

Developmental Psychology

Nature vs. Nurture
Development

Developmental Psychology

- Key Issues in Development
- Genetics & Heredity
- Cultural Influences on Behavior
- Studying Development
- Physical Development
- Cognitive Development
- Moral Development
- Social & Emotional Development
- Gender

Key Issues in Development

- Nature vs. Nurture
 - How much do heredity and environment influence development?
- Continuity vs. Stages/Discontinuity
 - Is development gradual or does it happen in stages?
- Stability vs. Change
 - Do traits (like those of personality) persist throughout life or do they change as we grow?

Genetics & Heredity

- Behavior Genetics
 - Study human differences and weigh the effects and interplay of heredity and environment
- Molecular Genetics
 - Studies structure and function of genes
 - Seeks to identify certain genes which influence behavior
- Evolutionary Psychology
 - Understand how behavior helps us to survive
 - Examine natural selection and mutations

Genetics & Heredity

- **DNA (Deoxyribonucleic Acid)**
 - molecule containing genetic information
 - Genes
 - segments of DNA that make up chromosome; capable of synthesizing a protein
 - Chromosomes
 - threadlike structures made of DNA molecules that contain the genes
 - Genome
 - Complete instructions for making an organism

Genetics & Heredity

- **Genes**

- Heterozygous vs. Homozygous

- Homozygous: Identical forms of a particular gene
 - Heterozygous: Different forms of a particular gene

- Dominant vs. Recessive

- Dominant: Gene which is expressed if heterozygous
 - Recessive: Hidden gene, which is not expressed in a heterozygous gene (expressed only if homozygous)

- Genotype vs. Phenotype

- Genotype: genetic makeup of a trait of an individual
 - Phenotype: physical expression of the gene

Genetics & Heredity

- **Gene-Responsible Abnormalities**

- Tay-Sachs Syndrome

- progressive loss of nervous function and death in a baby

- Albinism

- failure to produce or store pigment

- Phenylketonuria (PKU)

- severe, irreversible brain damage unless people consume a diet low in phenylalanine; lack enzyme to process that amino acid

Genetics & Heredity

- **Gene-Responsible Abnormalities**
 - Huntington's Disease
 - dominant gene defect, degeneration of the nervous system
 - Sex-Linked Traits
 - Color-Blindness
 - Recessive gene on X chromosome
 - more common in males; can't see colors

Genetics & Heredity

- **Chromosomal Abnormalities**

- Turner's Syndrome

- Female with one X chromosome only; typically short with webbed neck, no ovaries, no secondary sex characteristics; certain cognitive deficits

- Klinefelter's Syndrome

- males with XXY; typically no secondary sex characteristics, breast tissue develops

- Down Syndrome

- 3 copies of chromosome 21; mental retardation

Genetics & Heredity

- **Heritability**

- proportion of variation among individuals due to genetic causes
- Heritability for identical twins would have to be zero

