cognition.

#### I. Cognitive Development Theory by Jean Piaget

**Jean Piaget** (1896-1980) pioneered in the theoretical contributions made towards the field of cognitive development. His theory was primarily based on observations made by him on his own three children. He noted that children evolve in their process of thinking and outlined it in form of stages, starting from infancy to adulthood.

Stages	Developmental Phenomenon
0-2 years Sensorimotor	<ul style="list-style-type: none"> <li>Children use their senses and ability to move to explore and interact with the surroundings.</li> <li>Children display the phenomena of 'object permanence' by the end of this stage, which is becoming aware that an object continues to exist even when out of sight.</li> <li>Engaging in 'Symbolic Thoughts' – at the end of this stage, the child evidences thinking in terms of simple symbols.</li> </ul>
2-7 years Preoperational	<ul style="list-style-type: none"> <li>Pre-schoolers acquire language ability and use it to explore and interact with the surroundings.</li> <li>Children actively engage in 'pretend play', with symbolic thinking on a high but logical thinking at its lowest.</li> <li>Children in this stage display 'egocentrism', which is failure to see the world from another's perspective.</li> <li>Poor reasoning ability as evidenced in 1) Centration – the tendency to see only one feature of the object instead of considering all the features together, and 2) Irreversibility – the child's failure to mentally reverse an action.</li> <li>Children also evidence failure on the principle of 'Conservation', which is the ability to understand that changing the appearance of an object does not change the nature of the object.</li> </ul>
7-12 years Concrete Operations	<ul style="list-style-type: none"> <li>Children become capable of conservation thinking, acquire ability to see others' perspectives and engage in 'reversible thinking'.</li> <li>Ability of logical thinking goes up but abstract thinking is still low.</li> <li>Limitation at this stage is the 'concrete thinking', where children get so consumed with rules that they find it difficult to change them (or make an exception).</li> </ul>
12 years-adulthood Formal Operations	<ul style="list-style-type: none"> <li>Not all individuals reach till this stage.</li> <li>Children become capable of abstract thinking.</li> <li>Display of 'egocentrism' in adolescence as displayed by – 1) Personal fable – a belief among the adolescent that they are unique and protected from all harm. This justifies their high tendency of risk taking, and 2) Imaginary audience – a belief among the adolescents that they are as much the centre in others' life, as they are in their own. This gives rise to extreme self-consciousness.</li> </ul>

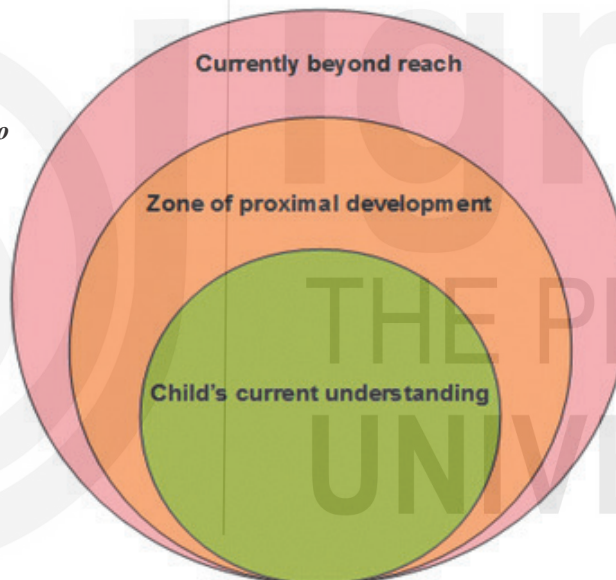
#### II. Vygotsky's Sociocultural Theory of Development

**Lev Vygotsky** (1896-1934), a Soviet Psychologist, proposed the socio-cultural

theory of cognitive development which was distinct from the one proposed by Jean Piaget. While Piaget laid emphasis on the importance of interaction of the child with objects in the surroundings in the development of cognitive abilities, Vygotsky stressed on the importance of social interactions with skilled adults and peers. Listed below are two main concepts of his theory that are briefly summarized –

- 1) Cognitive development is evidenced in children through the process of scaffolding, which involves a highly skilled learner (adult/sibling/elder peer) helping a low skilled learner (the child), followed by a gradual withdrawal of the help extended so that the low skilled learner becomes capable of doing the task by own self.
- 2) Each child's development period consists of a zone of proximal development (ZPD). ZPD is defined as distance between the child's actual development level as assessed by independent problem solving and a higher level of potential development in guided activities with adults or peers. Using clues, words of encouragement, modelling, explanations and prompts; the skilled adult collaborates with the child to transfer them to a level slightly above their competencies where they need assistance.

