

Chapter 11

Human development across the lifespan

Phases of Prenatal Development

1. **Germinal stage** → **first 2 weeks (zygote)**

- a. Conception, implantation, formation of placenta (which is a membrane that protects the human development)
 - i. During this stage, rapid cell division occurs, and the mass of cells migrates to the uterus and begins to implant into the uterine wall, forming a placenta during the implantation process.
 - ii. The placenta is a structure that allows oxygen and nutrients to pass into the fetus from the mother's bloodstream and bodily wastes to pass out to the mother.

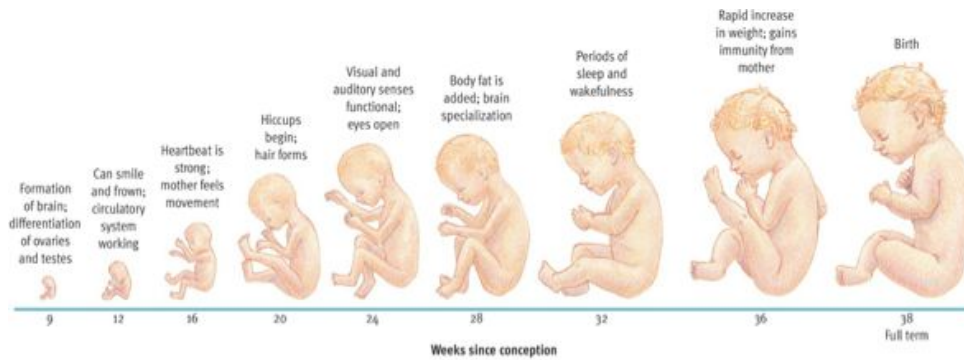
2. **Embryonic stage** → **2 weeks - 2 months**

- a. Formation of vital organs and systems
- b. rapid development - vital organs are functioning at the end of this stage)
 - i. The embryonic stage lasts from two weeks to two months and is the period when most of the vital organs and bodily systems such as the heart, spine, and brain emerge. The embryonic period is a time of great vulnerability; if anything interferes with development during this time period, effects can be devastating.

3. **Fetal stage** → **2 months- Birth**

- a. Bodily growth continues, movement capability begins, brain cells multiply
 - i. The fetal period lasts from two months to birth. During the early parts of this stage, the muscles and bones begin to form. The body continues to grow and function, with sex organs developing in the third month and brain cells multiplying during the final three months.
- b. Age of viability
 - i. Somewhere between 22 and 26 weeks, the age of viability is reached; when the baby could survive if born prematurely. At 22 or 23 weeks, chances for survival are slim, but by 26–28 weeks chances improve to a survival rate of about 85%.
- c. (Fetus - tremendous growth, major brain development first 15 weeks)

22 weeks is the earliest we know if the fetus has survived – medical advancements could potentially detect this earlier in the future



Environmental Factors and Prenatal Development

- Maternal drug use (page 464 teratogen "drugs that can harm or increase risk of complications at birth") (certain teratogen affect certain areas during development; limbs, brain, muscle growth etc.)
 - Tobacco, alcohol, prescription and recreational drugs (marijuana)
 - - Severe maternal malnutrition is linked to increased risk of birth complications and neurological problems in the newborn. Moderate maternal malnutrition has been shown to have negative effects for many years after birth. Research links maternal malnutrition to vulnerability, schizophrenia, and other psychiatric disorders in adolescence and early adulthood.
 - Fetal alcohol syndrome
 - - Maternal drug use can significantly impact a developing baby, even if the drugs are legal, like alcohol and cigarettes. Many drugs, both prescription and recreational, are linked to birth defects. Problems can even be caused by some over-the-counter drugs.
 - - Fetal alcohol syndrome, one of the leading causes of mental retardation, is a collection of congenital (inborn) problems associated with excessive alcohol use during pregnancy. Problems include microcephaly, heart defects, irritability, hyperactivity, and delayed mental and motor development. FAS is also related to increased incidence of depression, suicide, and criminal behaviour in adulthood. Many children don't meet the criteria for a diagnosis of FAS but are still impaired due to their mother's drinking. While degree of impairment has been shown to be related to the amount of alcohol consumed by a pregnant woman, current studies suggest that even normal social drinking can have enduring negative effects on children, including deficits in IQ, reaction time, motor skills, attention span, and math skills, as well as impulsive, antisocial, and delinquent behaviour.
- Maternal illness and exposure to toxins
 - Rubella, syphilis, mumps, genital herpes, AIDS, severe influenza
 - - Maternal illness can also interfere with prenatal development; the nature of the damage depends, in part, on when the mother contracts the illness.
 - Prenatal health-care