Genetics & Heredity

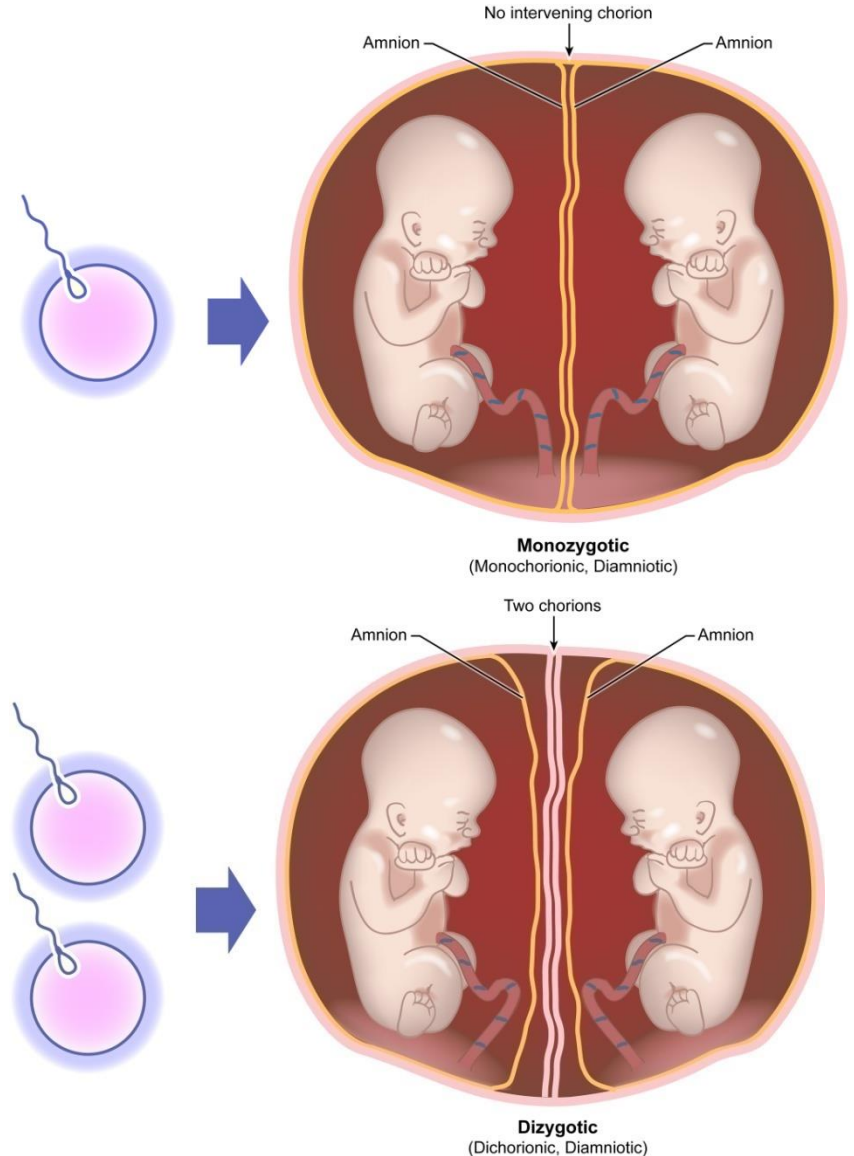
- **Twins**

- **Monozygotic Twins**

- Identical twins
- 1 egg and 1 sperm
- Share 100% genes

- **Dizygotic Twins**

- Fraternal twins
- 2 eggs and 2 sperm
- Share 50% genes



Cultural Influences on Behavior

- **Culture**

- Enduring behaviors, ideas, attitudes, values, and traditions shared by a group of people and transmitted from one generation to the next
- Norms: understood rules for accepted and expected behavior; prescribe “proper” behavior
 - Ex: Personal Space
- Individualism vs. Collectivism

Studying Development

- Twin Studies
 - Compare identical and fraternal twins
 - Compare identical twins separated at birth
- Adoption Studies
 - Compare biological and adoptive relatives

Studying Development

- Longitudinal Study
 - Follows same group of people for a long time
- Cross-Sectional Study
 - Evaluate different age groups at the same time
- Cohort-Sequential Study
 - Age groups assessed multiple times
 - Cross between longitudinal & cross-Sectional
- Retrospective Study
 - Case studies that reconstruct life changes

Physical Development

- **Prenatal Development**

- Zygote

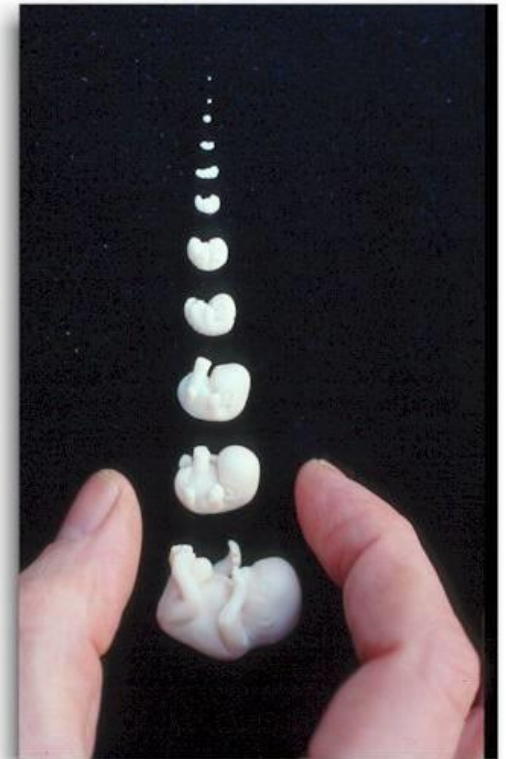
- Fertilized egg; rapid cell division
 - First 2 weeks after conception

