Chapter Nine
Life Span Development I

STUDYING DEVELOPMENT

Introduction to Developmental Psychology
Study of age-related changes in behavior and mental processes from conception to death

Topical Approach
Chapter 9: Physical, cognitive, social-emotional
Chapter 10: Moral, personality, grief and death

Chronological Approach
Separated by time periods of life
Developmental Psychology
Chronological Approach

### Table 9.1 LIFE SPAN DEVELOPMENT

<table>
<thead>
<tr>
<th>Stage</th>
<th>Approximate Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal</td>
<td>Conception to birth</td>
</tr>
<tr>
<td>Infant</td>
<td>Birth to 10 months</td>
</tr>
<tr>
<td>Early childhood</td>
<td>18 months to 6 years</td>
</tr>
<tr>
<td>Middle childhood</td>
<td>6-12 years</td>
</tr>
<tr>
<td>Adolescence</td>
<td>12-20 years</td>
</tr>
<tr>
<td>Young adulthood</td>
<td>20-45 years</td>
</tr>
<tr>
<td>Middle adulthood</td>
<td>45-60 years</td>
</tr>
<tr>
<td>Later adulthood</td>
<td>60 years to death</td>
</tr>
</tbody>
</table>

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Theoretical Issues: Ongoing Debates

**Nature versus Nurture**

Nature—development governed by maturation (automatic, genetically predetermined signals) and critical periods (time of sensitivity to specific types of learning)

Nurture—development governed by learning through observation and personal experience

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Theoretical Issues: Ongoing Debates

**Continuity versus Stages**

Continuity—development is continuous, compiling at a relatively uniform pace

Stages—development occurs at different rates, alternating periods of little and rapid change

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Theoretical Issues: Ongoing Debates

**Stability versus Change**
Stability—childhood personality measurements closely predict adult personality
Change—life changes can affect a person’s development from childhood to adulthood

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Theoretical Issues: Ongoing Debates

**Interactionist Perspective and the Biopsychosocial Model**
Most psychologists recognize the importance of both sides of these debates and integrate all approaches to best understand development.

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Research Methods in Developmental Psychology

**Two Common Methods**
Cross-sectional Method
Longitudinal Method
Cross-sectional Research

Cross-sectional Research

Longitudinal Research
Longitudinal Research

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides information about age changes</td>
<td>More expensive and time-consuming</td>
</tr>
<tr>
<td>Increased confidence in results</td>
<td>Restricted generalizability typically smaller sample</td>
</tr>
<tr>
<td>More in-depth information per participant</td>
<td>Over time can drop out over time</td>
</tr>
</tbody>
</table>

Compare the Methods

Why do these two research methods show different results?

![Graph showing reasoning ability over age for cross-sectional and longitudinal methods](image)

PHYSICAL DEVELOPMENT
Prenatal Physical Development

**Conception**
- ovum unites with sperm cell

**Zygote**
- new cell that is created by the union of ovum and sperm

**Proximodistal**
- near to far; internal developing before external

**Cephalocaudal**
- head to tail

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Prenatal Development: Three Stages

**Germinal Period (Zygote)**
- From conception, typically in the fallopian tube, to implantation, typically in the uterus

**Embryonic Period (Embryo)**
- After implantation through the eighth week

**Fetal Period (Fetus)**
- From eight weeks to birth
- Increased growth and “fine detailing”
Major Prenatal Hazards

The first three prenatal months are a critical period in development. Teratogens, such as alcohol and nicotine, are environmental agents that can cross the placental barrier and cause damage during prenatal development. Fetal Alcohol Syndrome (FAS) is a combination of birth defects from maternal alcohol abuse.

Summary Table 3

<table>
<thead>
<tr>
<th>Threats to Prenatal Development</th>
<th>Possible Effects on Embryo, Fetus, Newborn, or Young Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal behavior</td>
<td>Low birth weight, malformations, low development, greater vulnerabilities</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>Decline in birth weight, increased mortality, growth difficulties</td>
</tr>
<tr>
<td>Legal and Legal drugs</td>
<td>低 birth weight, growth difficulties, fetal alcohol syndrome, maternal-hypertension, behavioral and intellectual delays, and death</td>
</tr>
<tr>
<td>Diseases</td>
<td>Birth defects, mental retardation, feast and other malformations, problems with growth and development, Down syndrome, and brain abnormalities</td>
</tr>
</tbody>
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Early Childhood Physical Development

Brain Development
Rapid growth and development prenatally and during the first two years of life

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Early Childhood Physical Development

Motor Development
Initially reflexes (involuntary movements to stimulation), then voluntary control

Sensory and Perceptual Development
Many senses are highly developed at birth, though sense of vision is poor

Visual acuity nears 20/20 at two years

Hearing begins a few months prior to birth (How do we know this?)
Physical Development During Adolescence

Adolescence
Period between childhood and adolescence
Puberty—biological changes during adolescence
Growth spurt
Menarche—onset of menstruation in females
Spermarche—first ejaculation in males

Frontal lobes are not fully mature until the mid-twenties
Synaptic pruning during adolescence
Middle Age Physical Development