*'what a child can today with assistance, she will be able to do by herself tomorrow'*  
(Vygotsky, 1978)



**Figure 3.1: Vygotsky's concept of a zone of proximal development**

Source: Cognitive development: The Science of Childcare (firstdiscoverers.co.uk)

### Check Your Progress 1

- 1) Read the examples carefully, and label each of them with the help of terms given in the box below:

Personal Fable, Zone of proximal development, centration, egocentrism

- i) Darsh can solve math problems of grade 4 on his own, but with the help of his math tutor, he can also solve math problems of grade 6.  
.....
- ii) When 4-years old Dhiya, wanted to gift a teddy to her grandmother because that is what she would also have wanted. ....

- iii) Little Suhani is upset that she got a smaller piece of cake than her elder sister, Nandini. When her mother cut Suhani's cake into two pieces, she is very happy that she now has two pieces of cake and her elder sister, only one. ....
- iv) When Nicky thinks he is special and nothing wrong can happen to him even if he is driving drunk. ....

2. Define zone of proximal development.

.....  
.....

### III. Bruner's idea of knowledge acquisition

**Jerome Bruner** (b.1915), an American developmental psychologist introduced Vygotsky's ideas to Western scholars. He combined many aspects from Piaget's and Vygotsky's theories. He posited three forms of knowing: *enactive representation* (knowledge based in action or knowing how to do things); *iconic knowledge* (based on representing knowledge through visual imagery); and lastly, *symbolic knowledge* (based on language and is transmitted through culture). These forms of knowledge partially overlap. For instance, when learning the sport of surfing, enactive representation is most important and just reading books on surfing will not enable a person to learn the water sport. On the other hand, once the person learns surfing, they might improve performance by visualising ocean, river or artificial waves, and glide across the surface of the water, as well as by verbal feedback on the performance.

### IV. Information Processing Theory

It is a memory model that looks into how information is received and stored for shorter or longer periods of time. Attention processes, maintenance and elaborative rehearsals are some of the key strategies used to register and store information into the short-term memory (STM) and long-term memory (LTM). Infants have memory capacity, and one instance to prove it is by how they are able to differentiate unfamiliar and familiar faces by the age of 5 to 6 months. Children in preschool move a step ahead when they are able to use language to form memories. However, preschoolers may not be aware of strategies to take the information from STM to LTM. Also, preschoolers are able to sustain episodic memory which is related to personal events, and procedural memory like learning to ride a bicycle. Children in middle childhood arrive at an understanding of how their own memories work, which is termed as 'metamemory'. They acquire strategies that enable them to store and organize information in memory stores. This is possible with an advancement in their language development.

### V. Kohlberg's View on Moral Development

Influenced by Piaget's work with children, **Lawrence Kohlberg** (1927-1987), American psychologist, developed his theory of moral development. His theory was much more advanced as compared to Piaget's two-stage theory of moral judgment which differentiated younger children's responses to moral dilemmas that were fixed, versus older children's views of moral dilemmas that were relativistic. Let us see the main stages and the associated developmental features.

STAGES OF MORAL DEVELOPMENT	
LEVEL I PRECONVENTIONAL MORALITY	Stage 1 Obedience and Punishment Orientation
	The child comes to solve a moral dilemma by following the adults' instructions that are considered as final. The decision to obey is also reflected by the concern of getting punished. Morality is something external to them.
	Stage 2 Individualism and Exchange.
	Children realise of a possibility of more than one right view. Emphasis remains on doing what helps avoid punishment. What is also seen is the reciprocity concept – 'one gets what one does to others'.
LEVEL II CONVENTIONAL MORALITY	Stage 3 Good Interpersonal Relationships.
	In adolescence, morality gets based upon good actions towards the family and community.
	Stage 4 Maintaining the Social Order.
	Focus shifts to 'society as a whole'. Morality is now based on obeying laws, respecting authority and maintaining social order.
LEVEL III POSTCONVENTIONAL MORALITY	Stage 5 Social Contrast and Individual Rights
	Focus shifts to upholding certain basic human rights as well as democratic privileges. Individuals start to evaluate their own society as good or not, based on the rights and values that it upholds.
	Stage 6 Universal Principles.
	This stage is based on personal values. Universal principles of equality, justice, dignity and respect are the focus. Morality is based on what is right and just.

