Child Development

Developmental Psychology
Nature (Genetics) vs. Nurture (Environment)

- Development is best understood in terms of a continuous interplay of biology and experience.
- Continuity model – argues that the changes children undergo at various ages are quantitative in nature; they occur in small steps rather than in major leaps.
- Discontinuity model - argues that development progresses in stages that are qualitative in nature. Development occurs as sudden transformations or abrupt leaps in the child’s abilities and ways of interacting with the world.
- Most developmentalists take a middle position: they believe development involves both quantitative and qualitative changes; children must reach a stage of developmental readiness for training and experience to matter.
The Universality Question

- There is strong evidence that children progress through a series of stages of cognitive development. Developmental psychologists take into account many social and cultural influences on development, including factors such as ethnicity, socioeconomic status, lifestyle, and diet.

- The Stability Question – Some theorists, have argued that our personalities are generally fixed in early childhood, typically by age 6 or so. Erik Erikson recognized that our personality continues to develop as we age and face new life challenges.
Methods of Study

- Longitudinal study – observes the same people repeatedly over time. Longitudinal studies are done to see, e.g., how personality and behavior change over time. Do shy children become shy adults. The major strength of longitudinal research is that it allows investigators to examine developmental processes by observing changes in the same individuals over time. A drawback is that the study sample may not be representative of the larger population, which limits the ability to generalize the results beyond the study group.
Cross-Sectional Method

- The cross-sectional method observes people of different ages at the same point in time. A problem with this method is the possibility of a cohort effect – the differences between age groups as a function of historical or social influences affecting those groups rather than age per se.
Prenatal Development

- The male of the species carries both an X and a Y chromosome, whereas the female carries two X chromosomes. Each reproductive cell, the sperm (germ cell) in males and the ovum (egg cell) in females – contains only one sex chromosome. All other body cells have two sex chromosomes. Thus, a sperm cell carries either one X or one Y sex chromosome, and an ovum carries only one X. During ovulation, an ovum is released from an ovary and then begins a slow journey through a fallopian tube. If fertilization occurs, the resulting combination (XX for females or XY for males) of the sex chromosomes in the fertilized ovum determines the baby’s sex. The fertilized ovum is a single cell, called a ____________________, that soon undergoes cell division.
A pregnancy typically lasts _________ days, or about nine months, which are commonly divided into three trimesters. Three major prenatal stages can be identified: the germinal stage, which corresponds to roughly the first two weeks after conception; the embryonic stage, which spans the period of about two weeks to about eight weeks after conception; and the fetal stage, which continues until birth. The germinal stage covers the time from _________________ to implantation in the wall of the uterus.
The embryonic stage covers the period from _______________ to about the eighth week of pregnancy. The major organ systems begin to take shape in the developing organism, which we call the embryo. About three weeks into pregnancy, two ridges fold together to form the neural tube, from which the nervous system will develop. The head and blood vessels also begin to form at this time. By the fourth week, a primitive heart takes shape and begins to beat. The embryo is suspended in a protective environment within the mother’s uterus called the amniotic sac.
Nutrients and waste materials are exchanged between the mother and embryo through the ______________________, which is connected to the embryo by the umbilical cord. The placenta allows nutrients and oxygen to pass from mother to fetus. Their blood streams do not mix. The fetal stage, or stage of the fetus, begins around the ninth week of pregnancy and continues until the birth of the child. All of the major organ systems, as well as the fingers and toes, are formed by about the twelfth week of prenatal development, which roughly corresponds to the end of the first trimester.
By the end of the ____________________________, the fetus approaches the age of viability, the point at which it becomes capable of sustaining life on its own.

THREATS TO PRENATAL DEVELOPMENT: Maternal malnutrition is associated with a greater risk of premature birth (birth prior to thirty-seven weeks of gestation) and low birth weight (less than 5 pounds). Folic acid greatly reduces the risk of neural tube defects such as spina bifida (the child is born with a hole in the tube surrounding the spinal cord), but only if it is taken early in pregnancy. ______________________ refers to an environmental influence or agent that may harm the developing embryo or fetus.
Rubella or German measles is a common childhood disease that can lead to serious birth defects, including heart disease, deafness, and mental retardation, if contracted during pregnancy.