- Embryo

- Organs start to develop
 - About 2 weeks to 2 months

- Fetus

- Organs become more refined
 - About 2 months until birth



Physical Development

- **Prenatal Development**
 - Teratogens: agents such as viruses or drugs that can cause harm during prenatal development
 - Ex: Alcohol & Fetal Alcohol Syndrome (FAS)

Physical Development

- **Neonatal Reflexes**
 - simple, automatic, inborn responses
 - Rooting Reflex
 - turn when cheek was touched
 - Sucking Reflex
 - suck things put in mouth
 - Swallowing Reflex
 - contraction of throat muscles
 - Palmar Reflex
 - grasping; close fingers around object

Physical Development

- **Neonatal Reflexes**
 - Moro Reflex
 - startle to loud noise
 - Babinski Reflex
 - fan toes when foot is stroked

Physical Development

- **Brain Development**

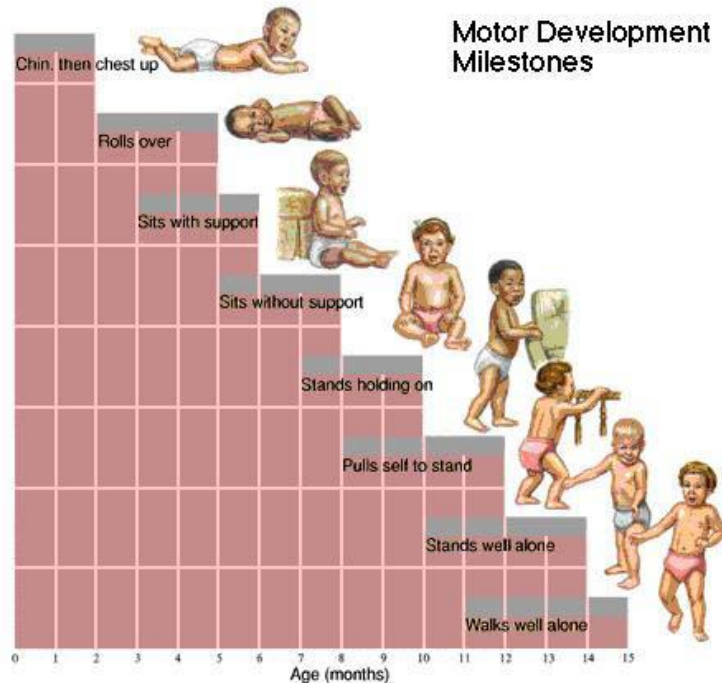
- Habituation: decreasing responsiveness with repeated stimulation; as infants gain familiarity with a visual stimulus, their interest wanes and they look away sooner
 - Shows early negative correlation with intelligence (as habituation time increases, IQ decreases)
- Maturation: biological growth processes that enable orderly changes in behavior, relatively uninfluenced by experience

Physical Development

- **Motor Development**

- Behaviors reflect maturing nervous system and are NOT imitation.

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Physical Development

- **Adolescence**

- Transition from childhood to adulthood

- Puberty

- Primary Sex Characteristics: reproductive organs and genitals

- Secondary Sex Characteristics: non-reproductive features associated with sexual maturity

- Menarche: female's first menstruation

- Spermarche: males' first ejaculation

Physical Development

- **Aging**

- Physical capabilities peak in mid-20s
- As we age, neural processes slow, reproductive function declines, degenerative diseases more likely
 - Menopause: cessation of ability to reproduce
 - Less likely to get minor illness, but more likely to develop long-term illness
- Decline in sensory abilities

Physical Development

- **Aging**

- Alzheimer's Disease: progressive and irreversible brain disorder characterized by gradual deterioration of memory, reasoning, language, and finally physical functioning
- Parkinson's Disease: degenerative disease of the brain (central nervous system) that often impairs motor skills (tardive dyskinesia), speech, and other functions