Longitudinal vs. cross-sectional designs

- Cross Sectional studies compare groups of participants of differing age at a single point in time. Cross-sectional studies are easier, quicker, and cheaper
- while longitudinal studies observe one group of participants repeatedly over time. Longitudinal designs are more sensitive to developmental influences,

Thomas, Chess & Birch

- Were the first to begin a longitudinal study of temperament, an individual's characteristic mood, activity level, and emotional reactivity. They found that temperamental individuality is established by about 2–3 months of age,

3 basic temperamental styles

- easy – 40% : easy babies were happy, regular in sleep and eating, adaptable, and not readily upset
- slow-to-warm-up – 15%: slow-to-warm-up children were less cheery, less regular in sleep and eating, and slow adapting to change, with moderate reactivity
- difficult – 10% : were glum, erratic in sleep and eating, resistant to change, and relatively irritable
- mixed – 35%
- stable over time : indicated that difficult children developed more emotional problems than other children, and temperament was generally stable over time

Kagan & Snidman

Inhibited vs. uninhibited temperament

- Inhibited – 15–20% : inhibited children exhibiting shyness, timidity, and wariness of the unfamiliar
- uninhibited – 25–30% : uninhibited children exhibiting less restraint with regard to the unfamiliar and little trepidation.
- stable over time, genetically based : these characteristics are stable over time and may have a genetic base. Current research shows that children who exhibit an inhibited temperament in their second year of life are more likely to develop problems with anxiety during adolescence.

Attachment Patterns & Theories

- Separation anxiety : emotional distress seen in many infants when they are separated from people with whom they have formed an attachment
- Ainsworth : developed a research paradigm to study attachment using separation anxiety as a measure

The strange situation and patterns of attachment

- **Secure:** playing and exploring comfortably when mom is present, becoming visibly upset when she leaves, and calming quickly upon her return. securely attached children tend to become resilient, competent toddlers, with high self-esteem. In preschool, they show more persistence, curiosity, self-reliance, and leadership; they also get along better with peers. In middle childhood, they display better social skills and have richer friendship networks. Research also suggests that early attachment patterns set the tone for adult romantic relationships.

- **Anxious-ambivalent:** show anxiety even when mom is near and protest excessively when she leaves, but are not particularly comforted when she returns
- **Avoidant:** some babies sought little contact with their mothers and were not distressed when she left
- **Disorganized/disoriented:** Linked to abusive childhood

Developing secure attachment

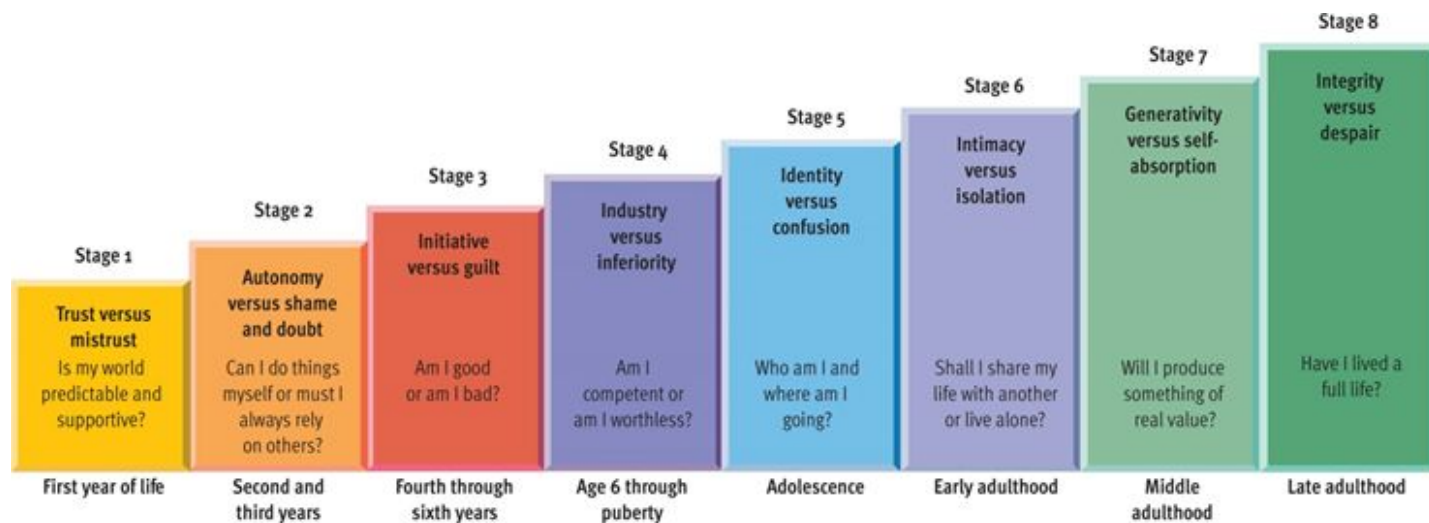
- Bonding at birth: appear to be related to the quality of interactions between parent and child over time. Bonding during the first few hours after birth does not appear to be crucial to secure attachment. Day care is not harmful to children's attachment relationships, and there is evidence that there may be beneficial effects of daycare on social development in children from deprived backgrounds.
- cross-cultural research shows that attachment is a universal feature of human development, cultural variations in childrearing practices can impact the patterns of attachment seen in a society
- Evolutionary perspectives on attachment: Jay Belsky asserts that children have been programmed by evolution to respond to sensitive or insensitive care with different attachment patterns.

