



PSY 205

Developmental Psychology

Course Manual

Grace A. Adejuwon Ph.D.

COURSE MANUAL

Developmental Psychology

PSY205



University of Ibadan Distance Learning Centre
Open and Distance Learning Course Series Development
Version 1.0 ev1

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Vice-Chancellor's Message

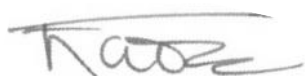
The Distance Learning Centre is building on a solid tradition of over two decades of service in the provision of External Studies Programme and now Distance Learning Education in Nigeria and beyond. The Distance Learning mode to which we are committed is providing access to many deserving Nigerians in having access to higher education especially those who by the nature of their engagement do not have the luxury of full time education. Recently, it is contributing in no small measure to providing places for teeming Nigerian youths who for one reason or the other could not get admission into the conventional universities.

These course materials have been written by writers specially trained in ODL course delivery. The writers have made great efforts to provide up to date information, knowledge and skills in the different disciplines and ensure that the materials are user-friendly.

In addition to provision of course materials in print and e-format, a lot of Information Technology input has also gone into the deployment of course materials. Most of them can be downloaded from the DLC website and are available in audio format which you can also download into your mobile phones, IPod, MP3 among other devices to allow you listen to the audio study sessions. Some of the study session materials have been scripted and are being broadcast on the university's Diamond Radio FM 101.1, while others have been delivered and captured in audio-visual format in a classroom environment for use by our students. Detailed information on availability and access is available on the website. We will continue in our efforts to provide and review course materials for our courses.

However, for you to take advantage of these formats, you will need to improve on your I.T. skills and develop requisite distance learning Culture. It is well known that, for efficient and effective provision of Distance learning education, availability of appropriate and relevant course materials is a *sine qua non*. So also, is the availability of multiple plat form for the convenience of our students. It is in fulfillment of this, that series of course materials are being written to enable our students study at their own pace and convenience.

It is our hope that you will put these course materials to the best use.



Prof. Isaac Adewole

Vice-Chancellor

Forward

As part of its vision of providing education for “Liberty and Development” for Nigerians and the International Community, the University of Ibadan, Distance Learning Centre has recently embarked on a vigorous repositioning agenda which aimed at embracing a holistic and all encompassing approach to the delivery of its Open Distance Learning (ODL) programmes. Thus we are committed to global best practices in distance learning provision. Apart from providing an efficient administrative and academic support for our students, we are committed to providing educational resource materials for the use of our students. We are convinced that, without an up-to-date, learner-friendly and distance learning compliant course materials, there cannot be any basis to lay claim to being a provider of distance learning education. Indeed, availability of appropriate course materials in multiple formats is the hub of any distance learning provision worldwide.

In view of the above, we are vigorously pursuing as a matter of priority, the provision of credible, learner-friendly and interactive course materials for all our courses. We commissioned the authoring of, and review of course materials to teams of experts and their outputs were subjected to rigorous peer review to ensure standard. The approach not only emphasizes cognitive knowledge, but also skills and humane values which are at the core of education, even in an ICT age.

The development of the materials which is on-going also had input from experienced editors and illustrators who have ensured that they are accurate, current and learner-friendly. They are specially written with distance learners in mind. This is very important because, distance learning involves non-residential students who can often feel isolated from the community of learners.

It is important to note that, for a distance learner to excel there is the need to source and read relevant materials apart from this course material. Therefore, adequate supplementary reading materials as well as other information sources are suggested in the course materials.

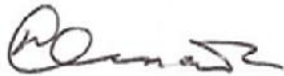
Apart from the responsibility for you to read this course material with others, you are also advised to seek assistance from your course facilitators especially academic advisors during your study even before the interactive session which is by design for revision. Your academic advisors will assist you using convenient technology including Google Hang Out, You Tube, Talk Fusion, etc. but you have to take advantage of these. It is also going to be of immense advantage if you complete assignments as at when due so as to have necessary feedbacks as a guide.

The implication of the above is that, a distance learner has a responsibility to develop requisite distance learning culture which includes diligent and disciplined self-study, seeking available administrative and academic support and acquisition of basic information technology skills. This is why you are encouraged to develop your computer skills by availing yourself the opportunity of training that the Centre’s provide and put these into use.

In conclusion, it is envisaged that the course materials would also be useful for the regular students of tertiary institutions in Nigeria who are faced with a dearth of high quality textbooks. We are therefore, delighted to present these titles to both our distance learning students and the university's regular students. We are confident that the materials will be an invaluable resource to all.

We would like to thank all our authors, reviewers and production staff for the high quality of work.

Best wishes.

A handwritten signature in black ink, appearing to read 'Bayo Okunade', written in a cursive style.

Professor Bayo Okunade

Director

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About this course manual

Developmental Psychology PSY205 has been produced by University of Ibadan Distance Learning Centre. All course manuals produced by University of Ibadan Distance Learning Centre are structured in the same way, as outlined below.

How this course manual is structured

The course overview

The course overview gives you a general introduction to the course. Information contained in the course overview will help you determine:

- If the course is suitable for you.
- What you will already need to know.
- What you can expect from the course.
- How much time you will need to invest to complete the course.

The overview also provides guidance on:

- Study skills.
- Where to get help.
- Course assignments and assessments.
- Margin icons.

We strongly recommend that you read the overview *carefully* before starting your study.

The course content

The course is broken down into Study Sessions. Each Study Session comprises:

- An introduction to the Study Session content.
- Study Session outcomes.
- Core content of the Study Session with a variety of learning activities.
- A Study Session summary.
- Assignments and/or assessments, as applicable.
- Bibliography

Your comments

After completing Developmental Psychology we would appreciate it if you would take a few moments to give us your feedback on any aspect of this course. Your feedback might include comments on:

- Course content and structure.
- Course reading materials and resources.
- Course assignments.
- Course assessments.
- Course duration.
- Course support (assigned tutors, technical help, etc.)

Your constructive feedback will help us to improve and enhance this course.

CourseOverview

Welcome to Developmental Psychology PSY205

This *three unit* course provides a study on how people grow and change over the course of a lifetime. It examines physical changes that occur as people grow; and also the social, emotional, and cognitive development that occurs throughout life.

The overall aim of the course is to enable the student become aware of how changes in development take place during conception, prenatal, and childhood. This includes the processes that produce the change and stability, the patterns of change in physical, cognitive, and psychosocial development.

Course outcomes

Upon completion of Developmental Psychology PSY205 you will be able to:



Outcomes

- *define and use* the basic terms in developmental psychology.
- *outline* the stages of human development (infancy and early childhood period).
- *distinguish* between major perspectives (behavioural, psychoanalytic, psychosocial and cognitive).
- *explore* the ways developmental theories are used to describe, understand, predict, and control or modify behaviour.

Timeframe



How long?

This is a 15 week course. It requires a formal study time of 45 hours. The formal study times are scheduled around online discussions / chats with your course facilitator / academic advisor to facilitate your learning. Kindly see course calendar on your course website for scheduled dates. You will still require independent/personal study time particularly in studying your course materials.

How to be successful in this course



As an open and distance learner your approach to learning will be different to that from your school days, where you had onsite education. You will now choose what you want to study, you will have professional and/or personal motivation for doing so and you will most likely be fitting your study activities around other professional or domestic responsibilities.

Essentially you will be taking control of your learning environment. As a consequence, you will need to consider performance issues related to time management, goal setting, stress management, etc. Perhaps you will also need to reacquaint yourself in areas such as essay planning, coping with exams and using the web as a learning resource.

We recommend that you take time now—before starting your self-study—to familiarize yourself with these issues. There are a number of excellent resources on the web. A few suggested links are:

- <http://www.dlc.ui.edu.ng/resources/studyskill.pdf>

This is a resource of the UIDLC pilot course module. You will find sections on building study skills, time scheduling, basic concentration techniques, control of the study environment, note taking, how to read essays for analysis and memory skills (“remembering”).

- http://www.ivywise.com/newsletter_march13_how_to_self_study.html

This site provides how to master self-studying, with bias to emerging technologies.

- <http://www.howtostudy.org/resources.php>

Another “How to study” web site with useful links to time management, efficient reading, questioning/listening/observing skills, getting the most out of doing (“hands-on” learning), memory building, tips for staying motivated, developing a learning plan.

The above links are our suggestions to start you on your way. At the time of writing these web links were active. If you want to look for more, go to www.google.com and type “self-study basics”, “self-study tips”, “self-study skills” or similar phrases.

Need help?



Help

As earlier noted, this course manual complements and supplements PSY205at UI Mobile Class as an online course, which is domiciled at www.dlc.ui.edu.ng/mc.

You may contact any of the following units for information, learning resources and library services.

Distance Learning Centre (DLC)

University of Ibadan, Nigeria
Tel: (+234) 08077593551 – 55
(Student Support Officers)
Email: ssu@dlc.ui.edu.ng

Head Office

Morohundiya Complex, Ibadan-Ilorin Expressway, Idi-Ose, Ibadan.

Information Centre

20 Awolowo Road, Bodija, Ibadan.

Lagos Office

Speedwriting House, No. 16 Ajanaku Street, Off Salvation Bus Stop, Awuse Estate, Opebi, Ikeja, Lagos.

For technical issues (computer problems, web access, and etcetera), please visit: www.learnersupport.dlc.ui.edu.ng for live support; or send mail to webmaster@dlc.ui.edu.ng.

Academic Support



Help

A course facilitator is commissioned for this course. You have also been assigned an academic advisor to provide learning support. The contacts of your course facilitator and academic advisor for this course are available at the course website: www.dlc.ui.edu.ng/mc

Activities



Activities

This manual features “Activities,” which may present material that is NOT extensively covered in the Study Sessions. When completing these activities, you will demonstrate your understanding of basic material (by answering questions) before you learn more advanced concepts. You will be provided with answers to every activity question. Therefore, your emphasis when working the activities should be on understanding your answers. It is more important that you understand why every answer is correct.

Assessments



Assessments

There are three basic forms of assessment in this course: in-text questions (ITQs) and self assessment questions (SAQs), and tutor marked assessment (TMAs). This manual is essentially filled with ITQs and SAQs. Feedbacks to the ITQs are placed immediately after the questions, while the feedbacks to SAQs are at the back of manual. You will receive your TMAs as part of online class activities at the UI Mobile Class. Feedbacks to TMAs will be provided by your tutor in not more than 2 weeks expected duration. Schedule dates for submitting assignments and engaging in course / class activities is available on the course website. Kindly visit your course website often for updates.

Bibliography



Readings











For those interested in learning more on this subject, we provide you with a list of additional resources at the end of this course manual; these may be books, articles or websites.

Getting around this course manual

Margin icons

While working through this course manual you will notice the frequent use of margin icons. These icons serve to “signpost” a particular piece of text, a new task or change in activity; they have been included to help you to find your way around this course manual.

A complete icon set is shown below. We suggest that you familiarize yourself with the icons and their meaning before starting your study.

| | | | |
|---|---|---|---|
|  |  |  |  |
| Activity | Assessment | Assignment | Case study |
|  |  |  |  |
| Discussion | Group Activity | Help | Outcomes |
|  |  |  |  |
| Note | Reflection | Reading | Study skills |
|  |  |  |  |
| Summary | Terminology | Time | Tip |

Study Session 1

Historic View of Child Development

Introduction

Child development has been going on as long as children have existed, but its formal scientific study is relatively new. In this Study Session, we will present an overview of how early researchers studied child development.

Learning Outcomes

When you have studied this session, you should be able to:

- 1.1 *outline* how early researchers studied child development.
- 1.2 *point out* the elements of a theory.



1.1 Overview of Child Developmental Studies

Child development The biological, emotional and social changes that occur in human beings between birth and the end of adolescence.

Early forerunners of scientific study of **child development** consist of baby biographies and journals. These were kept to record the early development of a single child. One early journal, published in 1787 in Germany was Dietrich Tiedemann's for behaviour at various ages. It attempted to explain what causes or influences the observed behaviour; for example, how children acquire and learn to use language. This knowledge may make it possible to predict child's language ability at a given age and an awareness of how language develops may be used to modify behaviour by intervening to promote optimal development.

Hint

The study of child development has practical implication. By learning, about the normal course of development, we can look at various factors in a child's life and attempt to predict future behaviour.

According to the French historian Philippe Aries (1962), it was until the seventeenth century that children in western societies were seen as qualitatively different from adults; before then, children were considered simply as smaller, weaker, and less intelligent. *Aries based his opinion on historical sources.* Old paintings, showed children dressed like their elders. Document described children working long hours leaving their parents at early ages for apprenticeships, and suffering brutality in the hands of adults. Aries view has been widely accepted, but more recent analyses paint a different picture. The psychologist David Elkind (1986)

found recognition of children's special nature in the Bible and in the works of the ancient Greeks and Romans. After examining more than 400 autobiographies, dairies, and other sources closer to the actual day-to-day experience of family life than those Aries used, Linda A. Pollock (1983) made a strong argument that, at least, as far back as the sixteenth century, children have been seen and treated differently from adults. Dairies of both parents and children portrayed parents who loved their children and saw them as playful beings in need of guidance, care, and protection. Parent-child relationships were not described as formal or distant, and there was little evidence of harsh discipline or abuse. Most parents wanted their children and enjoyed their company, were concerned about such issues as weaning and teething, and suffered when children fell ill or died. Parents regarded child rearing as one of the most important challenges in life.



Discussion Activity

Study the information in the link below and answer the question that follows.

<http://psychology.about.com/od/early-child-development/a/introduction-to-child-development.htm>

What do you think is the most important reason to study child development?

Provide response and join your tutor in an online discussion on this topic on Study Session One forum page on course website

1.2 Use of Theories in Child Development Studies

Theory A set of statements or principles devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted

Developmentalists have come up with many theories about why children behave as they do. A **theory** is a set of related concepts, which seeks to organize and explain data, the information gathered through research. Theories also predict what data might be obtained under certain conditions, thus they serve as a source of hypothesis explanations or predictions that can be tested by research. Theories are dynamic; they change to incorporate new findings. Sometimes, research supports a hypothesis and the theory on which it was based. At other times, scientists must modify their theories to account for unexpected data. However, whether research findings support a theory or not, they often suggest additional issues and hypotheses to be researched. Theories have helped the scientists to achieve the goals noted earlier to describe, explain, predict, and modify behaviour. As we will see, particular theories gave greater emphasis to one or another of these goals. Every theory concentrated mainly on description and explanation. Theories and research that captured the popular imagination, as well as much scientific attention, during the 1960s notably behaviourism focused on attempts to predict and control behaviour. Today, the emphasis again is on precise detailed description and explanation of the complex processes of development and their many overlapping contexts.

