



Human Development

# Unit	3
📅 Rev 1	@11/10/2021
▼ Rate	
🔗 Vocab 1	https://docs.google.com/document/d/1kvD-6Z8uVaQ09RJYTdgA5qJ38Gk3rmwRrJw4rXuiwggw/edit
🔗 Vocab 2	

HD Active Recall

3.1 - Prenatal Development

Identical twins who share the same placenta are more alike than those who do not, suggesting prenatal influences on psychological traits.

▼ Experience and Brain Development

Early postnatal experiences affect brain development

TED: Nadine Burke

▼ How does childhood trauma affect our health?

Such severe trauma can get under our skin and physically change how our DNA is read by the body

▼ What is ACES?

Adverse Childhood Experiences Study

▼ How does an ACES score relate to overall health?

ACES and overall health are strongly correlated. A higher score indicates a higher risk for health problems later in life

▼ What does severe trauma do to the body?

- Affects the nucleus,
- Inhibits the prefrontal cortex
- Affects the pleasure reward
- High adversity
- High-risk behavior
- Poor health outcome

▼ What is the difference between adaptive and maladaptive coping?

▼ Adaptive

Coping mechanisms that we can do that won't make the event worse

▼ Maladaptive

Coping mechanisms that are counterproductive or cause negative consequences. They often work in the short term, but in the grand scheme cause trouble

▼ Rosenzweig Rat Study

Investigated the effects of the environment on brain growth and development (neuroplasticity)

▼ Influences on Childhood Development

Parental Influence

Parental influence is largely genetic. This support is essential in nurturing children. However, other socializing factors also play an important role.

Why are people the way they are? Focus on childhood experiences

Peer Influence

Children, like adults, attempt to fit, into a group by conforming. Peers are influential in such areas as learning to cooperate with others, gaining popularity, and

developing interactions

Cultural Influences

Humans have the ability to evolve culture. Culture is composed of behaviors, ideas, attitudes, values, and traditions shared by a group.

Variation Across Culture

Cultures differ. Each culture develops norms - rules for accepted and expected behavior. Men holding hands in Saudi Arabia is the norm (closer personal space), but not in American culture

▼ Sex or Gender

▼ Sex

- Chromosomes
- Biological
- Hormones
- Organs
- Not as "black and white" as once believed

▼ Gender

- Societal characteristics
- Tradition based
- Expected roles and behaviors
- Feminine or Masculine

Biology of Sex

Biological sex is determined by the twenty-third pair of chromosomes. If the pair is XX, a female is produced. If the pair is XY, a male child is produced

Sexual Differentiation

In the mother's womb, the male fetus is exposed to testosterone (because of the Y chromosome), which leads to the development of male genitalia.

If low levels of testosterone are released in the uterus, the result is a female.

Sexual differentiation is not only biological but also psychological and social.

However, genes and hormones play a very important role in defining gender, especially in altering the brain and influencing gender differences as a result.

Gender Roles

Our culture shapes our gender roles — expectations of how men and women are supposed to behave. (Vary over time and place)

Gender Identity — means how a person views himself or herself in terms of gender. (Different than orientation)

3.2 - Prenatal Development and The Newborn

Prenatal Development

A zygote is a fertilized cell with 100 cells that become increasingly diverse. At about 14 days, the zygote turns into an embryo.

At 9 weeks, an embryo turns into a fetus. Teratogens are chemicals or viruses that can enter the placenta and harm the developing fetus.

The last trimester is where a lot of brain development happens

The Competent Newborn

Infants are born with reflexes that aid in survival, including the rooting reflex which helps them locate food

Offspring cries are important signals for parents to provide nourishment. In animals and humans, such cries are quickly attended to and relieved.

Cognitive Development in the Newborn

Investigators study infants becoming habituated to objects over a period of time. Infants pay more attention to new objects than habituated ones, which shows they are learning.

Infancy and Childhood

Infancy and Childhood span from birth to the teenage years. During these years, the individual grows physically, cognitively, and socially.

Developing Brain

The developing brain overproduces neurons. Peaking around 28 billion at 7 months, these neurons are pruned to 23 billion at birth. The greatest neuronal spurt is in the frontal lobe enabling the individual to think rationally.

▼ Developmental Disorders

▼ PKU

- Genetic Disorder
- May cause developmental delays if not treated with appropriate diet from birth

▼ Down's Syndrome

- Genetic Disorder
- Extra 21st Chromosome
- Not treatable

Maturation

The development of the brain unfolds based on genetic instructions, causing various bodily and mental functions to occur in sequence - standing before walking, babbling before talking - this is called maturation.

Maturation sets the basic course of development, while experience adjusts it.

Motor Development

First, infants begin to roll over. Next, they sit unsupported, crawl, and finally walk. Experience has little effect on this sequence(genetic/nature).

Maturation and Infant Memory

The earliest age of conscious memory is around 3.5 years. A 5-year-old has a sense of self and increased long-term memory, thus the organization of memory is different from 3-4 years.

Cognitive Development

Piaget believed that the driving force behind intellectual development is our biological development amidst experiences with the environment. Our cognitive development is shaped by the errors we make.

Schemas

Schemas are mental molds into which we pour our experiences.

"Think outside the box". Schemas are the box.

Assimilation and Accommodation

How we learn new stuff

Assimilation (ss=same schema, fits into the box) involves incorporating new experiences into our current understanding (schema).