Physical Development

- **Aging**

- Crystallized Intelligence: accumulated knowledge and verbal skills
 - Increases with age
- Fluid Intelligence: ability to reason speedily and abstractly
 - Decreases with age

Cognitive Development

- **Jean Piaget's Stages of Cognitive Development**
 - Schemata
 - Preexisting mental frameworks that organize and interpret information and changes with exposure to new information
 - Adaptation
 - Assimilation: interpretation of new experiences in terms of current understanding (schemata)
 - Accommodation: adapting current understandings (schemata) to incorporate new info

Cognitive Development

- **Jean Piaget's Stages of Cognitive Development**
 - Stage 1: Sensorimotor (0-2 years)
 - Infants learn by looking, hearing, touching, grasping, and putting things in their mouths
 - Object Permanence: knowing that objects continue to exist even when out of sight
 - Stranger Anxiety: fear of unfamiliar people
 - indicates ability to differentiate among people they know and don't know

Cognitive Development

- **Jean Piaget's Stages of Cognitive Development**
 - Stage 2: Preoperational (2-7 years)
 - Use of symbols (including language), clearer sense of time, pretend and creative play
 - Egocentrism: seeing world from their own perspective only
 - Theory of Mind: the understanding of the mental states of others, including their intentions, desires, beliefs, emotions
 - Centration: looking at only one aspect of a problem

Cognitive Development

- **Jean Piaget's Stages of Cognitive Development**

- Stage 3: Concrete Operational (7-12 years)

- Can use simple logic; egocentrism is no longer demonstrated
 - Conservation: principle that properties such as mass, volume, and number remain the same despite changes in the forms of the objects
 - Reversibility: awareness that actions can be reversed
 - Classification: idea that one set can include another; can master hierarchical organization

Cognitive Development

- **Jean Piaget's Stages of Cognitive Development**
 - Stage 4: Formal Operational (12+ years)
 - Can engage in abstract or hypothetical thinking

Cognitive Development

- **Lev Vygotsky's Sociocultural Theory of Cognitive Development**
 - Internalization
 - absorbing information from a specified social environmental context
 - children learn from interactions with others
 - Zone of Proximal Development (ZPD)
 - range between the level at which a child can solve a problem alone and with the assistance of adults
 - Role of Mentors & Scaffolding

Moral Development

- **Lawrence Kohlberg's Theory of Moral Development**
 - Preconventional Morality
 - Avoid Punishment, Gain Rewards
 - Self-Interests, Fair Deals
 - Conventional Morality
 - Good Intentions and Interpersonal Relationships
 - Maintain Social Order
 - Postconventional Morality
 - Society's Welfare, Social Contract
 - Universal Principles, Justice

Moral Development

- **Criticisms of Kohlberg's Theory**
 - Carol Gilligan brought up the differences between males and females in terms of moral development which makes women appear to be less moral
 - Women rarely reach highest stages of morality because they think about caring for others rather than the abstract ideas focused on mostly by men
 - Other critics stress that we react differently in different situations, not consistently
 - Theory favors individualistic societies

Social & Emotional Development

- **Awareness of Self and Others**

- Self-Awareness: consciousness of oneself as a person

- “Rouge Test”

- Self-Concept: understanding and evaluation of who we are

- Social Referencing: observing behavior of others in social situations to obtain information or guidance

Social & Emotional Development

- **Temperament**

- Natural predisposition to show a particular mood; excitability; genetically determined

- Easy

- Calm, happy, adaptable; regular eating and sleeping patterns; do well in new situations

- Difficult

- Fussy; irregular eating and sleeping patterns; not adaptable; fearful of new people and situations; easily upset; intense in reactions

- Slow to Warm Up

- Inactive, reflective; tend to withdraw or react negatively to novelty; reactions become more positive with time

Social & Emotional Development

- **Attachment**

- John Bowlby

- Attachment: emotional tie with another person; especially between children and their caregivers