No one theory of human development is universally accepted, and no one theory explains all facets of development. Indeed, the trend today is away from "grand", all-encompassing theories (such as the classic theories of Sigmund Freud and Jean Piaget) and toward smaller, more limited

“minitheories” aimed at explaining specific phenomena, such as how poverty influences family relations. Different investigators looked from different perspectives at how children develop. These perspectives, which are generally affected by the culture in which they arose, influences the questions researchers ask, the methods they use, and the ways they interpret data. Therefore, to evaluate and interpret research, it is important to know the theoretical perspective on which it is based.

In this course, features of five theoretical perspectives that underlie influential theories and research on child development will be examined; these features are:

1. psychoanalytic (which focuses on unconscious emotions and drives)
2. psychosocial
3. cognitive (which stressed thought processes)
4. behaviourism
5. contextual (which emphasizes the impact of the social and cultural context).

Study Session Summary



Summary

In this Study Session, we saw dramatic changes in the way adults have viewed and investigated the world of childhood. The study of child development has practical implication. Early forerunners of the scientific study of child development were baby biographies journals which kept records of the early development of a single child. As from the seventeenth century however, different investigators using theories look from different perspectives at how children develop.

Assessment



Assessment

Required

Bibliography



Readings

- Aries, P. (1962) *Centuries of Childhood*. New York: Vintage.
- Elkind, D. (1986). *The Mis-education of Children: Super kids at risk*. New York: Knopf.
- Pollock, L.A. (1983). *Forgotten Children*. Cambridge, England:

Cambridge University Press.

<http://psychology.about.com/od/early-child-development/a/introduction-to-child-development.htm>

<http://psychology.about.com/od/developmentalpsychology/a/childdevelopment.htm>

Study Session 2

Context of Development

Introduction

A useful way of classifying environmental influences is by immediacy of impact. This Study Session will expose you to the "bioecological" approach to human development; the contexts of children's lives such as the homes, communities, societies they live in, and their relationships with people around them. Finally, we will explore influences on human development.

Learning Outcomes

When you have studied this session, you should be able to:

- 2.1 highlight the relevance of studying of human development.
- 2.2 present at least two implications of Brofenbrenner's ecological system theory to developmental psychology.
- 2.3 point out the influences on development.
- 2.4 present the mechanism involved in developmental psychology.



2.1 The Meaning and Relevance of the Study of Human Development

Direct democracythe growth of humans throughout the lifespan, from conception to death.

Before you begin an in-depth study of this subject, you need to understand exactly what **development** means. Development describes the growth of humans throughout the lifespan, from conception to death. The scientific study of human development seeks to understand and explain how and why people change throughout life. This includes all aspects of human growth, including physical, emotional, intellectual, social, perceptual, and personality development. The scientific study of development is important not only to psychology, but also to sociology, education, and health care. Development does not just involve the biological and physical aspects of growth, but also the cognitive and social aspects associated with development throughout life. The study of human development is important in a number of subjects, including biology, anthropology, sociology, education, history, and psychology. Most importantly, however, are the practical applications of studying human development. By better understanding of how and why people change and grow, we can then apply this knowledge to help people live up to their full potential.

2.2 Contexts of Development: An Ecological Approach

2.2.1 Bronfenrenner's Ecological Systems Theory

Urie Bronfenrenner's (1979, 1986, and 1994) is an American psychologist. He proposed the Ecological Systems Theory which identifies five interlocking levels of external influence, or contexts of development from the most intimate to the broadest. To understand individual development, says Bronfenrenner, we must study a child in the context of the multiple environments, or ecological systems, in which she or he develops). These begin with the intimate surroundings of the home, move outward to larger institutions such as the school system, and finally encompass cultural, social and historical patterns and conditions that affect home, school, and virtually everything in a child's life. These are:

- The Microsystem is the immediate everyday environment of home, school, or neighborhood. It includes personal, face-to-face relationships with parents, siblings, caregivers, classmates and teachers in which influences flow back and forth. Analyses of the Microsystem have come up with some surprises: for example, the extent to which the environment differs for individual children within the same family.
- The mesosystem is the interaction of various micro systems that contain the developing child in other words, a system of Microsystems. These may include linkages between home and school, such as parent-teacher conferences, or between the family and the peer groups.
- The exosystem refers to linkages between two or more settings, at least one of which does not contain the developing child but affects him or her indirectly. For example, a mother who is frustrated at work may mistreat her children.
- The macrosystem consists of cultural patterns: dominant beliefs, ideologies, and economic and political systems, such as capitalism and socialism.
- The chronosystem adds the dimension of time – the influence of normative or nonnormative change or constancy in the child and the environment. This can include changes in family structure, place of residence or parents' employment, as well as larger cultural changes such as wars and economic cycles.

2.2.2 Implications of Bronfenrenner's Ecological System Theory

By looking at systems that affect individuals in and beyond the family, this ecological approach shows the variety of interrelated influences on child development. Attention to context can also alert us to differences in

the way the same child may act in different settings. A child who can satisfactorily complete a school assignment at home may become tongue tied when called upon to answer a question about the assignment in class. A child who is terror on the playground may be docile as a lamb while having lunch at Grandma's house. For this reason, developmentalists need to pay attention to behaviour in a variety of contexts to the linkages between contexts.

2.3 Influences on Development

2.3.1 Factors that influences Development

Heredity

This consists of inborn influences on development carried on the genes inherited from the parents. The basic unit of heredity is the gene. Genes contain all the hereditary material passed from biological parents to children which affects inherited characteristics. Each cell in the human body contains an estimated 80,000 to 100,000 genes. The gene is made up of deoxyribonucleic acid (DNA). The chromosomes carry the genes. There are 23 pairs (46) of chromosomes in each cell except the sex cells of the body. The sex chromosomes are either X chromosome or Y chromosome. The ovum of the woman contains XX chromosomes while the sperm of the man contain XY chromosomes. After fertilization, the child will be a boy if the Y chromosome from the man fertilizes the X-carrying ovum, forming XY zygote while a girl will be formed if the X chromosome from the man fertilizes the X-carrying ovum of the woman forming XX zygote. Other inherited characteristics give each child a unique start in life.

Environment

This is the totality of nongenetic influence on development external to the self. It includes family, socioeconomic factors, ethnicity and culture. Family may mean something different in different societies. The types of family include nuclear family, extended family, single-parent family and step-families. The nuclear family is a two-generational kinship consisting of two parents and their biological or adopted children. The extended family is a multigenerational kinship network of parents consisting of children, parents, grandparents, uncles, aunties, cousins and other relatives forming in an intimate relationship with the child. Some of the time the extended family lives in the same household.

Socioeconomic Status (SES)

This involves a variety of related factors including income, education, and occupation. Socioeconomic factors have been found in many studies to be associated with developmental outcomes such as health, cognitive performance, and differences in mother's verbal interaction with their children. However, it is not SES itself that directly affects these outcomes but factors associated with SES such as the kind of home and neighbourhood a child lives in and the quality of medical care and schooling a child receives.

Ethnic Group

An ethnic group consists of people united by ancestry, race, culture, language, and/ or national origins which contribute to a sense of shared identity. Culture refers to a society's way of life including customs, traditions, beliefs, values, language and physical products from tools to art works and all of the learned behaviour that is passed from adults to children. Culture is not static; it is constantly changing most of the time through interaction with other cultures.

Maturation

Maturation A term used to specify how a person reacts to the situation or environment in a suitable manner. It is also a term used to describe the process of maturing or reaching full functionality.

This is when sequence of physical changes and behaviour patterns, including readiness to master new abilities, unfolds. **Maturation** is genetically influenced and often age-related. For example, as children grow into adolescents and then into adults, differences in innate characteristics and life experience play a greater role.



Reflection

Is maturation a function of age? See the following resources before you conclude.

<http://www.alleydog.com/glossary/definition.php?term=Maturation>

<http://home.cc.umanitoba.ca/~eaton/child-development-physical-maturation.htm>

2.3.2 Forms of Influences on Development

Normative Influences

An event is normative when it occurs in a similar way for most people in a group. Some may be age-graded or history-graded. Normative age-grade influences are highly similar for people in a particular age group. They include biological events such as puberty, and cultural events such as entry into formal education. Normative history-graded influences are common to a particular cohort (a group of people who share similar experiences such as growing up at the same time and in the same place). Children may also feel the impact of war, famines, nuclear explosions, and economic depressions depending on where they live and when the occurrence took place. For example, most children are affected by the widespread participation of women in the work force in Nigeria today.

Non-normative Influences

These are unusual life events that have a major impact on individual lives and may cause stress because they are unexpected. They are typical events that happen at a typical time of life such as; death of a parent when a child is young or death of spouse at an unexpected period of marital life. They may also be events such as being involved in a motor crash, having a birth defect. They can also be happy events such as winning a scholarship. Some people create their own Non-normative life events such as driving when drunk or applying for a scholarship or making every effort to pass an examination.

2.3.3 Timing of Influence

Certain events should occur at particular times in the course of human development- this is called the critical time for that particular event. A critical time refers to a specific time during which a given event will have the greatest impact on development. For example, if a pregnant woman is exposed to X-rays, contact certain diseases, or takes certain drugs at specific times, the foetus may develop specific ill effects. The extent of damage will vary depending on the timing of those events. Also, the period just after birth is critical for brain growth. Undernourishment just after birth can result in brain damage. Giving an infant an opportunity to practice stepping movements during the first week of life may lead to early walking. Also, the first three years of life may be critical to developing ability to focus the eyes (binocular vision). As such a physical problem such as crossed eyes if not corrected during that period may interfere with the proper development of binocular vision. Mutual face-to-face interaction with an adult in the first six months of life is critical to the development of circuits in the brain which regulates emotional excitement.

However, although the human organism may be particularly sensitive to certain psychological experiences at certain times, later events can reverse the effects of earlier ones. For example, a child who becomes attached to the mother early in life may become insecure at adolescence if the child is exposed to adverse situations. In other words, the performance of cognitive and psychosocial development may be modifiable. This means that there is greater plasticity in performance for these aspects of development.

2.4 Mechanisms of Development

Although developmental change runs parallel with chronological age, age itself cannot cause development. The basic mechanisms or causes of developmental change are genetic factors and environmental factors.

Genetic factors are responsible for cellular changes like overall growth, changes in proportion of body and brain parts, and the maturation of aspects of function such as vision and dietary needs. The individual's initial genotype may change in function over time, giving rise to further developmental change. **Environmental factors** affecting development may include diet and disease exposure, as well as social, emotional, and cognitive experiences. However, examination of environmental factors also shows that young human beings can survive within a fairly broad range of environmental experiences.



Tip

Rather than acting as independent mechanisms, genetic and environmental factors often interact to cause developmental change

PlasticityThe quality that will allow a substance to retain its change in shape after being bent, stretched, or squeezed

Some aspects of child development are notable for their **plasticity**, or the extent to which the direction of development is guided by environmental factors as well as initiated by genetic factors. For example, the development of allergic reactions appears to be caused by exposure to certain environmental factors relatively early in life, and protection from early exposure makes the child less likely to show later allergic reactions. When an aspect of development is strongly affected by early experience, it is said to show a high degree of plasticity; when the genetic make-up is the primary cause of development, plasticity is said to be low. Plasticity may involve guidance by endogenous factors like hormones as well as by exogenous factors like infection.

One kind of environmental guidance of development has been described as experience-dependent plasticity, in which behaviour is altered as a result of learning from the environment. Plasticity of this type can occur throughout the lifespan and may involve many kinds of behaviour, including some emotional reactions. A second type of plasticity, experience-expectant plasticity, involves the strong effect of specific experiences during limited sensitive periods of development. For example, the coordinated use of the two eyes, the experience of a single three-dimensional image, rather than the two-dimensional images created by light in each eye, depend on experiences with vision during the second half of the first year of life. Experience-expectant plasticity works to fine-tune aspects of development that cannot proceed to optimum outcomes as a result of genetic factors working alone.

In addition to the existence of plasticity in some aspects of development, genetic-environmental correlations may function in several ways to determine the mature characteristics of the individual. Genetic-environmental correlations are circumstances in which genetic factors make certain experiences more likely to occur. For example, in passive genetic-environmental correlation, a child is likely to experience a particular environment because his or her parents' genetic make-up makes them likely to choose or create such an environment. In evocative genetic-environmental correlation, the child's genetically-caused characteristics cause other people to respond in certain ways, providing a different environment than might occur for a genetically-different child; for instance, a child with Down syndrome may be treated more protectively and less challengingly than a non-Down child. Finally, an active genetic-environmental correlation is one in which the child chooses experiences that in turn have their effect; for instance, a muscular, active child may choose after-school sports experiences that create increased athletic skills, but perhaps preclude music lessons. In all of these cases, it becomes difficult to know whether child characteristics were shaped by genetic factors, by experiences, or by a combination of the two.

Study Session Summary



Summary

In this Study Session, you were exposed to ecological systems theory also called "Development in Context" or "Human Ecology" theory. This theory specifies five types of nested environmental systems, with bi-directional influences within and between the systems. The five systems are:

Microsystem: immediate environments (family, school, peer group, neighbourhood, and childcare environments)

Mesosystem: A system comprised of connections between immediate environments (i.e., a child's home and school).

Exosystem: External environmental settings which only indirectly affect development (such as parent's workplace).

Macrosystem: The larger cultural context (Eastern vs. Western culture, national economy, political culture, subculture).

Chronosystem: The patterning of environmental events and transitions over the course of life.

Each system contains roles, norms, and rules that can powerfully shape development. We also discussed factors that influence development; normative and non-normative influences; and mechanisms of development.

Assessment



Assessment

Required

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Study Session 3

Physical Development

Introduction

The study of human development is endlessly fascinating because it is the study of real lives- yours, ours; and those of millions of people around the world. There are three aspects of human development: physical, cognitive or intellectual and personality and social development at each period of life, but actually these are intertwined. Each aspect of development affects the others throughout life.

Learning Outcomes

When you have studied this session, you should be able to:

- 3.1 explain physical development.
- 3.2 point out how gross motor skills and fine motor skills are developed.



3.1 Composition of Physical Development

Growth Series of physical changes that a certain individual undergoes.

Growth of the body, brain, sensory capacities, health, and motor skills are all part of physical development. Physical development involves the increasing skill and functioning of the body whereas growth relates to a child's increasing height, weight and general size. Both growth and development depend on suitable nourishment, including a balance of the right foods and sufficient water to drink. Increasing control and co-ordination is enabled by the maturing brain and nervous system, growing bones and muscles, exercise and physical activity. They exert a major influence on both intellect and personality.