**Carol Gilligan**, a social psychologist, worked with Eric Erikson in 1960s and later on became Kohlberg's research assistant. She believed that Kohlberg's moral development theory was biased toward males since the subjects of his study were only males. Gilligan believed that men and women have different moral and psychological tendencies. While men think in terms of rules and justice, women emphasize more on care and relationships. In other words, she believed that women were not inferior, rather different than men; and that their functioning is based on ethics of care rather than ethics of justice.

Gilligan devised her theory as comprising of pre-conventional, conventional, and post-conventional stages, where changes occur from the selfish stage, to social stage to principled morality. Gilligan strongly asserted that the transition from one stage to the other, is not because of the cognitive capabilities as proposed by Kohlberg and Piaget, but rather due to changes in the sense of self. Carol Gilligan's work in the field of developmental psychology was phenomenal since she put forward the importance of moral decisions based on the self and social environment, and where the self can be a man or a woman.

### 3.2.2 Theories of Language Development

Children have an amazing ability to learn any language fluently in the first few years of life. India, is a land of many languages and faces its own challenges of multilingualism. In fact, bilingualism and multilingualism have become a norm in India. Policies pertaining to 'languages in education' evidences a hierarchical structure between dominant and minority languages resulting in a double divide: (i) between English and major regional languages, and (ii) between major regional languages and indigenous tribal minority (ITM) languages. UNESCO has recognized 197 languages that are in the vulnerable, endangered or extinct

category in India alone! The National Education Policy 2020 recognizes the urgency of the matter and hence recommends mother tongue/regional language as medium of education till Grade V and preferably till Grade VIII.

- a) **Contributions by Skinner–Burrhus Frederic Skinner** (1904-1990), an American psychologist and a behaviourist, believed that language development was the result of operant conditioning. Strategies like imitating others, shaping, prompts and rewarding mechanisms help the child acquire language. For instance, each time the mother holds a glass of milk and says ‘milk’, the child observes, retains the phonic sounds of the word and associates the glass with ‘milk’. As the child grows up, the mother makes her/him utter the word ‘milk’ and when she/he does, the mother smiles and gives the glass (a reward). This continues till the child learns to communicate one’s need for milk by uttering the right word for it. Skinner’s contingency model of language development included (i) motivating operations (ii) discriminative stimuli (iii) response, and (iv) shaping.
- b) **Contributions by Naom Chomsky–Naom Chomsky** (b 1928-), American linguist, was opposed to the ideas proposed by Skinner and stated that children acquire language ability in a seemingly effortless manner and that the mechanism for the same is hardwired into the brain, termed as the language acquisition device (LAD). Chomsky further proposed the concept of universal grammar, stating that all language have similar structure and rules.

### Stages of language and communication development in infancy and childhood:

Language development occurs through a number of stages that are not culture specific. The observations and age period of these developments is also approximate, and one may evidence individual variations in such developmental milestones.

Approximate Age period	Noted Observations
Infancy	Infants communicate via body gestures, facial expressions and cries. Caregivers are able to differentiate when the infant cries out of hunger or discomfort.
First couple of months	Cooing–infants start to vocalize by making vowel-like sounds like ooooo, aaaaa. This works as a feedback for the infant on how he/she sounds.
Between 6 and 9 months	Babbling – consonant sounds are now added like mamamama, dadadada and the infant engages in repeated vocalizations.
Around 10 months of age	Infant starts to understand the conversations that the adults are engaging in. “they understand more than they can say”.
12-13 months of age	Holophrasic Speech- partial words are used to communicate the need. In place of <i>pani</i> , the child may say <i>ani</i> or <i>paa</i> and these are idiosyncratic and hence a caregiver close to the child only understands the holophrasic speech. Around one year of age, the infant’s vocabulary evidences a growth spurt, known as ‘naming explosion’ and the infant acquires about 200 words.
Around 15-18 months of age	Telegraphic speech–the infant begins to form short sentences which is generally a combination of nouns and verbs like Mamma-go, Doggie shoo.
Preschool years	Children acquire more new words and start to apply grammatical rules and by the age of 6 years, become fluent in spoken language.