<table>
<thead>
<tr>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menopause (45-55 years)</td>
<td>Male climacteric</td>
</tr>
<tr>
<td>Cessation of menstruation</td>
<td>Gradual decline in</td>
</tr>
<tr>
<td>Decreased estrogen production</td>
<td>testosterone and sperm</td>
</tr>
<tr>
<td>Does NOT cause mood swings,</td>
<td>production</td>
</tr>
<tr>
<td>loss of sexual interest, or depression</td>
<td>Can reproduce into their 80s</td>
</tr>
<tr>
<td>Many report relief and</td>
<td>or 90s</td>
</tr>
<tr>
<td>increased libido</td>
<td>May have weight gain,</td>
</tr>
<tr>
<td>Social devaluation of aging</td>
<td>graying or loss of hair,</td>
</tr>
<tr>
<td>women</td>
<td>decreased</td>
</tr>
<tr>
<td></td>
<td>sexual response and muscle</td>
</tr>
<tr>
<td></td>
<td>strength</td>
</tr>
</tbody>
</table>

Late Adulthood Physical Development

Most changes are gradual
- Decreased cardiac output
- Increased blood pressure
- Senses decline—visual acuity, depth perception, hearing, smell, taste
- Ageism—prejudice or discrimination based on physical age

Late Adulthood Physical Development

Cognitive abilities are affected
- information processing speed
- encoding
- retrieval
- Most of memory function is retained
- Accumulation of knowledge can aid in further knowledge acquisition
Late Adulthood Physical Development

Programmed Theory
Aging is genetically controlled

Damage Theory
Accumulated cell and organ damage ultimately causes death

Maximum lifespan
110-120 years

COGNITIVE DEVELOPMENT
Piaget’s Theory

Schema
Basic unit of intellect; cognitive structure of ideas that are affected by experience

Assimilation
Applying existing schemas to new information; new information is incorporated (assimilated) into existing schemas

Accommodation
Adjusting existing schemas or developing new ones to fit with new information

Piaget’s Four Stages
Stages cannot be skipped
Piaget’s Theory

**Major Criticisms**

Underestimated abilities (see the infant imitation to the right)

Underestimated genetic and social/cultural influences
Social-Emotional Development

**Attachment**
- Strong emotional bond with special others that endures over time
- Infants raised in abusive or impersonal environments have social-emotional deficits, as well as physical and mental deficits

**Imprinting**
- Innate form of learning within a critical period that involves attachment to the first large moving object seen

Attachment

As a baby, how did you respond to the presence or absence of your mother or a stranger? This is what was researched using the Strange Situation Procedure (Ainsworth). Based on this line of study, there are four categories of children.
Four Attachment Styles

**Secure**
Caregivers are sensitive and responsive
Most likely to be sociable, competent, cooperative, persistent, enthusiastic

**Avoidant**
Caregivers are aloof and distant

**Anxious/Ambivalent**
Caregivers are inconsistent

Attachment

Harlow monkey studies examined contact comfort, the pleasurable tactile sensations provided by something soft and cuddly that can promote attachment.
Cloth mother surrogates promoted greater emotional security and curiosity than a wire mother surrogate with food.
What is Your Romantic Attachment Style?

1. I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't often worry about being abandoned or about someone getting too close.
2. I am somewhat uncomfortable being close. I find it difficult to trust partners completely or to allow myself to depend on them. I am nervous when anyone gets close, and love partners often want me to be more intimate than is comfortable for me.
3. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn’t really love me or won’t stay with me. I want to merge completely with another person, and this desire sometimes scares people away.

Romantic Attachment Styles

**Secure**
- Easily connect with others
- Believe in lasting relationships
- Perceive others as trustworthy
- Have long-term relationships
- Make desirable partners

**Avoidant**
- Find it hard to trust others and self-disclose
- Block intimacy by being distant
- Rarely find “true love”

**Anxious/Ambivalent**
- Obsessed with their partners
- Smothering, possessive, emotionally demanding

Parenting Styles

Parenting styles affect the development of children. Baumrind identified three parenting patterns:

- Permissive
- Authoritarian
- Authoritative

They differ in control/demandingness and warmth/responsiveness.
Parenting Styles

<table>
<thead>
<tr>
<th>Parenting Style</th>
<th>Description</th>
<th>Example</th>
<th>Potential Effects on Children</th>
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<td>Authoritative high control, low warmth</td>
<td>Parents are strict and demand immediate obedience, often using punishments. Children may feel constrained and may develop behavior problems.</td>
<td>&quot;Stop contesting me, you hear?&quot; leads to immediate punishment.</td>
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Child Temperament

Correlation does not equal causation

A child's temperament may influence parenting style

Child Expectations

Children’s expectations of parental behavior can affect the parenting style

Parental warmth

Most important variable may be warmth versus rejection parents have toward the child

Gender and Cultural Diversity: Understanding Development

Culture may be the most important determinant of development

Human development cannot be studied outside of the sociocultural context

Each culture’s ethnotheories are important determinants of behavior

Culture is largely invisible to its participants