Tip

Physical development involves the increasing skill and functioning of the body whereas growth relates to a child's increasing height, weight and general size.

Genetic factors play a major role in determining the growth rate, and particularly the changes in proportion characteristic of early human development. However, genetic factors can produce the maximum growth only if environmental conditions are adequate. Poor nutrition and frequent injury and disease can reduce the individual's adult stature, but the best environment cannot cause growth to a greater stature than is determined by heredity. Population differences in growth are largely

related to adult stature. Ethnic groups that are quite tall in adulthood are also longer at birth and throughout childhood, as compared to groups that have short adult stature. Males are also somewhat taller, although this is more apparent in ethnic groups with strong sexual dimorphism in adulthood. Populations that are characteristically malnourished are also shorter throughout life. However, there are few population differences in growth rates or patterns, except that poor environmental conditions may delay puberty and the associated growth spurt. Individual differences in height and weight during childhood are considerable. Some of these differences are due to family genetic factors, others to environmental factors, but at some points in development they may be strongly influenced by individual differences in reproductive maturation. For example, much of an infant's knowledge of the world comes from the senses and from motor activity. Also, a child who has a hearing loss is at risk of delayed language development.

Physical growth in stature and weight occurs over the 15-20 years following birth, as the individual changes from the average weight of 7 1/2 pounds and length of 20" at full-term birth to full adult size. As stature and weight increase, the individual's proportions also change, from the relatively large head and small torso and limbs of the neonate, to the adult's relatively small head and long torso and limbs. The speed of physical growth is rapid in the months after birth, and then slows, so birth weight is doubled in the first four months, tripled by age 12 months, but not quadrupled until 24 months. Growth then proceeds at a slow rate until shortly before puberty (between about 9 and 15 years of age), when a period of rapid growth occurs. Growth is not uniform in rate and timing across all body parts. At birth, head size is already relatively near to that of an adult, but the lower parts of the body are much smaller than adult size. In the course of development, then, the head grows relatively little, and torso and limbs undergo a great deal of growth.

3.2 Development of Physical Skills

The sequence of physical development involves firstly gross motor skills that involve control of large muscles in the body, arms and legs. This is followed by development of fine manipulative skills, which depend on small muscle coordination.

As children progress and become more confident, improvement in co-ordination of gross and fine movements will continue to develop and new skills will be learnt. Children cannot learn a new skill until the muscles are sufficiently developed and the activities and resources provided should be suitable for their developmental needs. The ages at which children accomplish particular physical skills can vary considerably. Most children will progress through the same stages of development at their own rate. The timing of this development can depend on different influencing factors such as, eating habits, emotional development and confidence in tackling new activities. Physical skills, body and spatial awareness contribute to a child's personal and social development by enhancing confidence and self esteem. Young children are active learners who enjoy learning through play and physical activities. During play,

children engage in learning experiences that require them to use a range of physical skills whether playing indoors or outdoors.

3.2.1 Gross Motor Skills

Children's control and co-ordination of their gross motor skills develop through movement that involves the use of muscles in the body, legs and arms. As they develop, most children will acquire the following skills: walking, running, stopping, jumping, climbing, pushing and pulling wheeled toys, pedaling a bike, rolling a ball, throwing / catching a beanbag or ball and balancing. As they progress, children will continue to refine their movements and apply their skills in new situations, for example: hopping and skipping, following games marked on the ground or the wall, gaining awareness of space, height and distance as they move around, use climbing equipment or ride wheeled toys.

Children should also be able to engage in rolling, striking, skittles, throwing / catching balls, balls of different sizes, quoits, hoops and other developmentally appropriate resources. As they become more skilful, children should develop skills in order to use the floor and apparatus for climbing and swinging, learn to lift, carry, place and use apparatus safely, respond with gesture and stillness as appropriate, improve their control, use different shapes, levels and create their own patterns of movements that combine some of the above actions collaborate in pairs and small groups to produce a sequence of movements following instructions and applying new skills, use mime and gesture to respond creatively to a stimulus, use their body movements expressively to reflect and to have opportunities to participate in gymnastics and dance from various cultures.

3.2.2 Fine Motor Skills

Skill at manipulating a range of malleable materials and small items of equipment depends on the development of small muscles. Fine motor control is needed, for example, to build a tower of blocks, complete a jigsaw puzzle, or tie shoe laces. Physical skills are also linked with perceptual development, visual skills, cognitive skills and understanding of specific vocabulary related to spatial relationships. These are enhanced through a visually stimulating environment and opportunities to explore and talk about a wide range of resources and materials. As children's small muscles mature, including eye muscles, hand/eye co-ordination will develop. Hand /eye coordination is a pre-requisite of being able to hold a pencil properly to make marks on paper and later produce precise writing patterns, letters and numbers. Children will develop fine manipulative skills and hand/ eye co-ordination by handling a wide range of resources, including: dough, plasticine, clay, painting- first with large brushes and then finer ones, sand and water play equipment, jigsaw puzzles, peg patterns, a range of equipment for threading and weaving, small world figures, animals and vehicles. Constructing equipment of different sizes for table top activities, use of clothes for role and imaginative play, use of scissors, cooking equipment, sewing equipment computers and other programmable devices. As children progress, they should be able to: handle increasingly small equipment skillfully, for example sewing, construction toys, use crayons, pencils, pens and paintbrushes, of varying

sizes to support their individual development when making, writing and making pictures, use hammers, saws and nails to create their own models, make intricate models from clay, plasticine, pour and measure liquids, cut accurately with a knife or scissors, handle items such as sequins, large needle and thread and paper fasteners when decorating or joining items they design and make, handle the computer mouse with increasing control, use ICT to support their work and development across all areas of learning.



The scientific study of children indicates the belief that knowledge is useful. Real children cannot be found on the pages of textbooks. They are living, crying, and laughing shouting and question-asking human beings. Observe the children around you. Remember also what you used to be as a child and try to understand what made you to be who you are today.

Forward your reflection as a post on Study Session Three forum page on course website. The post should not be more than 120 words.

Study Session Summary



Summary

In this Study Session, we discussed physical development. We examined two forms of development; and explored gross motor skills and fine motor skills in physical development.

Assessment



Assessment

Required

Study Session 4

Personality

Introduction

Personality is the unique way in which each person deals with the world, expresses emotions, and so on. In general, though the basic physical and psychological processes involved in development are the same for every child, the outcome is usually different. We will devote this Study Session to explore factors that affect everyone at one hand, and also serves as the reason why one child is different from another child. We will discuss the substance of personality development using two theories: Sigmund's theory of psychosexual development and Erik's theory of psychosocial development.

Learning Outcomes

When you have studied this session, you should be able to:

- 4.1 outline the stages of psychosexual development.
- 4.2 point out the implication of fixation to human development.
- 4.3 discuss the criticisms against Sigmund Freud's theory.
- 4.4 outline the elements of psychosocial theory.
- 4.5 highlight the stages of human development according to psychosocial theory.



4.1 Psychosexual Theory of Sigmund Freud



Sigmund Freud

Sigmund Freud (1953) proposed three hypothetical parts of **personality**: the id, the ego, and the superego. Newborns are governed by the id, a source of motives and desires that is present at birth. The id seeks immediate satisfaction under the pleasure principle. When gratification is delayed (as when they have to wait for food), infants begin to see themselves as separate from the outside world. The ego, which represents reason or common sense, develops sometime during the first year of life and operates under the reality principle. The ego's aim is to find realistic ways to gratify the id. At about age 5 or 6, as the child identifies with the parent of the same sex, the superego develops. It includes the conscience and incorporates social approved "should" and "should not" into the child's own value system.

Sigmund Freud developed a psychosexual theory of human development from infancy onward, in accordance with his view of a basic human motivation being the sexual drive. He divided into five stages. Each stage centred on the gratification of the libido within a particular area, or

Personality is made up of the characteristic patterns of thoughts, feelings and behaviours that make a person unique. In addition to this, personality arises from within the individual and remains fairly consistent throughout life.

erogenous zone of the body. He also argued that as humans develop, they become fixated on different and specific objects through their stages of development.

4.1.1 Stages of Psychosexual Development

Oral Stage: Birth – 18 months

The first stage of psychosexual development is the oral stage, which lasts from the beginning of one's life up to (about) the 15th month. During this stage, the focus of gratification is on the mouth and pleasure is the result of nursing, but also of exploration of the surroundings (as infants tend to put in their mouths new objects). In this stage the id is dominant, since neither the ego nor the superego is yet fully formed. Thus, the baby does not have a sense of self and all actions are based on the pleasure principle.

The ego, however, is under formation during this first stage. There are two factors that contribute to the formation of the ego. Firstly, body image is developed, which implies that the infant recognizes that the body is distinct from the outer world. For instance, one will start understanding that one feels pain only when force is applied on one's own body. By the identification of the body boundaries, one starts developing the sense of ego. A second factor to which ego formation is attributed is experiences involving delay of gratification and leads to the understanding that specific behaviours can satisfy some needs. The infant gradually realizes that gratification is not immediate and that it has to produce certain behaviours to initiate actions that lead to gratification. An example of such behaviour is crying, which seems to be purposeless during the first 2 months of the baby's life, but later seems to be used productively and is connected to certain needs (Leach 1997). The key experience in this stage is weaning, during which the child loses much of the intimate contact with the mother and leads to the first feeling of loss ever experienced by the baby. Weaning also adds to the baby's awareness of self, since it learns that not everything is under its control, but also that gratification is not always immediate.

In this stage, the gratification of needs will lead to the formation of an independent, since the baby forms a clear idea about the limits of the self and has formed its ego) and trusting, since the baby learned that specific behaviours will lead to gratification and thus to trust its own abilities but also its parent's (and generally social environment) willingness to meet its requirements, personality. On the other hand, a fixation can lead to passivity, immaturity and unrealistic optimism, but also to the formation of a generally manipulative personality, due to improper formation of the ego. This can be the result of either too much or too little gratification. In the case of too much gratification, the child does not learn that not everything is under its control and that gratification is not always immediate (which are the results of weaning), forming an immature personality. On the other hand, the child's needs may be insufficiently met, and thus the child becomes passive since it has learned that either it produces behaviour or not, no gratification will come.

In some societies, it is common for a child to be nursed by its mother for several years, whereas in others the stage is much shorter. Sucking and eating, however, compose the earliest memories for infants in every society. This stage holds special importance because some tribal societies commonly found in the Southwest Pacific and Africa; consider the stomach to be the seat of emotions.

Anal stage: 18 months - 3 years

In the anal stage of the psychosexual development, the focus of drive energy (erogenous zone) moves from the upper digestive tract to the lower end and the anus. This stage lasts from about the 15th month to the third year of age. In this stage, the formation of ego continues. The major experience during this stage is toilet training. This occurs by the age of two (there may be fluctuations among different societies as to the age in which toilet training occurs), and results to conflict between the id, which asks for immediate gratification of its drives that involves elimination and activities related to it (such as handling faeces) and the demands of their parents. The resolution of this conflict can be gradual and non-traumatic, or intense and stormy, depending on the methods the parents will use to handle the situation. The ideal resolution will come if the child tries to adjust, but also the parents are moderate, so that the child will learn the importance of cleanliness and order gradually, which will lead to a self-controlled adult. If the parents emphasize on toilet training too much while the child decides to accommodate, this may lead to the development of compulsive personality, extensively concerned about order and neatness. On the other hand, if the child decides to heed the demands of the id and the parents give in, the child may develop a messy and self-indulgent personality. If the parents react, the child will have to comply, but it will develop a weakened sense of self, since the parents were the ones who controlled the situation, not the ego.

Phallic stage: 3-6 years

The phallic stage extends from about three to five years of age, and the erogenous zone associated with it as the area of the genitals. Even though the gratification is focused on the genitals, this is not in the form of adult sexuality, since the children are yet physically immature. However, stimulation of genitals is welcomed as pleasurable and boys, like adult males, may have erection during their sleep. Children become increasingly aware of their body and are curious about the body of other children, but also their parents', so that very often children of this age can be observed taking off their clothes and playing "the doctor" with each other, but also asking their mother whether she has penis or not. These observations persuaded Freud that the gratification is focused on the genitals this period of time.

The major conflict of this stage is called Oedipal conflict, the name deriving from Oedipus, who killed his father and unintentionally slept with his mother. Freud used the term Oedipal for both sexes, but other analysts proposed that we refer to the female variant as Electra conflict. In the beginning, for both sexes the primary care giver (at least at most societies) and main source of gratification is the mother. As the child develops, however, it starts forming a sexual identity and the dynamics for boys and girls alter. For both sexes, the parents become the focus of

drive energy. For the boy, the mother becomes more desired, while the father is the focus of jealousy and rivalry, since he is the one who sleeps with the mother, but still he is one of the main caregivers. The id wants to unite with the mother and kill the father (like Oedipus did), but the ego, based on the reality principle knows that the father is stronger. The child also feels affectionate towards the father, one of the caregivers, and his feelings are ambivalent. The fear that the father will object to the boy's feelings is expressed by the id as fear that the father will castrate him. The castration fear is not rational, and occurs in a subconscious (irrational) level.

For the girl, it is the father who becomes desired, but the mother promotes greater ambivalence, since she is the primary caregiver and the first object of drive focus for the infant. In this way, the girl feels hostility for the mother due to the demands of the id that she should eliminate her mother and unite with the father, but their ego recognizes that the expression of such feelings would lead to an emotional split with the mother. One major discovery a girl makes at this stage is that she has no penis, just like her mother. While the boy is afraid of losing it, the girl feels devastated for having already lost hers, which leads to feelings of loss and guilt. Freud described that as penis envy. Generally, Freud considered the Oedipal conflict experienced by girls more intense than that experienced by boys, potentially resulting to a submissive and unconfident personality.

In both cases, the conflict between the id drives and the ego is resolved through two basic defense mechanisms of the ego. One of them is repression, which involves the blocking of memories, impulses and ideas from the conscious mind, but does not lead to resolution of the conflict. The second is identification, which involves incorporation of characteristics of the same-sex parent into the child's own ego. The boy by adopting this mechanism seeks for the reduction of castration fears, since his similarity with the father is thought to protect the boy from him. The identification of girls with the mother is easier, since the girl realizes that neither she, nor her mother have a penis. Freud's theory regarding the psychosexual dynamic present in female children in this point of their psychosexual development is termed, though not by Freud himself, the Electra complex. Freud's theory of feminine sexuality, particularly penis envy, has been sharply criticized in both gender and feminist theory.