**Check Your Progress 2**

- 1) What is the difference between Chomsky and Skinner's theory on language development?

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.....

.....

- 2) How is Carol Gilligan's work on moral development different from that of Piaget and Kohlberg?

.....

.....

.....

- 3) Match the following language developments with appropriate age brackets:

a) Holophrasic Speech	i) around 15-18 months of age
b) Babbling	ii) around 10 months of age
c) Telegraphic Speech	iii) 12-13 months of age
d) "Babies understand more than they can say"	iv) between 6-9 months

- 4) An effective teacher-child relationship results in –

a) enjoyment in the process of learning	c) a close bond with the parents
b) better adjustment in school	d) effective regulation of emotions

i) a-iv, b-iii, c-ii, d-i

ii) a-iii, b-iv, c-i, d-ii

iii) a-iii, b-ii, c-iv, d-i

iv) a-i, b-ii, c-iii, d-iv

- 4) Following sentences describe a stage of moral development theory given by Kohlberg. Against each statement write down the correct stage of development:

i) When morality is based on obeying laws and respecting authorities.  
.....

ii) When morality is based upon good actions toward the family and community. ....

iii) When morality is based on what is right and just. ....

iv) When morality is based on basic human rights and democratic privileges. ....

v) When morality is based on following orders of adults or else facing punishment. ....

### 3.2.3 Theories of Psychosocial Development

**I. Eric Erikson's Psychosocial Stages of Development**– Built upon the theory of psychosexual development by Sigmund Freud, **Erik Erikson** (1902-1994) introduced the theory of psychosocial development in the 1950s to explain the influence of social dynamics from infancy till old age. Erikson, trained in Freudian psychoanalysis, was convinced that social interactions are more important in development than the sexual development as proposed by Freud. His stage theory comprised of eight stages of psychosocial development and this section will highlight the first five stages of development that extends from infancy to adolescence. Erikson believed that each stage of development provides a developmental crisis and the individual either is successful in handling the crisis or unsuccessful. Successful dealing of the crisis results in healthy and positive development and subsequent stages are affected by the handling of the crisis at each stage.

ERIKSON'S PSYCHOSOCIAL STAGES OF CHILDHOOD AND ADOLESCENCE			
Stage	Developmental crises	Successful handling of crises	Unsuccessful handling of crises
Infancy	Trust versus Mistrust	When infants' needs are cared for, trust develops and the world appears as a good place	Neglect and mishandling of infant leads to mistrust
Toddlerhood	Autonomy versus Shame and Doubt	Parents need to foster situations of independent behaviours so that a sense of autonomy develops	If independent self-direction is thwarted, child develops feelings of shame and doubt.
Pre-schoolers	Initiative versus Guilt	If children acquire a sense of responsibility, they develop initiative	If children do not acquire a sense of responsibility, they experience guilt.
Elementary school age	Industry versus Inferiority	Development of new skills result in feeling of competence and an increase in self-esteem.	Failure to develop new skills can make them feel inferior.
Adolescence	Identity versus Role confusion	Success in defining a role for themselves results in developing a sense of identity	Failure to define their identity leads to a state of confusion and withdrawal.

**II. Social Learning Theory**– Canadian-American psychologist, **Albert Bandura** (b. 1925) proposed the social learning theory which states that social behaviour is acquired through observation and imitation of others' behaviours. There are four mediational processes that are essential for a new behaviour to be learnt. These are,

- i. Attention – A behaviour needs to be attended from a wide range of stimuli.
- ii. Retention – The attended behaviour form needs to be retained in one's memory.
- iii. Reproduction – One needs to have the required skills and abilities to reproduce the behaviour.
- iv. Motivation – also explained as 'vicarious observation' by Bandura, means that a behaviour is enacted only if the individual has observed his consequences as rewarding.