SMOKING: Maternal smoking can lead to miscarriage, premature birth, low birth weight, and increased risk of infant mortality, increased risks of SIDS, childhood asthma, as well as developmental problems such as reduced attention span, lower IQ, and hyperactivity.

ALCOHOL AND DRUGS: FAS is the leading preventable cause of mental retardation, affecting as many as 40,000 babies in the United States.
PRENATAL TESTING: Amniocentesis, generally performed between weeks sixteen and eighteen of pregnancy, a syringe is inserted into the amniotic sac and fluid containing fetal cells is extracted. The fetal cells are cultured and then analyzed for biochemical and chromosomal abnormalities. Chorionic villus sampling (CVS) may be performed several weeks earlier than amniocentesis. A small amount of tissue from the chorion, the membrane that holds the amniotic sac and fetus, is analyzed for fetal abnormalities, including Down syndrome. Down syndrome occurs when three chromosomes are present on the twenty-first pair of chromosomes instead of the normal two. Ultrasound imaging is another method used to detect fetal abnormalities.
Reflexes

A reflex is an unlearned, automatic response to a particular stimulus. *Rooting reflex* is the reflexive turning of the newborn’s head in the direction of a touch on its cheek. *Moro reflex* is when the infant extends its arms, arches its back, and brings its arms toward each other as though attempting to grab hold of someone. *Palmar grasp reflex* is the reflexive curling of the infant’s fingers around an object that touches its palm. Maturation refers to the biological unfolding of the organism according to the underlying genetic code. SENSORY AND PERCEPTUAL ABILITY: Shortly after birth infants begin making meaningful sensory and perceptual discriminations among various stimuli. Birth to 1 month the child has blurry vision, but sees more clearly at short distances and shows preferences for facelike stimuli and responds to certain facial features.
From 2-3 months, the child can discriminate direction of a moving object and can learn simple responses and remember them for several day (at 2 months) to several weeks (at 6 months). From 4 -6 months, the child develops his depth perception and can discern differences among certain facial expressions. See Concept chart 9.3 for the milestones in Infant development.
Emotional and Social Development

- Temperament is a characteristic style of behavior or disposition. Three general types of temperament that could be used to classify about two out of three of the children in the study group:
  1. Easy children – These children are playful and respond positively to new stimuli. 2. Difficult children – Are children that react negatively to new situations or people; 3. Slow-to-warm-up children – These children have low activity levels; avoid novel stimuli; require more time to adjust to new situations than most children; and typically react to unfamiliar situations by becoming withdrawn.

- Children with more adaptable or flexible temperaments interacted more effectively and cooperatively with their peers than did children with less adaptable temperaments. Temperament is also link to early language acquisition.
Attachment

- Attachment is the enduring emotional bond that infants and older children form with their caregivers. Bonding is the process by which parents develop strong ties to their newborn.

- Imprinting is the formation of a strong bond of the newborn animal to the first moving object seen after birth.

- ATTACHMENT IN HUMAN INFANTS: Ainsworth and colleagues noted three basic attachment styles plus one more discovered by researchers:
  1) Secure type (Type B);
  2) Insecure-avoidant type (Type A);
  3) Insecure-resistant type (Type C); and
  4) Disorganized/disoriented.
Secure type attachment, infants use their mothers as a secure base for exploring the environment, periodically checking on her whereabouts and limiting exploration when she was absent.

Insecure-avoidant type, these infants paid little attention to the mother when she was in the room and separated easily from her to explore the environment.

Insecure-resistant type, were infants who clung to the mother and were reluctant to explore the environment despite the presence of desirable toys.

Disorganized/disoriented attachment, these infants appeared to lack a consistent or organized strategy for responding to separations and reunions.
Attachment and Later Development

- Attachment behaviors affect development throughout life. A lack of solid attachments in adult life is linked to poorer physical and emotional health. Internal working models refers to the generalized expectations, developed in early childhood, about how others are likely to respond in close relationships. The more securely attached infant is likely to have higher self-esteem, to show greater co-operativeness and independence, to have fewer problem behaviors and to exhibit better overall emotional health.