If the conflict is not resolved, a fixation in this stage may lead to adult women striving for superiority over men, if she had overwhelming feelings of devastation due to lack of penis, being seductive and flirtatious, or very submissive and with low self-esteem. On the other hand, men can exhibit excessive ambition and vanity. Overall, the Oedipal conflict is very important for the super ego development, since by identifying with one of the parents, morality becomes internalized, and compliance with rules is not any more the result of punishment fear. A poor identification with the opposite sex parent may lead to recklessness or even immorality.

Latency Stage: 6 years to puberty

The latency period is typified by a solidifying of the habits that the child developed in the earlier stages. Whether the Oedipal conflict is

successfully resolved or not, the drives of the id are not accessible to the ego during this stage of development, since they have been repressed during the phallic stage. Hence, the drives are seen as dormant and hidden (latent), and the gratification the child receives is not as immediate as it was during the three previous stages. Now pleasure is mostly related to secondary process thinking. Drive energy is redirected to new activities, mainly related to schooling, hobbies and friends. Problems however might occur during this stage, and this is attributed to inadequate repression of the Oedipal conflict, or to the inability of the ego to redirect the drive energy to activities accepted by the social environment.

Genital Phase: from 12 years onwards

The fifth and last stage of psychosexual development, the genital stage, starts from puberty, about the twelfth year of age, and onwards. It actually continues until development stops, which is ideally in the eighteenth year of age, when adulthood starts. This stage represents the major portion of life, and the basic task for the individual is the detachment from the parents. It is also the time when the individual tries to come in terms with unresolved residues of the early childhood. At this stage, the focus is again on the genitals, like in the phallic stage, but this time the energy is expressed with adult sexuality. Another crucial difference between these two stages is that, while in the phallic gratification is linked with satisfaction of the primary drives, while the ego in the genital stage is well-developed, and so uses secondary process thinking, which allows symbolic gratification. The symbolic gratification may include the formation of love relationships and families, or acceptance of responsibilities associated with adulthood.

4.1.2 Fixation

Fixation A strong attachment to an object.

A **fixation** occurs when an issue or conflict in a psychosexual stage remains unresolved, leaving the individual focused on this stage and unable to move onto the next. Individuals with an oral fixation may have problems with drinking, smoking, eating or nail biting. Strong conflict can fixate people at early stages. This could be in form of:

- a) Oral fixation
- b) Anal fixation; and
- c) Phallic fixation.

Oral Fixation

The Oral receptive personality is preoccupied with eating/drinking. This has two possible outcomes. The Oral receptive personality is preoccupied with eating/drinking and reduces tension through oral activity such as eating, drinking, smoking, biting nails. They are generally passive, needy and sensitive to rejection. They will easily 'swallow' other people's ideas. Secondly, the Oral aggressive personality is hostile and verbally abusive to others, using mouth-based aggression.



Anal fixation

This may be caused by too much punishment during toilet training, it has two possible outcomes. The Anal retentive personality is stingy, with a compulsive seeking of order and tidiness. The person is generally stubborn and perfectionist. *The anal expulsive personality is an opposite of the anal retentive personality*, and has a lack of self control, being generally messy and careless.

Phallic fixation

At the age of 5 or 6, near the end of the phallic stage, boys experience the Oedipus complex whilst girls experience the Electra conflict, which is a process through which they learn to identify with the same gender parent by acting as much like that parent as possible. Boys suffer a castration anxiety, where the son believes his father knows about his desire for his mother and hence fears his father will castrate him. He thus represses his desire and defensively identifies with his father. Girls suffer a penis envy, where the daughter is initially attached to her mother, but then a shift of attachment occurs when she realizes she lacks a penis. She desires her father whom she sees as a means to obtain a penis substitute (a child). She then represses her desire for her father and incorporates the values of her mother and accepts her inherent 'inferiority' in society.

4.1.3 Criticisms of Sigmund Freud's Theory

Freud has been criticized by feminists and gender theory practitioners for being androcentric. *His theory failed to explain female sexual development*. Secondly, over the years, there have been many accusations against the scientific value of the psychodynamic perspective. Even when it would be in the best interests of organized psychoanalysis to cite favourable empirical evidence, it has failed to do so. Even so, psychoanalytic thought has proven to be surprisingly heuristic and has probably generated more research than any other theory of personality, and perhaps more than all other theories combined. For example, Segall et al. (1999) hypothesized that Freud's theory was based on a misinterpretation of a confounding variable. Also, a survey of scientific research showed that while personality traits corresponding to Freud's oral, anal, Oedipal, and genital phases can be observed, they cannot be observed as stages in the development of children, nor can it be confirmed that such traits in adults result from childhood experiences (Fisher & Greenberg, 1977, p. 399).

4.2 Psychosocial Development Theory of Erickson



Erikson

Erik Erikson, (1950) a follower of Freud's, synthesized both Freud's and his own to create what is known as the "Psychosocial" stages of human development, which spans from birth to death, and focuses on "tasks" at each stage that must be accomplished to successfully navigate life's challenges. Erik Erikson's theory of psychosocial development is one of the best-known theories of personality in psychology. Much like Sigmund Freud, Erickson believed that personality develops in a series of stages. Unlike Freud's theory of psychosexual stages, Erickson's theory describes the impact of social experience across the whole lifespan.

One of the main elements of Erickson's psychosocial stage theory is the development of ego identity. Ego identity is the conscious sense of self that we develop through social interaction. According to Erickson, our ego identity is constantly changing due to new experience and information we acquire in our daily interactions with others. In addition to ego identity, Erickson also believed that a sense of competence also motivates behaviours and actions. Each stage in Erickson's theory is concerned with becoming competent in an area of life. If the stage is handled well, the person will feel a sense of mastery. If the stage is managed poorly, the person will emerge with a sense of inadequacy.

In each stage, Erickson believed people experience a conflict that serves as a turning point in development. In Erickson's view, these conflicts are centred on either developing a psychological quality or failing to develop that quality. During these times, the potential for personal growth is high, but so is the potential for failure.

4.2.1 Stages of Psychosocial Development

Trust vs. Mistrust (Birth -18months) Infancy

Developing trust is the first task of the ego, and it is never complete. The child will let his/her mother out of sight without anxiety and rage because she has become an inner certainty as well as an outer predictability. But when a mother is not present, the father becomes the inner certainty along with other relatives usually surrounding the child daily. The balance of trust with mistrust depends largely on the quality of the maternal relationship.

- Main question asked: Is my environment trustworthy or not?
- Central Task: Receiving care
- Positive Outcome: Trust in people and the environment
- Ego Quality: Hope
- Definition: Enduring belief that one can attain one's deep and essential wishes
- Developmental Task: Social attachment; maturation of sensory, perceptual, and motor.
- Significant Relations: Maternal parent.

Erickson (1950) proposed that the concept of trust versus mistrust is present throughout an individual's entire life. Therefore, if the concept is not addressed, taught and handled properly during infancy (when it is first introduced), the individual may be negatively affected and never fully immerse themselves in the world. For example, people may hide themselves from the outside world and be unable to form healthy and long-lasting relationships with others, or even themselves. If individuals do not learn to trust themselves, others and the world around them then they may lose the virtue of hope, which is directly linked to this concept. If people lose their belief in hope they will struggle with overcoming hard times and failures in their lives, and may never fully recover from them. This would prevent them from learning and maturing into a fully-developed person if the concept of trust versus mistrust was improperly learned, understood and used in all aspects of their lives.

Autonomy vs. Shame & Doubt (1 1/2 - 3 Years) Toddler

If denied independence, the child will turn against his/her urges to manipulate and discriminate. Shame develops with the child's self-consciousness. Doubt has to do with having a front and back -- a "behind" subject to its own rules. Left over doubt may become paranoia. The sense of autonomy fostered in the child and modified as life progresses serves the preservation in economic and political life of a sense of justice. The main question asked at this stage is: Do I need help from others or not?

When a child reaches the age of one to the age of three, Erickson explains, the child is developing a sense of autonomy. During this age, the toddler discovers he/she is no longer attached to the primary caregiver but is a separate individual (Gonzalez-Mena & Eyer, 2004). Autonomy is the independence a toddler strives for from caregivers. Toddlers' autonomous behaviour is a way of forming their own identity away from their caregivers (Bigner, 2006). This stage is a time when a toddler has the "will" to become independent. Shame and doubt is likely to occur when the toddler is not given any choice or boundary because the toddler is determined to become independent. The strong will of a toddler may cause conflict between child and caregiver. Many parents are unaware of how to properly handle difficult situations in which they find themselves. Parents who are assertive and too demanding may find themselves in a power struggle with their toddler (Gonzalez-Mena & Eyer, 2006). In addition, parents may be too demanding for only "good" behaviour from their toddler. Gonzalez-Mena and Eyer (2004) explain that demanding good behaviour will only cause frustration for the toddler; instead, "it is far better for the child to see you as a support and an aid rather than being an obstacle to his or her own developing capabilities and independence." Autonomy can be gained for the toddler when given reasonable choices and proper guidance from the caregiver. Parents can give healthy and wise choices to assist their child to succeed at this stage.

Initiative vs. Guilt (3-6 Years) Play Age

Initiative adds to autonomy the quality of undertaking, planning, and attacking a task for the sake of being active and on the move. The child is learning to master the world around him or her, learning basic skills and

principles of physics; things fall to the ground, not up; round things roll, how to zip and tie, count and speak with ease. At this stage, the child wants to begin and complete his or her own actions for a purpose. Guilt is a new emotion and is confusing to the child; he or she may feel guilty over things which are not logically guilt producing and he or she will feel guilty when his or her initiative does not produce the desired results. The main question asked at this stage is: How moral am I?

The development of courage and independence are what set preschoolers, ages three to six years of age, apart from other age groups. Young children in this category, ranging between three to six years of age, face the challenge of initiative versus guilt (Boer, 1997). As described in Bee and Boyd (2004), the child during this stage faces the complexities of planning and developing a sense of judgment. During this stage, the child learns to take initiative and prepare him or herself towards roles of leadership and goal achievement. Activities sought out by a child at this stage may include risk-taking behaviours, such as crossing a street on his or her own or riding a bike without a helmet; both examples involving self-limits. The child defines his or her own boundaries when taking initiative in crossing a street or riding a bike with no helmet, such as deciding to cross a street without looking both ways or choosing to ride a bike at his or her own pace with no helmet. Within instances requiring initiative, such as those previously mentioned, the child may also develop negative behaviours. These behaviours are a result of the child developing a sense of frustration for not being able to achieve his or her goal as planned and may engage in behaviours that seem aggressive, ruthless, and overly assertive to parents; aggressive behaviours, such as throwing objects, hitting, or yelling, are examples of observable behaviours during this stage. With aggressive behaviours as a result of frustration, the child may progress towards developing a sense of guilt for not establishing initiative in the decisions he or she makes and/or not being able to follow through with a set goal. When guilt develops, the child becomes more assertive, aggressive, inhibited, and overly dependent. These characteristics can be seen from the norm since the child engages in behaviours that do not show a challenge and/or are comfortable for the child; thus, the child does not take on new situations unless assisted by an adult. In concordance with guilt, parents often misjudge the situation and punish or restrict the child too much. However, children at this stage require some sense of guilt in order to guide their self-control and a healthy conscience (Bee and Boyd, 2004).

In view of the fact that preschool children require skills necessary to become independent and responsible, parents and/or teachers should learn how to assist in the child's social development; this may include teaching the child how to be courageous, empathetic, self-disciplined, and loyal. Fittro (2003) suggests several ideas on how to create these types of values during a child's moral development. Parents should be realistic in their expectations and be firm. In order to promote a safe balance between initiative and guilt, parents must provide the child with achievable responsibility. They also need to remind themselves that the child is a human being and deserves to be treated with fairness in order to develop a positive self-concept. At this stage, parents have the advantage of teaching good morality through discussion and example. By illustrating

and discussing how to tolerate guilt, such as feelings of low self-efficacy, self-esteem, or self-confidence after taking initiative in accomplishing a goal, the child will learn that this type of behaviour is acceptable. If the child is not given the opportunity to discuss how to accept these feelings that accompany guilt or if the child is simply dealing with guilt reactions, then several questions may arise, such as "Can I do this?," and "How moral am I?". Consistent with these ideas, the Mohonasen Central School District Board of Education (2005) suggests letting children take on small tasks that gradually increase in difficulty as they grow older. This may include helping prepare small meals, setting a table, or letting them choose their own clothing for the day; all of which builds confidence and assists in developing simple math skills (e.g. counting and sorting). Parents and/or teachers should remember that children in this stage of Erickson's psychosocial development need and deserve a time to be free. The Child Development Institute LLC (1998) suggests that a child with no responsibility, whether given by an adult or produced by the child, grows fearful in most situations involving change, excessively depends on adults, and is restricted from imagination and active play; these characteristics are a result of the child being immobilized by guilt (i.e. low feelings of self-efficacy, confidence, frustration and inabilities when a personal goal has not been accomplished).

Industry vs. Inferiority (7-12 Years) School Age

To bring a productive situation to completion is an aim which gradually supersedes the whims and wishes of play. The fundamentals of technology are developed. Main question asked at this stage: Am I good at what I do? According to Allen and Marotz (2003), "children at this age are becoming more aware of themselves as individuals." They work hard at "being responsible, being good and doing it right." They are now more reasonable to share and cooperate. Allen and Marotz (2003) also list some perceptual cognitive developmental traits specific for this age group: children understand the concepts of space and time, in more logical, practical ways, beginning to grasp Piaget's concept of conservation, gain better understanding of cause and effect and understand calendar time. At this stage, children are eager to learn and accomplish more complex skills: reading, writing, telling time. They also get to form moral values, recognize cultural and individual differences and are able to manage most of their personal need and grooming with minimal assistance (Allen and Marotz, 2003). At this stage, children might express their independence by being disobedient, using back talk and being rebellious. Children at this stage have to learn the feeling of success. If the child is allowed too little success, he or she will develop a sense of inferiority or incompetence. Too much industry leads to narrow virtuosity (children who are not allowed to be children). A balance between industry and inferiority leads to competency. According to Robert Brooks (2001) parents can nurture self esteem and resilience in different ways. These include understanding and accepting children's learning problems (highlight strengths), teaching children how to solve problems and make decisions, reinforcing responsibility by having children contribute, learning from, rather than feeling defeated by mistakes and making the child feel special (create special times alone with them).

Identity vs. Role Confusion (12-18 Years) Adolescence

The adolescent is newly concerned with how he or she appears to others. Superego identity is the accrued confidence that the outer sameness and continuity prepared in the future are matched by the sameness and continuity of one's meaning for oneself, as evidenced in the promise of a career. The ability to settle in a school or occupational identity is pleasant. In the later stages of Adolescence, the child develops a sense of sexual identity.