Development stages → the personality theories :

- Stage theories, 3 components
 - Stage theories assume that individuals must progress through specified stages in a particular order because each stage builds on the previous one. They also assume that progress through the stages is strongly related to age, and that development is marked by major discontinuities that bring about dramatic changes in behaviour.
 - progress through stages in order
 - Progress through stages related to age
 - major discontinuities in development

Erik Erikson (***)**

- There are eight stages that span the lifespan
 - Erik Erikson, in the 1960s, proposed a theory of personality development based on stages. Many theories of development describe development in terms of stages, or developmental periods during which characteristic patterns of behaviour are exhibited and certain capacities become established.
 - Erikson theorized that there are eight stages, spanning the lifespan, in personality development. He held that there is a specific psychosocial crisis during each stage, the outcome of which determines the balance between opposing polarities in personality.
 - Psychosocial crises determining balance between opposing polarities in personality



(Know the * Stages Defintionally)

Piaget's 4 stages and their milestones/core issues

- Assimilation/accommodation
 - 4 stages and major milestones
 - Sensorimotor
 - First of the four stages Piaget uses to define cognitive development. Piaget designated the first two years of an infant's life as the sensorimotor stage.
 - During this period, infants are busy discovering relationships between their bodies and the environment. The child relies on seeing, touching, sucking, feeling, and using their senses to learn things about themselves and the environment.
 - Through countless informal experiments, infants develop the concept of separate selves, that is, the infant realizes that the external world is not an extension of themselves.
 - Infants realize that an object can be moved by a hand and develop notions of displacement and events. An important discovery during the latter part of the sensorimotor stage is the concept of "object permanence".
 - Object permanence is the awareness that an object continues to exist even when it is not in view. In young infants, when a toy is covered by a piece of paper, the infant immediately stops and appears to lose interest in the toy (see figure above). This child has not yet mastered the concept of object permanence. In older infants, when a toy is covered the child will actively search for the object, realizing that the object continues to exist.

■ Preoperational

- children engage in symbolic thought, with characteristic flaws in their reasoning such as centration, the tendency to focus on just one feature of a problem, and egocentrism, the limited ability to share another's viewpoint. This results in animism, the belief that all things are living, just like oneself.