Accommodation: The process of adjusting a schema and modifying it is called accommodation (cc=change/create, new box).

3.3

How does thinking change between kindergarten and high school?

- ▼ What matters more, how we develop cognitively or socially?

Cognitively, because you need to have the basic problem solving and decision-making skills in order to function throughout the day

Original Model of Development Activity

3.4 - Piaget's Theory and Current Thinking

Stages of Cognitive Development

- ▼ Stages of Cognitive Development

- ▼ Sensorimotor Stage

In the sensorimotor stage, babies take in the world by looking, hearing, touching, mouthing, and grasping. Children younger than 6 months of age do not grasp object permanence; objects out of sight are out of mind

- ▼ Preoperational Stage

Piaget suggested that from 2 years old to about 6-7 years old, children are in the preoperational stage- too young to perform mental operations.

preschool-early school

going by senses

- ▼ Egocentrism

Piaget concluded that preschool children are egocentric. They can not perceive things from another's point of view.

The opposite of empathy

▼ Theory of Mind

Preschoolers, although still egocentric, develop the ability to understand another's mental state when they begin forming a theory of mind

They start thinking of others

▼ Concrete Operational Stage

In concrete operational stage, given concrete materials, 6-7 year olds grasp conservation problems and mentally pour liquids back and forth into glasses of different shapes conserving their quantities.

Children in this stage are also able to transform mathematical functions

▼ Formal Operational Stage

Around age 12, our reasoning ability expands from concrete thinking to abstract thinking. We can now use symbols and imagined realities to systematically reason

Reflecting on Piaget's Theory

Piaget's stage theory has been influential globally, validating a number of ideas regarding growth and development in many cultures and societies.

However, today's researchers believe

1. Development is a continuous process
2. Children express their mental abilities at an earlier age
3. Formal logic is a smaller part of cognition

Lev Vygotsky

Social interaction/culture as key to development

- Zone of proximal development (ZPD)

- Scaffold learning to promote independent thought
- Private speech (language) shapes cognitive development
 - Piaget: thinking shapes language
- Emphasizes role of teacher in cognitive development
 - Piaget emphasized self-discovery/trial and error

Social Development

Stranger Anxiety is the fear of strangers that develops around 8 months. This is the age at which infants form schemas for familiar faces and cannot assimilate a new face.

Origins of Attachment

Harlow (1971) showed that infants bond with surrogate mothers because of bodily contact and not because of nourishment

- Contact comfort

Like bodily contact, familiarity is another factor that causes attachment. In some animals (goslings), imprinting (Lorenz) is the cause of attachment.

3.5 - Social Bonding

- ▼ What is the most lasting way parents/caregivers affect children?

The way they project their emotions onto the child and how effectively they are able to role model good behavior. Parental financials can also affect children.

Attachment Differences

Placed in a strange situation, 60% of children express secure attachment, ie., they explore their environment happily in the presence of their mothers. If the mother leaves,

they show distress

The other 30% show **insecure attachment**. These children cling to their mothers or caregivers and are less likely to explore the environment.

Secure attachment - trust environment

Insecure attachment - do not trust

Bonding

Secure Attachment

Relaxed and attentive caregiving becomes the backbone of secure attachment

Insecure Attachment

Harlow's studies showed that monkeys experience great anxiety if their terry-cloth mother is removed

Stages of Attachment

Indiscriminate: up to 3 months

Preference for certain people but accepting of anyone: after 4 months

Attachment to caregiver: 7-8 months

Multiple attachments: after 9 months

Deprivation of Attachment

Critical periods from 6-24 months during period of attachment

▼ What happens when circumstances prevent a child from forming attachments?

In such circumstances children become:

1. Withdrawn
2. Frightened
3. Unable to develop speech

Prolonged Deprivation

If deprived of parental or caregiving support for an extended period of time, children are at risk for physical, psychological, and social problems, including alterations in brain serotonin levels.

Separation Anxiety

Separation anxiety peaks at 13 months of age, regardless of whether the children are home or sent to day care.

Child Rearing Practices

Authoritarian —> Parents impose rules and expect obedience

Permissive —> Parents submit to children's demands

Authoritative —> Parents are demanding but responsive to children

Authoritative Parenting

Authoritative parenting correlates with social competence - other factors like common genes may lead to an easy-going temperament and may invoke an authoritative parenting style

3.6 - Morality

Developing Reasoning Power

According to Piaget, adolescents can handle abstract problems, i.e., they can perform *formal operations*. Adolescents can judge good from evil, truth and justice, and think about God in deeper terms.

Developing Morality

Kohlberg (1981, 1984) sought to describe the development of moral reasoning by posing moral dilemmas to children and adolescents, such as "Should a person steal medicine to save a loved one's life?" He found stages of moral development.

Moral Thinking

1. Preconventional Morality: Before age 9, children show morality to avoid punishment or gain reward.
2. Conventional Morality: By early adolescence, social rules and laws are upheld for their own sake.
3. Postconventional Morality: Affirms people's agreed-upon rights or follows personally perceived ethical principles.

Gilligan and Moral Development

- Focus on caring as opposed to justice (Kohlberg)
- Level One
 - the perception of survival of the self, this level is described as the individual moving from selfish to responsible
- Level Two
 - The second level associates self-sacrifice with goodness—the individual finds a place within the given structure of society.
- Level Three
 - woman finds truth in the understanding of herself and a realization of the consequences of her actions