Intimacy vs. Isolation (19-40 years) Young Adulthood

According to Erik, the young adult stage, intimacy vs. isolation, is emphasized around the ages of 19 to 34. At the start of the intimacy vs. isolation stage, identity vs. role confusion is coming to an end and it still lingers at the foundation of the stage (Erikson 1950). Young adults are still eager to blend their identities with friends. They want to fit in. When we arrive at stage six, we should be prepared for intimacy, a close personal relationship, and isolation, the fact of being alone and separated from others. A balance between intimacy and isolation makes love possible as we must know how to be alone in order to learn to truly love. Having a balanced stage 6 will help tremendously later in the coming stages when unwelcome or unexpected isolation surfaces, for example, the death of a spouse or a loved one (Erikson, Erikson, Kivnick 1986). In stage six, one is ready for commitments, is able to handle real relationships to a certain extent (Erikson 1950), after all, establishing a real relationship takes practice and many of us do not marry our first love. Our ego should also be prepared for rejection, the challenge of break-ups, and isolation, being alone. Erickson believes we are sometimes isolated due to the above. We are afraid of rejection; being turned down, our partners breaking up with us. We are familiar with pain and to some of us rejection is painful, our egos cannot bear the pain. Erickson also argues that "Intimacy has a counterpart, distantiation: the readiness to isolate and if necessary, to destroy those forces and people whose essence seems dangerous to our own, and whose territory seems to encroach on the extent of one's intimate relations".

Generativity vs. Stagnation (40-65 Years) Middle Adulthood

Generativity is the concern of establishing and guiding the next generation. Socially-valued work and disciplines are expressions of generativity. Simply having or wanting children does not in and of itself achieve generativity.

Integrity vs. Despair (from 65 years) Late Adulthood

The strength of Erickson's theory is that it acknowledges that development continues throughout the life cycle. According to Erickson, even older people have not yet finished developing. Older people who are coming to terms with their own mortality have a deep need to look over their whole lives. A person, who can look back on good times with gladness, on hard times with self-respect, and on mistakes and regrets with forgiveness, will find a new sense of integrity and a readiness for whatever life or death may bring. A person caught up in old sadness, unable to forgive themselves or others for perceived wrongs, and dissatisfied with the life they have led, will easily drift into depression

and despair. The fundamental question is, "What kind of life have I lived?"

A positive outcome of this crisis is achieved if the individual gains a sense of fulfillment about life and a sense of unity within himself and with others. That way, he can accept death with a sense of integrity. Just as a healthy child will not fear life, the healthy adult will not fear death. A negative outcome of this crisis causes the individual to despair and fear death.

Study Session Summary



Summary

In this Study Session, you learnt that personality is the unique way in which each person deals with the world, expresses emotions, and so on. Social development includes relationships with others. It affects both the cognitive and the physical aspects of functioning. Sigmund Freud's psychosexual stages of development include oral, anal, phallic, latency and genital stages. You also learn psychosocial development as proposed by Erik Erickson. Erik's theory describes eight developmental stages through which a healthily developing human should pass from infancy to late adulthood. In each stage the person confronts, and hopefully masters new challenges.

Assessment



Assessment

Required

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Study Session 5

Cognitive Development

Introduction

Changes in mental abilities – such as learning, memory, reasoning, thinking, and language – are aspects of intellectual development. Cognitive development involves changes in cognitive process and abilities. These changes are closely related to both motor and emotional development. In this Study Session, we will explore the conclusions of Jean Piaget on cognitive development. Piaget’s stage theory describes the cognitive development of children.

Learning Outcomes

When you have studied this session, you should be able to:

- 5.1 explain cognitive development;
- 5.2 mention the different stages of Piaget’s cognitive development;
- 5.3 discuss the relevance of the theory to everyday life; and
- 5.4 give two of the criticisms of the theory.



5.1 Jean Piaget’s (1952) Theory of Cognitive Development



Jean Piaget was born in Switzerland in 1896. He developed an interest in the intellectual development of children. Based upon his observations, he concluded that children were not less intelligent than adults, they simply think differently.

5.1.1 Key Concepts

Schemas

A schema describes both the mental and physical actions involved in understanding and knowing. Schemas are categories of knowledge that help us to interpret and understand the world. In Piaget’s view, a schema includes both a category of knowledge and the process of obtaining that knowledge. As experiences happen, this new information is used to modify, add to, or change previously existing schemas. For example, a child may have a schema about a type of animal, such as a dog. If the child’s sole experience

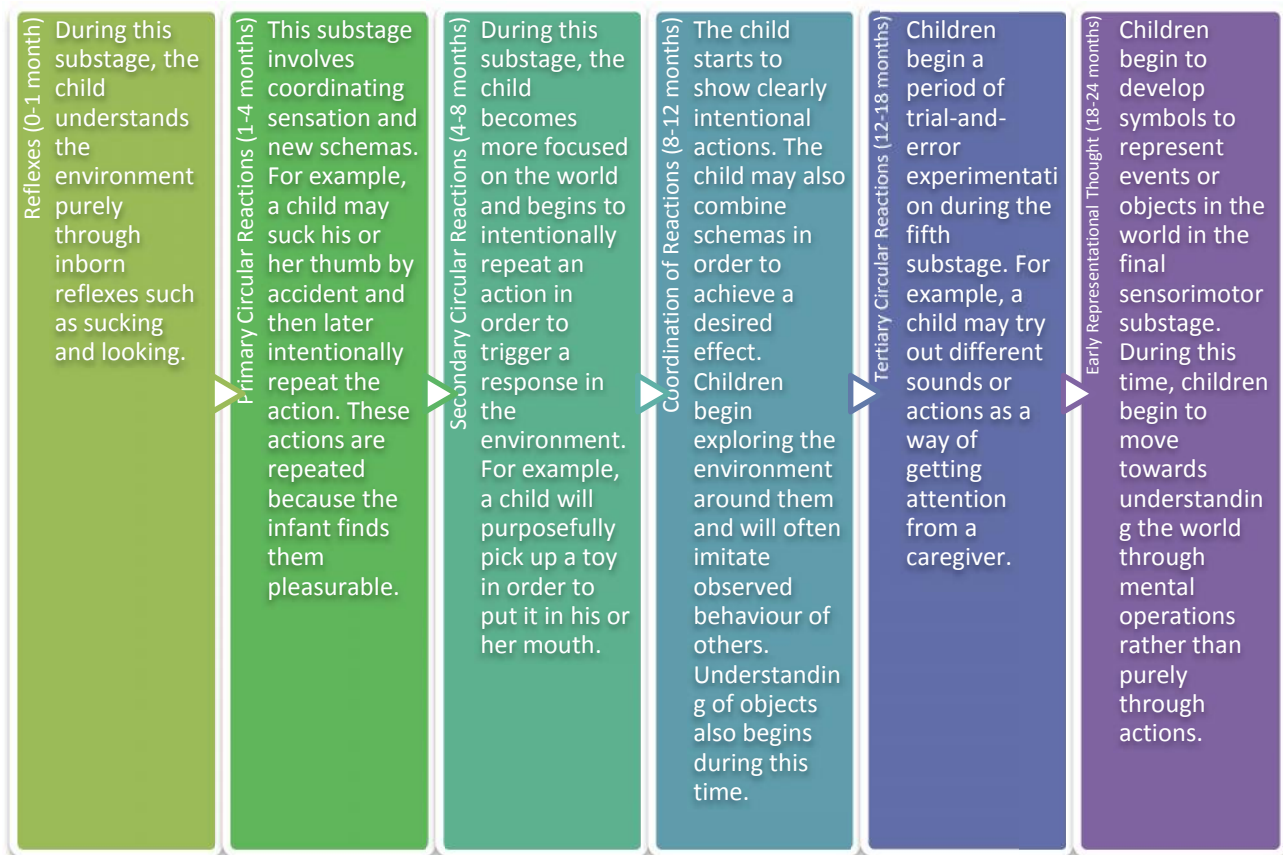
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| | has been with small dogs, a child might believe that all dogs are small, furry, and have four legs. Suppose then that the child encounters a very large dog. The child will take in this new information, modifying the previously existing schema to include this new information. |
| Assimilation | The process of taking in new information into our previously existing schema's is known as assimilation. The process is somewhat subjective, because we tend to modify experience or information somewhat to fit in with our preexisting beliefs. In the example above, seeing a dog and labeling it "dog" is an example of assimilating the animal into the child's dog schema. |
| Accommodation | Another part of adaptation involves changing or altering our existing schemas in light of new information, a process known as accommodation. Accommodation involves altering existing schemas, or ideas, as a result of new information or new experiences. New schemas may also be developed during this process. |
| Equilibration | Piaget believed that all children try to strike a balance between assimilation and accommodation, which is achieved through a mechanism Piaget called equilibration. As children progress through the stages of cognitive development, it is important to maintain a balance between applying previous knowledge (assimilation) and changing behaviour to account for new knowledge (accommodation). Equilibration helps explain how children are able to move from one stage of thought into the next. |

5.1.2 Stages of Development

Sensorimotor Stage: birth – 2 years

The first stage of Piaget's theory lasts from birth to approximately age two and is centered on the infant trying to make sense of the world. During the sensorimotor stage, an infant's knowledge of the world is limited to their sensory perceptions and motor activities. Behaviours are limited to simple motor responses caused by sensory stimuli. Children utilize skills and abilities they were born with, such as looking, sucking, grasping, and listening, to learn more about the environment.

Substages of the Sensorimotor Stage: The sensorimotor stage can be divided into six separate substages that are characterized by the development of a new skill.



Preoperational Stage: 2 – 6years

The preoperational stage occurs between ages two and six. Language development is one of the hallmarks of this period. Piaget noted that children in this stage do not yet understand concrete logic, cannot mentally manipulate information, and are unable to take the point of view of other people, which he termed egocentrism. During the preoperational stage, children also become increasingly adept at using symbols, as evidenced by the increase in playing and pretending. For example, a child is able to use an object to represent something else, such as pretending a broom is a horse. Role playing also becomes important during the preoperational stage. Children often play the roles of "mommy," "daddy," "doctor," and many others.

Egocentrism: According to Piaget, children experience this difficulty because they are unable to take on another person's perspective. Piaget used a number of creative and clever techniques to study the mental abilities of children. One of the famous egocentrism techniques involved using a three-dimensional display of a mountain scene. Children are asked to choose a picture that showed the scene they had observed. Most children are able to do this with little difficulty. Next, children are asked to select a picture showing what someone else would have observed when looking at the mountain from a different viewpoint. Invariably, children almost always choose the scene showing their own view of the mountain

scene. This is because children are not able to view things from other people's point of view.

Conservation: This involves a child's understanding of conservation. In one conservation experiment, equal amounts of liquid are poured into two identical containers. The liquid in one container is then poured into a different shaped cup, such as a tall and thin cup, or a short and wide cup. Children are then asked which cup holds the most liquid. Despite seeing that the liquid amounts were equal, children almost always choose the cup that appears fuller. Piaget conducted a number of similar experiments on conservation of number, length, mass, weight, volume, and quantity. Piaget found that few children showed any understanding of conservation prior to the age of five.

Concrete Operations Stage: 7 – 11 years

The concrete operational stage begins around age seven and continues until approximately age eleven. During this time, children gain a better understanding of mental operations. Children begin thinking logically about concrete events, but have difficulty understanding abstract or hypothetical concepts.

Logic: Piaget determined that children in the concrete operational stage were fairly good at the use of inductive logic. Inductive logic involves going from a specific experience to a general principle. On the other hand, children at this age have difficulty using deductive logic, which involves using a general principle to determine the outcome of a specific event.

Reversibility: One of the most important developments at this stage is an understanding of reversibility, or awareness that actions can be reversed. An example of this is being able to reverse the order of relationships between mental categories. For example, a child might be able to recognize that his or her dog is a Labrador, that a Labrador is a dog, and that a dog is an animal.

Formal Operational Stage: 12 years -adulthood

The formal operational stage begins at approximately age twelve and lasts into adulthood. During this time, people develop the ability to think about abstract concepts. Skills such as logical thought, deductive reasoning, and systematic planning also emerge during this stage.

Logic: Piaget believed that deductive logic becomes important during the formal operational stage. Deductive logic requires the ability to use a general principle to determine a specific outcome. This type of thinking involves hypothetical situations and is often required in science and mathematics.

Abstract Thought: While children tend to think very concretely and specifically at earlier stages, the ability to think about abstract concepts emerges during the formal operational stage. Instead of relying solely on previous experiences, children begin to consider possible outcomes and consequences of actions. This type of thinking is important in long-term planning.

Problem-Solving: During the formal operational stage, the ability to systematically solve a problem in a logical and methodical way emerges. In earlier stages, children used trial-and-error to solve problems. Children at the formal operational stage of cognitive development are often able to quickly plan an organized approach to solving a problem.

5.1.3 Criticisms of Piaget’s Theory of Cognitive Development

Much of the criticism of Piaget's work is in regards to his research methods. A major source of inspiration for the theory was Piaget's observations of his own three children. In addition to this, the other children in Piaget's small research sample were all from well-educated professionals of high socio-economic status. Because of this unrepresentative sample, it is difficult to generalize his findings to a larger population. Research has disputed Piaget's argument that all children will automatically move to the next stage of development as they mature. Some data suggests that environmental factors may play a role in the development of formal operations. Most researchers agree that children possess many of the abilities at an earlier age than Piaget suspected. Recent research on theory of mind has found that children of 4- or 5-years old have a rather sophisticated understanding of their own mental processes as well as those of other people. For example, children of this age have some ability to take the perspective of another person, meaning they are far less egocentric than Piaget believed. While there are few strict Piagetians, most can appreciate Piaget's influence and legacy. His work generated interest in child development and had an enormous impact on the future of education and developmental psychology.

Study Session Summary



Summary

In this Study Session, you learnt that Piaget was a theorist who posited that children learn through actively constructing knowledge through hands-on experience. He suggested that the adult's role in helping the child learn was to provide appropriate materials for the child to interact and construct.

Assessment



Assessment

Required

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Study Session 6

Learning Theories

Introduction

Learning theories focus on how the environment impacts behaviour. In this Study Session, we will discuss how behaviour is shaped by the interaction between the individual and the environment. Important learning processes which we will examine in this session include classical conditioning, operant conditioning, and social learning.