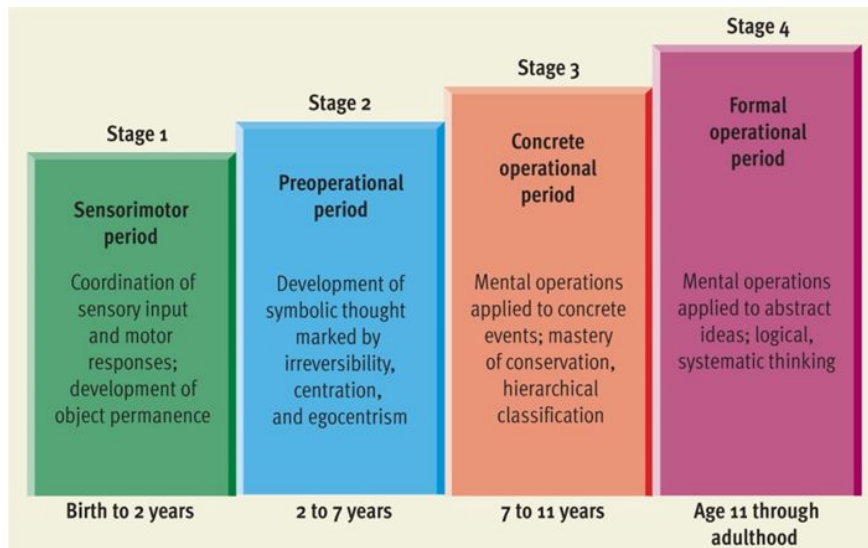
■ Concrete operational

- characterized by the ability to perform operations with symbolic thought such as reversing or mentally undoing an action. Children in the concrete operational stage are able to focus on more than one feature of a problem simultaneously, a process called decentration. These new cognitive skills lead to conservation, or recognizing that amount of a substance does not change just because appearance is changed

■ formal operational

- marked by the ability to apply operations to abstract concepts such as justice, love, and free will.

Piaget's theory of cognitive development identifies four stages marked by fundamentally different modes of thinking through which youngsters evolve. The approximate age norms and some key characteristics of thought at each stage are summarized here.



Kohlberg (pg 485)

Reasoning as opposed to behaviour

- Moral dilemmas

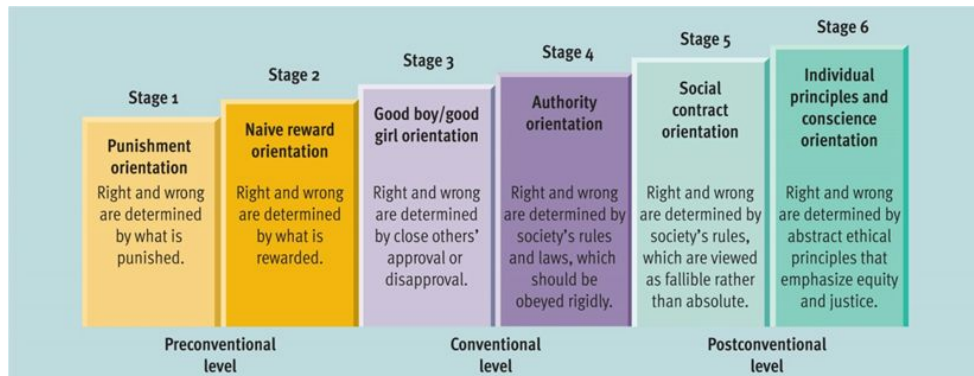
–Measured nature and progression of moral reasoning

–3 levels, each with 2 sublevels

- Preconventional: Someone who determines morality from the benefit/punishment of outcome

- Conventional: knowing getting along with others and social order, right and wrong in society

- Postconventional: Knowing getting along with society but can think beyond it. Higher moral reasoning. (people who break laws to save people)



Adolescent miles

- Pubescence: the term used to describe the two-year span preceding puberty during which the changes leading to physical and sexual maturity take place

Puberty:

- Secondary sex characteristics
 - Guys voice changing, facial hair .. etc
 -
- Primary sex characteristics (the primary sex characteristics, the structures necessary for reproduction, develop fully)
 - Menarche
 - Sperm production

Maturation: early vs. late

- Sex differences in effects of early maturation

- Maturing early for girls = negative effect
- maturing early for guys = advantage

Search for Identity

Erik Erikson

- Key challenge – forming a sense of identity: the key challenge of adolescence is to form a clear sense of identity

James Marcia

4 identity statuses

- Foreclosure: a premature commitment to a role prescribed by one's parents
- Moratorium: involves delaying commitment and engaging in experimentation with different roles
- Identity Diffusion: is a state of lack of direction and apathy, where a person does not confront the challenge and commit to an ideology
- Identity Achievement: involves arriving at a sense of self and direction after some consideration of alternative possibilities.

		Crisis	
		Present	Absent
Commitment	Present	Identity achievement (successful achievement of a sense of identity)	Identity foreclosure (unquestioning adoption of parental or societal values)
	Absent	Identity moratorium (active struggling for a sense of identity)	Identity diffusion (absence of struggle for identity, with no obvious concern about it)

The Expanse of Adulthood

Personality development

Social development and family life

Physiological changes

Neural changes

Cognitive changes: indicates that general mental ability remains fairly stable, with small declines in IQ after age 60. Fluid intelligence is more likely to decline with age, while crystallized intelligence remains stable or increases