- Harry Harlow

- Body Contact vs. Nourishment
 - Studies with Rhesus Monkeys

Social & Emotional Development

- **Attachment**

- Mary Ainsworth

- Strange Situation

- Secure Attachment

- » when mother left, child was upset; comforted when mother returned

- Anxious-Resistant/Anxious-Ambivalent

- » when mother left, child was much more upset; not comforted by mother's return, wanted to be comforted and punish the mother at the same time

- Anxious-Avoidant

- » when mother left, child was less concerned; when mother returned, child was not concerned

Social & Emotional Development

- **Diana Baumrind's Parenting Styles**
 - Authoritarian
 - Strict; high expectations; highly controlling; emphasize obedience to authority; very demanding
 - Authoritative
 - moderate; set limits; rely on natural consequences; high expectations
 - Permissive
 - indulgent; accepting and warm; allow children to set their own rules, schedules, and activities

Social & Emotional Development

- **Parenting Styles**

- Uninvolved

- demand little; respond minimally; might entail neglect and rejection

Social & Emotional Development

- **Erik Erikson's Stages of Psychosocial Development**

- Stage 1: Trust vs. Mistrust (0-1)

- begin to trust others based on consistency of caregiver(s)

- Stage 2: Autonomy vs. Shame & Doubt (1-3)

- begin to assert their independence

- Stage 3: Initiative vs. Guilt (3-6)

- plan activities, make up games, initiate activities with others

Social & Emotional Development

- **Erik Erikson's Stages of Psychosocial Development**
 - Stage 4: Industry vs. Inferiority (6-12)
 - develop sense of pride in accomplishments
 - Stage 5: Identity vs. Role Confusion (Adolescence)
 - begin to look at career, explore possibilities, begin to form identity based upon outcome of exploration

Social & Emotional Development

- **Erik Erikson's Stages of Psychosocial Development**

- Stage 6: Intimacy vs. Isolation (Young Adulthood)

- relationships leading toward longer commitments

- Stage 7: Generativity vs. Stagnation (Middle Adulthood)

- develop sense of being a part of the bigger picture; give back to society

- Stage 8: Integrity vs. Despair (Late Adulthood)

- contemplate accomplishments and life as a whole

Social & Emotional Development

- **James Marcia's Statuses of Identity Achievement**
 - Crisis vs. Commitment
 - Crisis: time of upheaval where old values or choices are being reexamined
 - Commitment: outcome of a crisis; commitment to a particular identity

Social & Emotional Development

- **James Marcia's Statuses of Identity Achievement**
 - Identity Diffusion
 - no crisis nor commitment
 - Identity Foreclosure
 - commitment, no crisis
 - Identity Moratorium
 - crisis, no commitment
 - Identity Achievement
 - crisis & commitment

Social & Emotional Development

- **Adolescent Social Issues**

- Imaginary Audience/Spotlight Effect: overestimating others' noticing and evaluating our appearance, performance, and blunders
- Personal Fable: form of egocentrism normally exhibited during early adolescence, and it is characterized by an over-differentiating of one's experiences and feelings from others to the point of assuming those experiences are unique from those of others

Social & Emotional Development

- **Kübler-Ross' Stages of Grieving**

- 5 Stages of Grieving

- Denial

- Anger

- Bargaining

- Depression

- Acceptance

- Criticized because not all terminal patients go through all stages or in that particular order

Gender

- Gender vs. Sex
 - Gender is culturally and socially determined
 - Sex is biologically determined
- Gender Identity
 - Sense of being male or female
- Gender Role
 - Sets of expectations that prescribe how males and females should act

Gender

- Androgyny
 - Presence of desirable masculine and feminine characteristics
- Physical Determinants of Gender
 - Chromosomes
 - X Chromosome
 - Women have 2; Men have 1
 - Y Chromosome
 - Women have none; Men have 1
 - Hormones
 - Estrogen vs. Testosterone

Gender

- **Gender Development**

- Gender-Typing: acquisition of masculine or feminine role

- Gender Schema Theory

- children form a schema of gender that filters their perceptions of the world and influences behavior

- Social Learning Theory

- children observe and imitate to learn to behave, and are reinforced or punished for efforts

- Oedipal/Electra Complex

- children identify with their same-sex parent after unconscious conflict involving the opposite-sex parent