Learning Outcomes

When you have studied this session, you should be able to:

- 6.1 explain classical conditioning.
- 6.2 outline operant conditioning.
- 6.3 define and use correctly the following bold terms:
 - observational learning
 - intrinsic reinforcement
 - process
 - attention
 - retention
 - reproduction
 - motivation



6.1 Classical Conditioning

Environmental stimulus Events or occurrences in the environment of an organism that influence its behaviour.

Naturally occurring stimulus In classical conditioning, the unconditioned response is the unlearned response that occurs naturally in response to an unconditioned stimulus

One of the best-known aspects of behavioural learning theory is classical conditioning. Discovered by Russian physiologist Ivan Pavlov, classical conditioning is a learning process that occurs through associations between an **environmental stimulus** and a **naturally occurring stimulus**. Classical conditioning can be used to increase the amount of behaviour, but it can also be used to decrease behaviour. In order to understand how classical conditioning works, it is important to be familiar with the basic principles of the process.

The unconditioned stimulus is one that unconditionally, naturally, and automatically triggers a response. For example, when you smell one of your favourite foods, you may immediately feel very hungry. In this example, the smell of the food is the unconditioned stimulus. The unconditioned response is the unlearned response that occurs naturally in response to the unconditioned stimulus. In our example, the feeling of

hunger in response to the smell of food is the unconditioned response.

The conditioned stimulus is previously neutral stimulus that, after becoming associated with the unconditioned stimulus, eventually comes to trigger a conditioned response. In our earlier example, suppose that when you smelled your favourite food, you also heard the sound of a whistle. While the whistle is unrelated to the smell of the food, if the sound of the whistle was paired multiple times with the smell, the sound would eventually trigger the conditioned response. In this case, the sound of the whistle is the conditioned stimulus.

The conditioned response is the learned response to the previously neutral stimulus. In our example, the conditioned response would be feeling hungry when you heard the sound of the whistle.

6.1.1 Classical Conditioning in the Real World

In reality, people do not respond exactly like Pavlov's dogs. There are, however, numerous real-world applications for classical conditioning. Many dog trainers use classical conditioning techniques to help people train their pets. These techniques are also useful in the treatment of phobias or anxiety problems. Teachers are able to apply classical conditioning in the class by creating a positive classroom environment to help students overcome anxiety or fear. Pairing an anxiety-provoking situation, such as performing in front of a group, with pleasant surroundings helps the student learn new associations. Instead of feeling anxious and tense in these situations, the child will learn to stay relaxed and calm.

6.2 Operant Conditioning

Reinforcer A stimulus that strengthens or weakens the behaviour that produced it.

Operant conditioning (sometimes referred to as instrumental conditioning) is a method of learning that occurs through rewards and punishments for behaviour. Through operant conditioning, an association is made between a behaviour and a consequence for that behaviour. We can find examples of operant conditioning at work all around us, such as children completing homework to earn a reward from a parent or teacher or employees finishing projects to receive praise or promotions. In these examples, the promise or possibility of rewards causes an increase in behaviour, but operant conditioning can also be used to decrease a behaviour. The removal of an undesirable outcome or the use of punishment can be used to decrease or prevent undesirable behaviours. For example, a child may be told they will lose recess privileges if they talk out of turn in class. This potential for punishment may lead to a decrease in disruptive behaviours. Some key concepts in operant conditioning: A **reinforcer** is any event that strengthens or increases the behaviour it follows. There are two kinds of reinforcers: Positive reinforcers are favorable events or outcomes that are presented after the behaviour. Negative reinforcers involve the removal of an unfavourable events or outcomes after the display of a behaviour. In both of these cases of reinforcement, the behaviour increases. Punishment is the presentation of an adverse event or outcome that causes a decrease in the behaviour it

follows. There are two kinds of punishment: Positive punishment involves the presentation of an unfavourable event or outcome in order to weaken the response it follows. Negative punishment occurs when a favourable event or outcome is removed after a behaviour occurs. In both of these cases of punishment, the behaviour decreases.

6.3 Social Learning Theory

“Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behaviour is learned observationally through modeling: from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action.”

–Albert Bandura, Social Learning Theory, 1977

The social learning theory proposed by Albert Bandura has become perhaps the most influential theory of learning and development. While rooted in many of the basic concepts of traditional learning theory, Bandura believed that direct reinforcement could not account for all types of learning. His theory added a social element, arguing that people can learn new information and behaviours by watching other people. Known as observational learning (or modeling), this type of learning can be used to explain a wide variety of behaviours.

6.3.1 Basic Social Learning Concepts

Observational Learning

People can learn through observation. In his famous “Bobo doll” studies, Bandura demonstrated that children learn and imitate behaviours they have observed in other people. The children in Bandura’s studies observed an adult acting violently toward a Bobo doll. When the children were later allowed to play in a room with the Bobo doll, they began to imitate the aggressive actions they had previously observed.

Bandura identified three basic models of observational learning:

- a) A live model, which involves an actual individual demonstrating or acting out a behaviour.
- b) A verbal instructional model, which involves descriptions and explanations of a behaviour
- c) A symbolic model, which involves real or fictional characters displaying behaviours in books, films, television programs, or online media.

Intrinsic Reinforcement

Mental states are important to learning. Bandura noted that external, environmental reinforcement was not the only factor to influence learning and behaviour. He described intrinsic reinforcement as a form of internal reward, such as pride, satisfaction, and a sense of accomplishment. This emphasis on internal thoughts and cognitions helps connect learning



theories to cognitive developmental theories. While many textbooks place social learning theory with behavioural theories, Bandura himself describes his approach as a ‘social cognitive theory.’

Learning Does not Necessarily Lead to a Change in Behaviour. While behaviourists believed that learning led to a permanent change in behaviour, observational learning demonstrates that people can learn new information without demonstrating new behaviours.

Process

Not all observed behaviours are effectively learned. Factors involving both the model and the learner can play a role in whether social learning is successful. Certain requirements and steps must also be followed. Attention, Retention, Reproduction and Motivation are involved in the observational learning and modeling process.

Attention

In order to learn, you need to be paying attention. Anything that detracts your attention is going to have a negative effect on observational learning. If the model interesting or there is a novel aspect to the situation, you are far more likely to dedicate your full attention to learning.

Retention

The ability to store information is also an important part of the learning process. Retention can be affected by a number of factors, but the ability to pull up information later and act on it is vital to observational learning.

Reproduction

Once you have paid attention to the model and retained the information, it is time to actually perform the behaviour you observed. Further practice of the learned behaviour leads to improvement and skill advancement.

Motivation

Finally, in order for observational learning to be successful, you have to be motivated to imitate the behaviour that has been modeled. Reinforcement and punishment play an important role in motivation.

Study Session Summary



Summary

In this Study Session, we examined the learning theories which focus on how the environment impacts behaviour. The important learning processes include classical conditioning, operant conditioning, and social learning. In each case, behaviour is shaped by the interaction between the individual and the environment.

Assessment



Assessment

Required

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Study Session 7

Attachment Theory

Introduction

In this Study Session, you will examine attachment theory. This is a psychological, evolutionary and ethological theory that provides a descriptive and explanatory framework for discussion of interpersonal relationships between human beings.

Learning Outcomes

When you have studied this session, you should be able to:

- 7.1 highlight the characteristics of attachment.
- 7.2 outline how infants form attachment.
- 7.3 discuss the attachment styles in human development.



7.1 The Meaning of Attachment

Attachment an enduring emotional bond between people.

Attachment in infants is primarily a process of “proximity seeking” to an identified attachment figure in situations of perceived distress or alarm. Infants become attached to adults who are sensitive and responsive in social interactions with the infant, and who remain as consistent caregivers for some months during the period from about 6 months to two years of age. Parental responses lead to the development of patterns of attachment which in turn lead to 'internal working models' which will guide the individual's feelings, thoughts, and expectations in later relationships.

7.2 Bolby's Attachment Theory

Attachment theory was developed by Bowlby as a consequence of his dissatisfaction with existing theories of early relationships. He explored a range of fields including evolution by natural selection, object relations theory (psychoanalysis), control systems theory, evolutionary biology and the fields of ethology and cognitive psychology, in order to formulate a comprehensive theory of the nature of early attachments (Cassidy 1999). Attachment theory has become the dominant approach to understanding early social development and given rise to a great surge of empirical research into the formation of children's close relationships (Schaffer, 2007). There have been significant modifications as a result of empirical research but attachment concepts have become generally accepted

(Rutter, 1995). More recent criticism relates to the complexity of social relationships within family settings, and the limitations of discrete styles for classifications.

In Bowlby's approach, the human infant is considered to have a need for a secure relationship with adult caregivers, without which normal social and emotional development will not occur. Children subsequently learn to use attachment figures as a secure base to explore from and return to.

Bowlby believed that there are four distinguishing characteristics of attachment:

- Proximity Maintenance - The desire to be near the people we are attached to;
- Safe Haven - Returning to the attachment figure for comfort and safety in the face of a fear or threat;
- Secure Base - The attachment figure acts as a base of security from which the child can explore the surrounding environment; and
- Separation Distress - Anxiety that occurs in the absence of the attachment figure.

In addition to care-seeking by children, attachment behaviours include peer relationships of all ages, romantic and sexual attraction, and responses to the care needs of infants or sick or elderly adults. However, different relationship experiences can lead to different developmental outcomes. Researchers have developed various ways of assessing attachment in children, including the Strange Situation Protocol developed by Mary Ainsworth and story-based approaches such as Attachment Story Completion Test. Mary Ainsworth developed a theory of a number of attachment styles in infants in which distinct characteristics have been identified known as secure attachment, avoidant attachment, anxious attachment and, later Main and Solomon (1986) added a fourth attachment style known as disorganized-insecure attachment.

7.3 Styles of Attachment

7.3.1 Secure Attachment

The attachment figure responds appropriately, promptly and consistently to the emotional as well as the physical needs of the child. She helps her child to transit and regulate stress, and as a result, the child uses her as a secure base in the home environment. The child protests the mother's departure and quiets promptly on the mother's return, accepting comfort from her and returning to exploration.

7.3.2 Avoidant Attachment

The attachment figure shows little response to the child when distressed. She discourages her child from crying and encourages independence and exploration. The avoidantly attached child may have lower quality play than the securely attached child. The child shows little to no signs of

distress at the mother's departure, a willingness to explore the toys, and little to no visible response to the mother's return.

7.3.3 Ambivalent Attachment

The ambivalently attached child is vulnerable to difficulty coping with life stresses and may display role reversal with the mother. The child presents stereotypes upon the mother's return after separation, such as freezing for several seconds or rocking. This appears to indicate the child's lack of coherent coping strategy. Children who are classified as disorganized are also given a classification as secure, ambivalent or avoidant based on their overall reunion behaviour. The child shows sadness on the mother's departure, ability to be picked up by the stranger and even be 'warm' to the stranger, and on the mother's return, some ambivalence, signs of anger, reluctance to 'warm' to her and return to play.

7.3.4 Disorganized Attachment

This can be associated with frightened/disoriented behaviour, intrusiveness/negativity and withdrawal, role/boundary confusion, affective communication errors and child maltreatment. The attachment figure is inconsistent with her child; she may at some times be appropriate and at other times neglectful to the child. The child raised in an ambivalent relationship becomes preoccupied with the mother's availability and cannot explore his environment freely or use his mother as a secure base.

Study Session Summary



Summary

In this Study Session, we noted that attachment is a special emotional relationship that involves an exchange of comfort, care, and pleasure. John Bowlby devoted extensive research to the concept of attachment, describing it as a "lasting psychological connectedness between human beings" (Bowlby, 1969, p. 194). Bowlby shared the psychoanalytic view that early experiences in childhood have an important influence on development and behaviour later in life. In addition to this, Bowlby believed that there are four distinguishing characteristics of attachment: proximity maintenance; safe haven; secure base; separation distress.

We also noted that Mary Ainsworth expanded Bowlby's work in her study. Her study involved observing children between the ages of 12 to 18 months responding to a situation in which they were briefly left alone and then reunited with their mother (Ainsworth, 1978). Based on these observations, Ainsworth concluded that there were three major styles of attachment: secure attachment, ambivalent-insecure attachment, and avoidant-insecure attachment. Main and Solomon (1986) added a fourth attachment style known as disorganized-insecure attachment.

Assessment



Assessment

Required

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Study Session 8

Prenatal Development

Introduction

In this Study Session, discussion shall be on how conception normally occurs, and the stages of pre-natal development. We will also examine the importance of pre-natal care and explain fetal discrimination.

Learning Outcomes

When you have studied this session, you should be able to:

- 8.1 explain how fertilization takes place
- 8.2 describe the pre-natal stages of human development.
- 8.4 give reasons why good prenatal care is important.
- 8.5 explain fetal discrimination.
- 8.6 explain fetal learning.
- 8.7 give examples of factors that could constitute risk for the developing child



8.1 How Fertilization takes Place

Every human being's biological begins when a single spermatozoon, one of millions of sperm cells from the father, joins an ovum, one of the several hundred thousand ova produced by the mother's body.

Fertilization, or conception, is the process by which sperm and ovum, the male and female gametes, or sex cell combine to create a single cell called a zygote, which then duplicates itself again and again by cell division to become a baby. A girl is born with all the ova she will ever have about 400,000. At birth these immature ova are in her two ovaries, each ovum in its own small sac or follicle. The ovum which is only about one fourth the size of the period that ends this sentence is the largest cell in the human body. In a mature woman, ovulation which is the rupture of a mature follicle in either ovary and expulsion of its ovum occurs about once every 28 days until menopause. The ovum is swept along through the fallopian tube by tiny hair cells, called cilia, towards the uterus, or womb. Fertilization normally occurs during the brief time the ovum is passing through the fallopian tube.

The sperm which meets the ovum has tremendous implications for the new person.

The tadpole like sperm only 1/6000 inch from head to tail is one of the smallest cells in the body. Sperm are much more active than ova, and there are many more of them. Sperm are produced in the testicles (testes) or, reproductive glands, of a mature male at a rate of several hundred million a day and are ejaculated in the semen at sexual climax. They enter the vagina and try to swim through the cervix (the opening of the uterus) and into the fallopian tubes, but only a tiny fraction make it that far.

8.2 Stages of Prenatal Development

If you had been born in China, you would probably celebrate your birthday on your estimated date of conception rather than your date of birth. This Chinese custom recognizes the importance of gestation, the approximately 9-months (or 266-day) period of development between conception and birth. Scientists, also date gestational age from conception.

What turns a fertilized ovum, or zygote, into a creature with a specific shape and pattern? Research suggests that an identifiable group of genes is responsible for this transformation in vertebrates, presumably including human beings. These genes produce molecules called morphogens, which are switched on after fertilization and begin sculpting arms, hands, fingers, vertebrae, ribs, a brain, and other body parts (Krauss, Concordet, & Ingham, 1993).