**III. Attachment Theory**– Proposed by the British Psychoanalyst, **John Bowlby** (1907-1990) in the 1940s, and later made testable by **Mary Ainsworth**. Bowlby believed that children deprived of the most basic social, emotional and relational needs, display deficiency in their adult relationships. He contended that children are born with an attachment behavioural system that leads them to seek and maintain proximity with an attachment figure. This attachment behavioural system works on the following assumptions –

- i) proximity seeking – need of the child to be with an attachment figure, especially during stress.
- ii) secure base – child experiences comfort and security from the attachment figure.
- iii) separation – the child objects upon the withdrawal of the attachment figure. Starting from around 6 weeks of age, the attachment system keeps evolving as a function of attachment figure's responses toward the child in need. Children who receive care and support from the attachment figure, develop positive working models of self and others, as opposed to one's who are neglected. Neglected children cope with distress by using affect-regulation strategies:
  - i) hyperactivation strategies – seen in clinging or coercive behaviours.
  - ii) deactivation strategies – thought suppression, and distancing from others.

**IV. Theories of Gender Role Development**– Learning and cognitive processes determine the development of gender roles and gender role identities. Bandura's Social Learning Theory contributes to the development of gender role formation in the early years. Children observe their parents and other significant elders and imitate the behaviour of same-sex parent. Imitation of appropriate behaviour gets followed with positive reinforcement and hence the likelihood of reoccurrence of that behaviour increases. Imitation of inappropriate behaviour gets followed with negative reinforcement and thus the likelihood of reoccurrence of that behaviour decreases.

Gender Schema Theory by **Sandra Bem** (1981) integrates the social learning theory with cognitive processes. The child in his/her growing years forms a schema of 'male' and 'female' behaviours. He/she observes boy and girls and organizes and categorises the information into a 'boy' schema and a 'girl' schema. They further acquire the behaviour that is closer to their being a boy or a girl, thereby developing their gender identities.

### Check Your Progress 3

- 1) Match the following developmental crisis with appropriate age brackets, as given by Erikson's psycho-social stages of development:

a) Trust versus Mistrust	i) Preschoolers
b) Initiative versus Guilt	ii) Elementary school age
c) Autonomy versus Shame & Doubt	iii) Toddlerhood
d) Industry versus Inferiority	iv) Infancy

- i) a-i, b-ii, c-iii, d-iv
- ii) a-iv, b-ii, c-iii, d-i

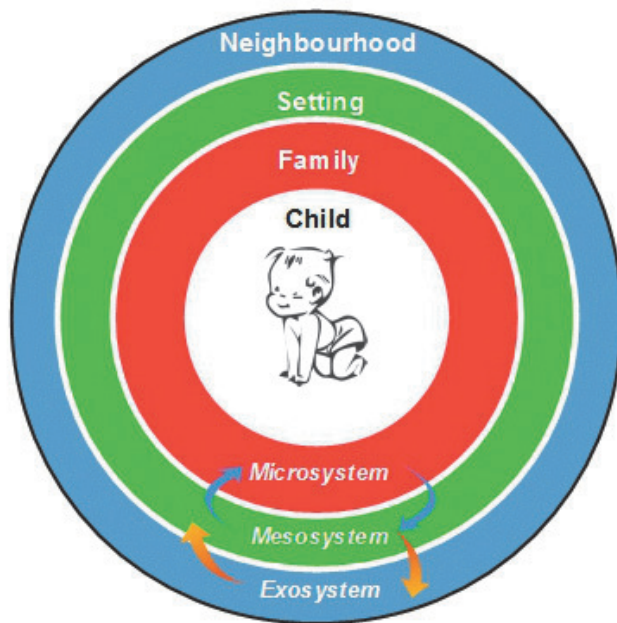
iii) a-iv, b-i, c-iii, d-ii
iv) a-ii, b-iv, c-i, d-iii
2) Which of the following is true for Bowlby's attachment theory?
i) Children learn to form attachments in childhood. (True/False)
ii) The attachment system evolves as a function of attachment figure's responses to the child in need. (True/False)
iii) Neglected children learn to develop positive working models of self and others. (True/False)
iv) Children deprived of basic social and emotional needs display deficiency in adult relationships. (True/False)

### 3.2.4 Ecological Systems Theory

Ecology has been defined as the study of relationship of biological forms with the physical environment. The ecological perspective takes into consideration the interaction of an individual with his/her physical and sociocultural context. For instance, the concept of adjustment is not understood alone by the individual factors like one's personality but rather, as the transactional process of the individual with his/her environment.