- CHILD-REARING INFLUENCES: Many factors influence a child’s intellectual, emotional, and social development, including genetics, peer group influences, and the quality of parenting. The Father’s Influence: 1) Children whose fathers share meals with them, spend leisure time with them, and assist them with schoolwork tend to perform better academically than those with less engaged fathers; 2) Fathers are more likely than mothers to encourage children to be independent and assertive and to take risks, and 3) Fathers tend to engage in more physically active play with their children.
CULTURAL DIFFERENCES IN PARENTING: African American families tend to have strong kinship bonds and to distribute childcare responsibilities among different family members; Hispanic families, the father is expected to be the provider and protector of the female, whereas the mother assumes full responsibility for childcare; Asia cultures emphasize respect for parental authority, especially the father’s, and warm maternal relationships.
Parenting Styles

Diana Baumrind identified three basic parenting styles: Authoritative, Authoritarian, and Permissive.

1) Authoritative parents set reasonable limits for their children but are not overcontrolling. The parent is the authority figure, firm but understanding, willing to give advice, but also willing to listen to children’s concerns.

2) Authoritarian parents are rigid and overcontrolling. They expect and demand unquestioned obedience from their children.

3) Permissive parents have an anything goes attitude toward raising their children. They may respond affectionately to children but are extremely lax in setting limits and imposing discipline.

Peer Relationships – As children venture into the world, the relationships they form with peers affect many aspects of their development. Friendships provide opportunities for children to learn prosocial behaviors such as sharing, cooperating, and resolving conflicts.
Erikson’s Stages of Psychosocial Development

- Erikson believed that our personalities are shaped by how we deal with a series of psychosocial crises or challenges during each of the stages.

  Trust vs. Mistrust – Is the first psychosocial challenge the infant faces in its social environment.

  Autonomy vs. Shame and Doubt – In this stage, the central psychosocial challenge faced during the second and third years of life concerns autonomy.

  Initiative vs. Guilt - This stage, corresponding to the preschool years of 3 to 6, is a time of climbing gyms and play dates, a time at which the child is challenged to initiate actions and carry them out.

  Industry vs. Inferiority - At this stage, which corresponds to the elementary school period of 6 to 12 years, the child faces the central challenge of developing industriousness and self-confidence.
Cognitive Development

Piaget’s Theory of Cognitive Development:
A schema is a mental framework for understanding or acting on the environment.

According to Piaget, adaptation is a process by which people adapt or change to meet challenges in the environment more effectively. Adaptation consists of two complementary processes: assimilation and accommodation. Assimilation is the process of incorporation new objects or situations into existing schemas. Accommodation is the process of altering existing schemas or creating new ones to deal with objects or experiences that don’t fit readily into existing schemas.
Stages of Cognitive Development

- Sensorimotor Stage (Birth to 2 years): During this stage, the infant explores its world by using its senses and applying its developing motor skills. The infant’s intelligence is expressed through action and purposeful manipulation of objects.

  Object permanence – Refers to the recognition that objects continue to exist even if they have disappeared from sight.

- Preoperational Stage (2 to 7 years): This stage describe the cognitive abilities of children who lack the ability to perform basic logical operations-to apply basic principles of logic to their experiences. During this period, the child has the ability to form mental or symbolic representations (symbols that stand for names and experiences; specifically, the words in a language) of the world. The preoperational child demonstrates egocentrism, the tendency to view the world only from one’s own perspective.
- Egocentrism leads to animistic thinking which is the child’s belief that inanimate objects have living qualities. Irreversibility is the inability to reverse the direction of a sequence of events to their starting point. Centration is the tendency to focus on only one aspect of a situation at a time to the exclusion of all other aspects. Conservation is the ability to recognize that the quantity or amount of an object remains constant despite superficial changes in its outward appearance.

- Concrete Operational Stage (7 to 11 years): The stage of concrete operations is marked by the development of conservation.

- Formal Operational Stage (begins around age 11). The stage of formal operations is the final one in Piaget’s theory- the stage of full cognitive maturity. This stage is characterized by the ability to think logically about abstract ideas, generate hypotheses, and think deductively.
Vygotsky’s Sociocultural Theory of Cognitive Development

Vygotsky was concerned primarily with how children come to understand their social world. He believed that learning is acquired through a gradual process of social interactions between children and parents, teachers, and other members of the culture. Vygotsky emphasized that social learning occurs within a zone of proximal development which refers to the range between the skills children can currently perform and those they could perform if they received proper guidance and instruction from people with greater expertise. Scaffolding is tailoring the degree and type of instruction to the child’s current level of ability or knowledge. THE END / STUDY STUDY