Prenatal development The process in which a baby develops from a single cell after conception into an embryo and later a fetus.

Prenatal development takes place in three stages: germinal, embryonic, and fetal. During these three stages of gestation, the original single-celled zygote grows into an embryo and then a fetus. Both before and after birth, growth and motor development proceed according to two fundamental principles. The cephalocaudal principle (from Greek and Latin, meaning “head to tail”) dictates that development proceeds from the head to the lower parts of the body. An embryo’s head, brain, and eyes develop earliest and are disproportionately large until the other parts catch up. At 2 months of gestation, the embryo’s head is half the length of the body. By the time of birth, the head is only one-fourth the length of the body but is still disproportionately large. Secondly, according to the proximodistal principle, (from Latin, “near to far”), development proceeds from parts near the center of the body to outer ones. For example, the embryo’s head and trunk develop before the limbs, and the arms and legs before the fingers and toes.

8.2.1 Germinal Stage (Fertilization to 2 Weeks)

During the germinal stage, the fertilized ovum divides and becomes more complex, and the growing organism is implanted in the wall of the uterus. Within 36 hours after fertilization, the one-celled zygote enters a period of rapid cell division and duplication, or mitosis. Seventy-two hours after fertilization, it has divided into 16 to 32 cells; a day later it has 64 cells. This division continues until the original single cell has developed into the 800 billion or more specialized cells that make up the human body. While the fertilized ovum is dividing, it is also making its way down the fallopian tube to the uterus, a journey of 3 or 4 days. Its form changes

into a fluid-filled sphere, a blastocyst, which floats freely in the uterus for a day or two and then begins to implant (embed) itself in the uterine wall. As cell differentiation begins, some cells around the edge of the blastocyst cluster on one side to form the embryonic disk, a thickened cell mass from which the embryo begins to develop. This mass is already differentiating into two layers. The upper layer, the ectoderm, will become the outer layer of skin, the nails, hair, teeth, sensory organs, and the nervous system, including the brain and spinal cord. The lower layer, the endoderm, will become the digestive system, liver, pancreas, salivary glands, and respiratory system. Later a middle layer, the mesoderm, will develop and differentiate into the inner layer of skin, muscles, skeleton, and excretory and circulatory systems.

Other parts of the blastocyst begin to develop into organs that will nurture and protect the unborn child: the placenta, the umbilical cord, and the amniotic sac. The placenta, which has several important functions, will be connected to the embryo by the umbilical cord. Through this cord the placenta delivers oxygen and nourishment to the developing baby and removes its body wastes. The placenta also helps to combat internal infection and gives the unborn child immunity to various diseases. It produces the hormones that support pregnancy, prepare the mother's breasts for lactation, and eventually stimulate the uterine contractions that will expel the baby from the mother's body. The amniotic sac is a fluid-filled membrane that encases the developing baby, protecting it and giving it room to move. The trophoblast, the outer cell layer of the blastocyst (which becomes part of the placenta), produces tiny threadlike structures that penetrate the lining of the uterine wall and enable the developing organism to cling there until it is fully implanted in the uterine lining.

8.2.2 Embryonic Stage (2 to 8 weeks)

During the embryonic stage, the second stage of gestation, from about 2 to 8 weeks, the organs and major body systems—respiratory, digestive, and nervous—develop rapidly. This is a critical period, when the embryo is most vulnerable to destructive influences in the prenatal environment. An organ, system or structure that is still developing at the time of exposure is most likely to be affected; a structure or organ that is already formed is in least danger. Defects that occur later in pregnancy are likely to be less serious. The most severely defective embryos usually do not survive beyond the first trimester, or 3-month period of pregnancy. A spontaneous abortion, commonly called a miscarriage, is the expulsion from the uterus of an embryo or fetus that is unable to survive outside the womb. Most miscarriages result from abnormal pregnancies; about 50 to 70 percent involve chromosomal abnormalities. Males are more susceptible than females to the effects of prenatal “shocks” and are more likely to be spontaneously aborted or stillborn (dead at birth). Thus, although about 120 to 170 males are conceived for every 100 females—a fact that has been attributed to the greater mobility to sperm carrying the smaller Y chromosome—only 106 boys are born for every 100 girls. Male's greater vulnerability continues after birth: more of them die early in life, and at every age they are more susceptible to many disorders. Part of the explanation for male vulnerability may be all zygotes start out with

the female body plan. The fact that males undergo more alteration than females during early development may account at least in part for their poorer survival rates. Other possibilities are that the Y chromosome may contain harmful genes, or that the sexes may have different mechanisms for providing immunity to infections and diseases.

Women are at higher risk of miscarriage if they smoke, drink alcohol or coffee, have miscarried in the past, experience vaginal bleeding during pregnancy, are over 35, or have uterine abnormalities, endocrine problems, or certain infections (Mishell, 1993). The physical risks to a woman who has a miscarriage are small, but an infection, a hemorrhage, or an embolism (obstruction of a blood vessel) can sometimes occur. Women over 29 and those who miscarry in the second trimester are more likely to experience such complications, as are women who have limited access to health care, such as single women and members of minority groups (Apgar & Churgay, 1993).



Growth and development both before and after birth follow the cephalocaudal principle (from top to bottom) and the proximodistal principle (center outward). About one-third of all conceptions end in spontaneous abortion (miscarriage). Nearly all birth defects and three out of four miscarriages occur in the first trimester of pregnancy. Males are more likely than females to be spontaneously aborted. Fetuses interact actively with their environment within the womb. As they grow and mature, they move less, but more vigorously, and show changes in heart rate, cardiac response, and coordination of sleep-wake states. Fetuses appear to be able to hear, exercise sensory discrimination, learn and remember.

8.2.3 Fetal Stage (8 Weeks to Birth)

With the appearance of the first bone cells at about 8 weeks, the developing baby is in the fetal stage, the final stage of gestation. During this period, the fetus grows rapidly to about 20 times its previous length, and organs and body systems become more complex. Right up to birth, “finishing touches” such as finger-nails, toenails, and eyelids develop.

Fetuses are not passive passengers in their mothers’ wombs. They respire, kick, turn, flex their bodies, do somersaults, squint, swallow, make fists, hiccup, and suck their thumbs. All these activities do not occur in a vacuum. Although the amniotic fluid provides a protective buffer, the fetus is surrounded by and interacts with a complex environment, bounded by the flexible uterine walls and the amniotic sac (Smotherman & Robinson, 1996, p.426). These elastic membranes restrain the fetus but also stimulate some kinds of movement.

The fetus’s isolation in the womb and dependence on the mother’s body make it easier to study the effects of specific kinds of stimulation. Much of this research has been to study the effects of specific kinds of stimulation. Much of this research has been done with pregnant rats (Smotherman & Robinson, 1995, 1996). Human fetuses can be observed by ultrasound, a medical procedure using high-frequency sound waves to detect the outline of a fetus and observed its movements. New instrumentation allows the monitoring of a fetus’s heart rate, changes in activity level, states of sleep and wakefulness, and cardiac reactivity. Through such technologies, scientists have learned much about fetal development.

In one study, 34 healthy fetuses were monitored at 4-week intervals from 20 weeks of gestation until term (DiPietro, Hodgson, Costigan, Hilton, & Johnson, 1996). As time went on, they had slower but more variable heart rates—possibly in response to the increasing stress of the mother’s pregnancy—and greater cardiac response to stimulation. They also showed less, but more vigorous, activity—perhaps a result of the increasing difficulty of movement for a growing fetus in a constricted environment, as well as of maturation of the nervous system. A significant “jump” in all these aspects of fetal development seems to occur between 28 and 32 weeks and may reflect an advance in brain development. It may also help explain why infants born prematurely at this age are more likely to survive and flourish than those born earlier.

Even inside the womb, each individual is unique. The movements of fetuses differ, and their heart rates vary in regularity and speed. There are marked individual differences in activity level, and there are gender differences, too. One study using the fetalactocardiograph, which can detect even very slight movement changes, found that male fetuses are more active and tend to move vigorously than female fetuses throughout gestation, even when they are same size. This finding suggests that infant boys’ tendency to be more active than girls may be at least partly inborn (DiPietro, Hodgson, Costigan, Hilton, & Johnson, 1996).

Women who bear more than one child often notice differences in fetal activity from one pregnancy to another. One fetus kicks or punches, another squirms, and still another makes sharp, spasmodic movements. Such differences may predict how active, restless, or resistant to handling a baby will be during the first year (Sontag, 1966). Some of these patterns seem to persist into later childhood and adulthood, supporting the existence of inborn temperament. In one study, apparent differences in temperament appeared as early as 24 weeks of gestation and remained stable throughout the prenatal period and 3 to 6 months after birth. Infants who had moved around more in the womb tended to be more difficult, unpredictable, and active and less adaptable, according to their mothers, than infants whose fetal activity had been calmer (DiPietro, Hodgson, Costigan, & Johnson, 1996). It is possible, however, that the mothers’ reports about their infants’ temperament were influenced by perceptions formed during pregnancy. Attempts are now under way to confirm these findings with laboratory-based assessments.

Fetal Sensory Discrimination

Beginning at about the twelfth week of gestation, the fetus swallows and inhales some of the amniotic fluid in which it floats. This stimulation may affect the budding senses of taste and smell and may contribute to the development of the nose, tongue, palate, lungs and other organs needed for breathing and digestion. Again, this process is not passive; the fetus’s respiration, digestion, and elimination regulate the amount and composition of the surrounding amniotic fluid. This fluid also contains chemical substances that cross the placenta from the mother’s bloodstream and enter the fetus’s bloodstream. All of these sensations and experiences may help shape the development of body and brain (Smotherman & Robinson, 1995, 1996).

Mature taste cells appear at about 14 weeks of gestation. The olfactory system, which controls the sense of smell, is also well developed before birth. The favours and odors of foods the mother consumes may be transmitted to the fetus through the amniotic fluid. It is not yet clear whether the human fetus responds to odors, but rodent fetuses do. Whether odor preferences in the womb are related to preferences after birth also remains to be determined. Prenatal experience does not seem to significantly affect taste preferences, which seem to be largely innate (Mennella & Beauchamp, 1996a).

Fetal Learning

A fetus is continually exposed to other kinds of sensory stimuli, including the mother's voice and heartbeat and the vibrations of her body. Fetuses respond to these stimuli, showing that they can hear and feel. Studies going back at least 60 years show that human fetuses, as early as 7 months of gestation, respond to bells and vibrations and can discriminate between different tones (Lecanuet, Granier-Deferre, & Busnel, 1995; Sontag & Wallace, 1934, 1936). In one experiment, researchers turned on a hand-held vibrator and put its tip to the mother's abdomen, just over the place where the fetus's head was (as confirmed by ultrasound). Then they measured fetal heart rate and movements, again with ultrasound. After testing 60 fetuses, they found that the first responses to sound and vibration came at 26 weeks of gestation; response increased steadily over the next 6 weeks and reached a plateau at about 32 weeks (Kisilevsky, Muir, & Low, 1992). Fetal exposure to sounds, including speech sounds, may spur the ability to process such sounds after birth (Lecanuet et al, 1995). Familiarity with the mother's voice may have an even more basic function: to help newborns locate the source of food. Hungry infants, no matter on which side they are held, turn toward the breast in the direction from which they hear the mother's voice (Noirot & Algeria, 1983, cited in Rovee-Collier, 1996). The fact that fetuses can discriminate what they have heard shows that they can learn and remember. Experiments have found that newborns 2 to 4 days old prefer musical and speech sequences heard before birth. They also prefer their mother's voice to those of other women, female voices to male voices, and their mother's native language to another language (C. Moon, Cooper, & Fifer, 1993).

8.4 Environment Hazards

Recently, scientists have become aware of some of the myriad environmental influences that can negatively affect the developing organism. The pervasive influence of the prenatal environment underlines the importance of providing an unborn child with the best possible start in life. The role of the father used to be virtually ignored; today we have known that various environmental factors can affect a man's sperm and the children he conceives. Although the mother's role has been recognized far longer, researchers are still discovering environmental hazards that can affect her fetus.

The fetus can be greatly affected by its prenatal environment. Some environmental factors are teratogenic, the likelihood of birth defects may depend on the timing and intensity of an environmental event and its

interaction with genetic factors. Important environmental influences involving the mother include nutrition, physical activity, smoking, drinking, intake of other legal or illegal drugs, transmission of acquired immune deficiency syndrome (AIDS), other maternal illnesses or infections, maternal age, incompatibility of blood type, and external environmental hazards, such as chemicals and radiation. Good prenatal care is therefore essential for healthy development. It can lead to detection of defects and disorders and, especially if begun early in a pregnancy, can reduce maternal and infant death, low birth weight, and other birth complications. Some of these findings have led to ethical debate over a woman's responsibility for avoiding activities that may harm her unborn child. Good prenatal care can give every child the best possible chance of entering the world in good condition to meet the challenges of life outside the womb.



Discussion Activity

Discussion: Interaction of the domains.

Discuss and describe how the three aspects of the development of the fetus interact and influence each other. The resources below may help you make an informed response.

<http://www.healthline.com/galecontent/prenatal-development>

Post your response on Study Session eight forum page on course website

Study Session Summary



Summary

In this Study Session, you learnt that prenatal development is a genetically directed process that occurs in three stages of gestation: the germinal stage, the embryonic stage, and the fetal stage. We noted that the prenatal environment of the foetus plays an important role in its' development'.

Assessment



Assessment

Required

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Study Session 9

The Newborn

Introduction

In this Study Session, we will examine the state of the neonate. We will also explore how the baby transits from intrauterine to extra uterine life

Learning Outcomes

When you have studied this session, you should be able to:

- 9.1 explain nature of the growth that takes place in body and brain of the newborn.
- 9.2 describe the sensory capacities of the newborn.
- 9.3 highlight the different reflex behaviours of the newborn.
- 9.4 discuss the motor and health development of the newborn.
- 9.5 point out the importance of the relationship of the newborn and the



9.1 Growth of Body and Brain

A child's body grows most dramatically during the first year of life; growth proceeds at a rapid but diminishing rate during the next 2 years. Normal physical growth and motor development proceed according to the cephalocaudal and proximodistal principles. Breastfeeding offers many physiological and psychological benefits to the infant. However, the quality of the relationship between parents and baby is the most important element in promoting healthy psychological development. During the latter half of the first year, babies may begin to eat solid foods. Obesity in infancy does not necessarily predict obesity later in life. Much of the brain's growth after birth consists of the formation of synapses, or connections between nerve cells. Due to the brain's plasticity, especially during this critical period of growth, environmental experience can influence brain development positively or negatively.