**Urie Bronfenbrenner's Ecological Theory:** The seminal work on ecological systems theory in 1979 asserts the role of environmental systems in human development. His theory described the child's ecology as comprising of levels of environmental contexts, from most proximal to the most distal systems. With the individual in the centre and other systems forming concentric layers, the structure is akin to the Russian nesting dolls, one level opening into another. In 2006, Bronfenbrenner revised his theory to term it as the bioecological system where the active role of the individual in his/her development process is emphasized.

Levels of Analysis in Bronfenbrenner's Model	
Level 1	Individual – Individuals play an important role in choosing their relationships and environments to an extent that influence his development process.
Level 2	Microsystem – are the immediate environments to an individual that foster close personal interactions with others. For example, families, school teachers, peers.
Level 3	Mesosystem – involves the processes that occur among the multiple microsystems that the individual is part of. In order to understand the individual's developmental process, one needs to understand the activities between the microsystems. For example, the relationship between the child's friends and parents, parents and teachers.
Level 4	Exosystem – involves microsystems to which an individual is indirectly connected but which still impact upon his/her development. For example, the work organizations of the child's parents. The work demands and job timings impact the child's upbringing.
Level 5	Macrosystem – influences development within and between all the other systems and manifests itself in the cultural, religious and socioeconomic organizations of the society. For example, socio-economic level of the family determines availability of adequate resources for health, education and child care facilities.



**Figure 3.2: Bronfenbrenner's child-centred Ecological Systems theory**

Source: Cognitive development: The Science of Childcare (firstdiscoverers.co.uk)

**Durganand Sinha's Model of Deprivation:** The eminent Indian psychologist **Durganand Sinha** (1922-1998) adopted Bronfenbrenner's ecological model in 1982 to study deprivation in the Indian context. He conceived the child's ecology as consisting of two concentric layers:

- i) The upper and the most visible layers – comprises of home, school and peer groups, with specific emphasis on physical objects, social roles and relationships with the child.
- ii) The supporting and the surrounding layer – comprises of the physical and cultural environment in which the child resides, with emphasis on the impact of the social class, caste, resources made available to the child.

The upper and the supporting layers combine and interact with one another to impact upon the child's interpersonal relations, socialization agents, cognitive and perceptual functioning of the child.

#### Check Your Progress 4

- 1) Match the following levels of analysis of Bronfenbrenner's model.

i) Individual	a) Athlete's parents' socioeconomic status
ii) Microsystem	b) Coach-athlete relationship
iii) Mesosystem	c) Athlete
iv) Macrosystem	d) Coach- athlete's parents

- 2) Explain Sinha's model of deprivation.

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### Box 3.1: Evolutionary Developmental Psychology

The evolutionary perspective and developmental theory had a history of setting out as incompatible fields. At the outset, when **Darwin (1859)** proposed his theory of natural selection, his focus was mainly on the origin, formation and development of the embryo. While having a common starting point, the two fields were set apart by developments in the field of genetics that took precedence over determining the development pattern in human species. The field of evolutionary psychology slowly emerged with the realization that cognitive processes are better understood with an evolutionary perspective that helps to find out the 'why's' of how humans behave the way they do, and not the 'how's' which was the focal point of development studies.

Shifting from the initial focus on adults and cognition, the field of evolutionary developmental psychology (EDP) came about with the realization that the process of natural selection is important in all life phases, but more crucial for survival in the early developmental periods. Hence, we can conclude that the field of EDP focuses on the application of evolutionary principles to human development, with the underlying assumption that natural selection function at all life stages. The EDP experts speak about 'deferred adaptations' which are behaviours exhibited early in life to prepare one for an adult life. For example, the contrasts in 'free play' pattern of young boys and girls, with girls engaging in more free plays of parenting and boys' free play more focused on the 'rough and tough'. These differences among boys and girls prepare them for future adult social roles. EDP experts also talk of 'ontogenic adaptations' which serve particular functions during a given period and later, is discarded. Example includes, the function of placenta before birth is to provide food and oxygen to the growing embryo, but later discarded at the time of childbirth.

### 3.3 SUMMARY

Now that we have come to the end of this unit, let us recapitulate all the major points that we have learnt.