9.2 Early Sensory Capacities

Sensory capacities, present from birth and even in the womb, develop rapidly in the first months of life. Very young infants show pronounced abilities to discriminate between stimuli. Touch seems to be the first sense to develop and is the most mature sensory system for the first several months. Newborns are sensitive to pain, smell, taste, and hearing begins to develop in the womb. A preference for sweet taste seems to be inborn and probably helps infants adapt to life outside the womb. Odor preferences develop with experience. Vision is the least well developed

sense at birth. Peripheral vision, color perception, acuteness of focus, binocular vision, and the ability to follow a moving object with the eyes all develop within the first few months. Visual preference and auditory discrimination appear to be related to later cognitive functioning.

9.3 Reflex Behaviours

Reflex behaviours are indications of neurological maturation. Primitive reflexes drop out during the first year as voluntary, cortical control develops.

Primitive reflexes are reflex actions originating in the central nervous system that are exhibited by normal infants but not neurologically intact adults, in response to particular stimuli. These reflexes disappear or are inhibited by the frontal lobes as a child moves through normal child development. (Rauch, 2006). These primitive reflexes are also called infantile, infant or newborn reflexes. Older children and adults with atypical neurology (for instance, people with cerebral palsy) may retain these reflexes and primitive reflexes may re-appear in adults due to certain neurological conditions including, but not limited to, dementia, traumatic lesions, and strokes (Schott and Rossor, 2003) An individual with cerebral palsy and typical intelligence can learn to suppress these reflexes, but the reflex might resurface under certain conditions such as during an extreme startle reaction. Reflexes may also be limited to those areas affected by the atypical neurology, such as individuals whose cerebral palsy affects only their legs retaining the Babinski reflex but having normal speech. In individuals with hemiplegia, the reflex might be seen in the foot on the affected side only. We shall now consider the newborn reflex behaviours.

9.3.1 Moro Reflex

This is sometimes referred to as the startle reflex, startle response, or embrace reflex. It is more commonly known as the Moro response or Moro reflex as it was discovered and first described by Austrian pediatrician Ernst Moro (1874-1951). Moro reflex is one of the infantile reflexes. It may be observed in incomplete form in premature birth after the 28th week of gestation, and is usually present in complete form by week 34 (third trimester). It is normally present in all infants/newborns up to 4 or 5 months of age though it may last up to six months. Persistence of the Moro response beyond 4 or 5 months of age is noted only in infants with severe neurological defects. This reflex is a response to unexpected loud noise or when the infant feels like, it is falling. It is believed to be the only unlearned fear in human newborns. The primary significance of this reflex is in evaluating integration of the central nervous system (CNS), since the reflex involves 4 distinct components: startle, spreading out the arms (abduction), outspreading the arms (adduction) and crying (usually). It is likely to occur if the infant's head suddenly shifts position, the temperature changes abruptly, or they are startled by a sudden noise. The legs and head extend while the arms jerk up and out with the palms up and thumbs flexed. Shortly afterward, the arms are brought together and the hands clench into fists, and the infant cries loudly. Absence of the reflex on both sides of the body (bilateral)

may mean damage to the infant's central nervous system while a unilateral absence could mean an injury due to birth trauma such as a fractured clavicle or injury to the brachial plexus. The brachial plexus is an arrangement of nerve fibres, running from the spine, specifically from above the fifth cervical vertebra to underneath the first thoracic vertebra. It proceeds through the neck, the axilla (armpit region) and into the arm. Erb's Palsy (Erb-Duchenne Palsy, or Brachial plexus paralysis) is a condition which, mainly due to birth trauma, can affect 1 or all of the 5 primary nerves that supply the movement and feeling to an arm. The palsy can recover fully without intervention, or may require surgical correction. The most common cause of Erb's palsy is an abnormal or difficult childbirth or labour. For example, it can occur if the infant's head and neck are pulled toward the side at the same time as the shoulders pass through the birth canal (Rauch, 2006)

The condition can also be caused by excessive pulling on the shoulders during a vertex delivery (head first) or by pressure on the raised arms during a breech delivery (feet first) (Rauch, 2006).

9.3.2 Walking Reflex

The walking or stepping reflex is present at birth; though infants are still can not support their own weight, when the soles of their feet touch a flat surface they will attempt to 'walk' by placing one foot in front of the other. This reflex disappears as an automatic response and reappears as a voluntary behaviour at around eight months to a year old.

9.3.3 Rooting Reflex

The rooting reflex is present at birth and assists in breastfeeding, disappearing at around four months of age as it gradually comes under voluntary control. A newborn infant will turn their head toward anything that strokes their cheek or mouth, searching for the object by moving their heads in steadily decreasing arcs until the object is found. After becoming used to responding in this way (if breastfed, approximately three weeks after birth), the infant will move directly to the object without a "search".

9.3.4 Sucking reflex

The sucking reflex is common to all mammals and is present at birth. It is linked with the rooting reflex and breastfeeding, and causes the child to instinctively suck at anything that touches the roof of their mouth. There are two stages to the action: First, Expression: activated when the nipple is placed between a child's lips and touches their palate. They will instinctively press it between their tongue and palate to draw out the milk. Secondly, Milking during which the tongue moves from areola to nipple, coaxing milk from the mother to be swallowed by the child. Coordination on of these movements with breathing and swallowing is instinctual, but not perfect.

9.3.5 Tonic Neck Reflex

The tonic neck reflex, asymmetric tonic neck reflex or 'fencing posture' is present at birth and disappears at around four months. When the child's head is turned to the side, the arm on that side will straighten and the opposite arm will bend (sometimes the motion will be very subtle or slight). If the infant is unable to move out of this position or the reflex continues to be triggered past six months of age, the child may have a disorder of the upper motor neurons.

9.3.6 Palmar Grasp Reflex

The palmar grasp reflex appears at birth and persists until five to six months of age. When an object is placed in the infant's hand and strokes their palm, the fingers will close and they will grasp it. The grip is strong but unpredictable; though it may be able to support the child's weight, they may also release their grip suddenly and without warning. The reverse motion can be induced by stroking the back or side of the hand.

9.3.7 Plantar Reflex

The plantar reflex or plantar grasp is present at birth and fades around the infant's first birthday. The plantar reflex causes the infant's toes to curl up tightly when something rubs the ball of their foot.

9.3.8 Babinski Reflex

Often confused with the plantar reflex, the Babinski reflex is also present at birth and fades around the first year. The Babinski reflex appears when the side of the foot is stroked, causing the toes to fan out and the hallux (big toe) to extend. The reflex is caused by a lack of myelination in the corticospinal tract in young children. The Babinski reflex is a sign of neurological abnormality in adults.

9.3.9 Galant Reflex

The galant reflex, also known as Galant's infantile reflex, is present at birth and fades between the ages of four to six months. When the skin along the side of an infant's back is stroked, the infant will swing towards the side that was stroked. If the reflex persists past six months of age, it is a sign of pathology. The reflex is named after the Russian neurologist Johann Susman Galant.

9.4 Motor Development

During the first 3 months of life, infants begin to gain control over their body movements. Reflex behaviours are indications of neurological maturation. Primitive reflexes drop out during the first year as voluntary, cortical control develops. Primitive reflexes are reflex actions originating in the central nervous system that are exhibited by normal infants. Self-locomotion seems to be a "setting event", effecting changes in all domains of development. The Denver Developmental screening Test is

widely used to assess motor, linguistic, and personality and social development.

Experiments with the visual cliff suggest that depth perception is present very early in life. It may depend in part on control of the head and on eye-hand coordination, which permits haptic perception. Environment factors, including cultural patterns, may affect the pace of motor development. Extreme environmental deprivation can slow development, at least temporarily, and training or practice can accelerate certain specific skills.

9.5 Health

A small minority of infants suffer lasting effects of birth trauma, sometimes due to anoxia. Other complications include low birthweight, postmature birth, and stillbirth. Low-birthweight babies may be either preterm (premature) infants or small-for-date (small-for-gestational age) infants. Low birthweight is a major factor in infant mortality and can cause long-term physical or cognitive problems. Electronic fetal monitoring is widely used (and may be overused) during labour and delivery to detect signs of fetal distress, especially in high-risk births.

At a minute and 5 minutes after birth, the neonate is assessed by the Apgar scale to determine how well he or she is adjusting to extrauterine life. The Brazelton Neonatal Behavioural Assessment Scale may be given to assess responses to the environment and to predict future development. Although the infant mortality rate in Nigeria has improved, it is still disturbingly high. Rates of immunization have also improved in many parts of Nigeria but there is still a need to achieve more success in this regard.

9.6 Newborns and Their Parents

Researchers following the ethological approach have suggested that similar to imprinting in some animals – there is a critical period for the formation of the mother-infant bond. However, research has not confirmed this hypothesis. Fathers typically bond with their babies whether or not they are present at the birth. A newborn's state of arousal is governed by periodic cycles of wakefulness, sleep, and activity, which seem to be inborn. Sleep takes up the major (but a diminishing) amount of a neonate's time. Newborns' activity levels show stability and may be early indicators of temperament. Marital satisfaction often declines after the birth of a first baby. Expectations and sharing of tasks can contribute to a marriage's deterioration or improvement. Dual earner couples have a particularly difficult challenge but this can be resolved through mutual agreement between the couples.

Hint

The choice, timing and circumstances of parenthood can have vast

consequences for a child. Whether a birth was planned or accidental, whether the pregnancy was welcomed or unwanted, whether it came about through normal or extraordinary means, whether the parents were married or unmarried, and how old the parents were when a child was conceived or adopted are all factors in the Microsystems identified in Bronfenbrenner's ecological approach. Whether the culture encourages large or small families, whether it values one sex over the other and how much it supports families with children are macro system issues likely to influence that child's development.

Study Session Summary



Summary

In this Study Session, we examined the neonatal period. The neonatal period is a time of transition from intrauterine to extrauterine life. During the first few days, the neonate loses weight and then regains it; the lanugo (prenatal hair) falls off and the protective coating of vernixcaseosa dries up. Sensory capacities, present from birth and even in the womb, develop rapidly in the first months of life. Reflex behaviours are indications of neurological maturation. Primitive reflexes drop out during the first year as voluntary, cortical control develops. Primitive reflexes are reflex actions originating in the central nervous system that are exhibited by normal infants. The Denver Developmental screening Test is widely used to assess motor, linguistic, and personality and social development. The Brazelton Neonatal Behavioural Assessment Scale may be given to assess responses to the environment and to predict future development. Dual earner couples have a particularly difficult challenge but this can be resolved through mutual agreement between the couples.

Assessment



Assessment

Required

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Readings

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Study Session 10

Toddlerhood

Introduction

Toddler is a common term for a young child who is learning to walk or "toddle". Generally, this is considered to be the second stage of development after infancy and before childhood occurring predominantly during the ages of 12 to 36 months old. We will examine how the child learns about social roles and develops motor skills during this period.

Learning Outcomes

When you have studied this session, you should be able to:

10.1 describe the physical, mental and emotional milestones in toddlerhood



10.1 Developmental Milestones

The toddler developmental timeline shows what an average toddler can do at what age. Times vary greatly from child-to-child. It is common for some toddlers to master certain skills (such as walking) well before other skills (like talking). Even close siblings can vary greatly in the time taken to achieve each key milestone. This age is sometimes referred to as 'the terrible twos', because of the temper tantrums for which they are famous. This stage can begin as early as nine months old depending on the child and environment. The toddler is discovering that they are a separate being from their mother or caregiver and are testing their boundaries in learning the way the world around them works. Between the ages of two and five they are reaching for independence which repeats itself during adolescence. Thus, it is very important for the caregiver to be consistent with boundaries and discipline for the child's safety and the caregiver's sanity through puberty. Most children are toilet trained while they are toddlers. In most Western countries, toilet training starts as early as 17 months for some while others are not ready to begin toilet training until they are three. When toddlers can walk they are still often transported in a stroller when they are tired, or to increase speed. Around 18 months, the toddler's vocabulary will greatly increase, and he or she may learn as many as 7-9 new words a day.

| Age | Type of Development | Milestones |
|----------------|------------------------|--|
| 12 -15 months | Physical development | Stand alone well, drink from a cup (poorly) and turn pages in a book (a few at a time, play ball by rolling or tossing it. |
| | Mental development | Uses four to six letter words such as 'ball' or 'basket'; can follow a simple command with an associate gesture such as bringing a cup to you when you point at it saying 'Please bring me the cup'. Object permanence: realizes things exist when they are out of sight such as a toy block placed into a closed box. |
| | Emotional development | Use gestures or words to convey desires, such as 'pointing at a book, raising arms to be picked up, or saying 'cup'. Mimic actions such as covering eyes. |
| 15 – 18 months | Physical development | Walk well alone, may be able to bend down and stand up without help; hold a crayon well enough to scribble; lift cup up to mouth for drinking; climb onto furniture. |
| | Mental development | Uses 10-20 words, may be able to follow a command without gesture; stack two blocks. |
| | Emotional development | Address others with greetings. Mimic parental activities such as cleaning up or talking on a telephone. |
| 18 -24 months | Physical development | Feed self with a spoon, Run; climb into a small chair; walk up steps. |
| | Mental development | speaks 20 -50 words; understands many more stack six blocks; understands non-physical relationships such as turning on lights or pushing buttons; sorting toys; searching for hidden objects; problem through experimentation. |
| | Emotional development. | Wants to be independent at times; will throw a tantrum or possibly say no; mimics social behaviour such a hugging a teddy bear or feeding a doll; self recognition; self reference; displays attachment; separation anxiety; can play turn-taking games. |
| 24- 36 months | Physical | Advanced mobility and climbing skills; |

| | |
|-----------------------|--|
| development | increased dexterity with small objects; puzzles; able to dress oneself. |
| Mental development | Speaking in sentences; easily learns new words; places and people's names; anticipates routines; plays with toys in imaginative ways; attempts to sing in-time with songs. |
| Emotional development | Knows boys from girls; shows preferences such as clothes and entertainment |

Study Session Summary



Summary

In this Study Session, you learnt that the toddler stage can begin as early as nine months old depending on the child and environment. The toddler is discovering that they are a separate being from their mother or caregiver and are testing their boundaries in learning the way the world around them works. Between the ages of two and five they are reaching for independence which repeats itself during adolescence. Thus, it is very important for the caregiver to be consistent with boundaries and discipline for the child's safety

Assessment



Assessment

Required

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