- Developmental theorists and neuroscience experts assert that the first few years of life comprising of the infancy and childhood phases, are the most crucial to the overall and lifelong development of an individual.
- Cognitive development concerns how humans acquire, organize, store and use the knowledge in their interactions with the world.
- Jean Piaget pioneered in the theoretical contributions made towards the field of cognitive development and laid emphasis on the importance of interaction of the child with objects in the surroundings in the development of cognitive abilities.
- Lev Vygotsky, proposed the socio-cultural theory of cognitive development which stressed on the importance of social interactions with skilled adults and peers.
- Skinner, a behaviourist, believed that language development was the result of strategies like imitating others, shaping, promptly and rewarding mechanisms help the child acquire language.
- Naom Chomsky stated that children acquire language ability in a seemingly effortless manner and that the mechanism for the same is hard wired into our brains termed as the language acquisition device.

- Kohlberg postulated theory of moral development into three stages: pre conventional, conventional and post conventional. Carol Gilligan believed that men and women have different moral and psychological tendencies.
- Information Processing Model is a memory model that looks into how information is received and stored for shorter or longer periods of time.
- Erik Erikson introduced the theory of psychosocial development in the 1950s to explain the influence of social dynamics from infancy till old age.
- Albert Bandura proposed the social learning theory which states that social behaviour is acquired through observation and imitation of others' behaviours.
- John Bowlby believed that children deprived of the most basic social, emotional and relational needs, display deficiency in their adult relationships and that children are born with an attachment behavioural system that leads them to seek and maintain proximity with an attachment figure.
- Learning and cognitive processes determine the development of gender roles and gender role identities.
- The ecological perspective takes into consideration the interaction of an individual with his/her physical and sociocultural context. Urie Bronfenbrenner's seminal work on ecological systems theory asserts the role of environmental systems in human development. The model was adapted to Indian context by Durganand Sinha that posited two layers, the upper and the most visible layers, and the supporting and the surrounding layers.

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### 3.4 KEYWORDS

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**Life expectancy:** The number of years an average person can expect to live when born in a particular year.

**Bilingualism:** The ability to use two languages effectively.

**Multilingualism:** The ability to use multiple languages

**Object Permanence:** Becoming aware that an object continues to exist even when out of sight.

**Operant conditioning:** Method of learning that provides for negative or positive reinforcements are a consequence of behaviour.

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### 3.5 REVIEW QUESTIONS

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- 1) Discuss Piaget's theory of cognitive development.
- 2) Explain Erikson's theory of psychosocial development that provide meaning to events during childhood and adolescence?
- 3) Critically evaluate Kohlberg's theory of moral development.
- 4) Explain Ecological Systems perspective on human development.

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### 3.6 REFERENCES AND FURTHER READING

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### 3.7 WEB RESOURCES

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- Article on Vygotsky’s Socio-Cultural Theory;  
Vygotsky’s Socio-Cultural Theory. “Every function in the cultural... | by Sila Cakmak | BrainBiguous | Medium
- On Kohlberg’s theory of Moral development, visit;  
<https://youtu.be/GTzBrjxKHLg>

**Check Your Progress 1**

- 1)
  - i) Zone of proximal development
  - ii) Egocentrism
  - iii) Centration
  - iv) Personal fable
- 2) Zone of proximal development is the gap between the actual level of development (of the child) and potential development that she or he may achieve after educational support.

**Check Your Progress 2**

- 1) Chomsky proposes that the acquisition of language is an innate ability whereas Skinner believed that a child acquires language through principles of reinforcement theory and other learning strategies of imitation, shaping, and prompting.
- 2) While Kohlberg and Piaget believed that transitions from one stage to the other in cognitive development take place as a result of cognitive capabilities, Gilligan believed that it was the changes in sense of self that resulted in transitions from one stage to the next.
- 3) II. a-iii, b-iv, c-i, d-ii
- 4)
  - i) Maintaining the social order
  - ii) Good interpersonal relations
  - iii) Universal Principles
  - iv) Social Contrast and Individual Rights
  - v) Obedience and Punishment Orientation

**Check your Progress 3**

- 1) III. a-iv, b-i, c-iii, d-ii
- 2)
  - i) False
  - ii) True
  - iii) False
  - iv) True

**Check your Progress 4**

- 1) i-c, ii-b, iii-d, iv-a
- 2) Bronfenbrenner's model was adapted to Indian context by Durganand Sinha. It proposed two main layers, the outer visible layer comprises of peers, relatives, friends. The supporting layer constitutes of the cultural and physical environment.

