Chapter 6

EARLY CHILDHOOD
AGES 3-6
Physical Development
Growth from Age 3 to 6: Body Growth

- Children grow about 2–3 inches a year and add 5–7 pounds
- Boys slightly taller and heavier than girls
- Primary teeth replace primary baby teeth
- Tooth decay varies by country

LO 6.1 Physical Growth and Change
Growth from Age 3 to 6: Brain Development

- Size of brain increases gradually during early childhood
- Frontal lobe growth is important during preschool years
- Substantial myelination in corpus callosum, cerebellum, reticular formation, & hippocampus

LO 6.2 Brain Development
Four Brain Structures with High Myelination in Early Childhood

In which structures is myelination completed by age 5?

- **Corpus callosum**
  Connects left and right hemispheres of the brain

- **Hippocampus**
  Involved in transfer of information from short-term to long-term memory

- **Cerebellum**
  Controls balance and motor movements

- **Reticular formation**
  Controls attention
Growth from Age 3 to 6: Health and Safety

- Children are less vulnerable to health threats than in earlier years
- Children in developing countries remain vulnerable to some illness and diseases

LO 6.3 Nutrition, Injury, Illness, & Mortality
Map 6.1  Worldwide Mortality Rates and Causes of Death in Children Under Age 5  Which regions of the world have the lowest and highest rates of childhood deaths? How do the causes of death vary by region?
Growth from Age 3 to 6: Health and Safety

- Developing countries face malnutrition as a norm
- Lack of protein experienced by 25% of children
  - Can lead to marasmus and kwashiorkor
- Iron deficiency (anemia) is experienced by majority of children
  - Causes fatigue, irritability, and difficulty sustaining attention
• Developing countries causes of death are
  - Illness, disease, malaria, measles, and pneumonia
  - Malnutrition is responsible for half of early childhood deaths
• Developed countries have vaccinations, adequate food, and medical care

LO 6.3 Nutrition, Injury, Illness, & Mortality
Growth from Age 3 to 6: Health and Safety

- Early childhood a time of high activity
- High rates of injuries
- Most common cause of injury are motor vehicle accidents
- Higher injury rates in developing countries
- Disease a larger problem than injuries

LO 6.3 Nutrition, Injury, Illness, & Mortality
Motor Development: Gross and Fine Motor Skills

- Gross motor skills extend abilities that appeared earlier
  - Some gender differences
  - Boys become better at skills that focus on: strength or size like jumping, throwing a ball
  - Girls become better at body coordination like balancing on one foot.
- Fine motor development allows refinement of skills
  - Drawing shapes, letters, and sentences

LO 6.4 Gross and Fine Motor Abilities
Motor Development: Handedness

LO 6.5 Handedness

- Preferences for handedness can be seen prenatally
- ex: fetus either sucking the right or left thumb.
- Genetics
  - Adopted children resemble biological parents more than adoptive parents
  - Identical twins likely to differ b/c they lie in opposite ways in the uterus and use the other hand.
- Culture
  - Historically left-handedness is considered evil
  Why?
Fun Facts

Cons of being left handed

• Infants are more likely to be born prematurely or experience difficult birth
• Likely to have problems learning to read or verbal learning disabilities
• Lower life expectancy
• More likely to die of an accident

Pros of being left handed

• More likely to show exceptional verbal & math abilities
• Likely to have strong visual & spatial abilities
• Da Vinci, Michaelangelo, Picasso
Cognitive Development
Piaget’s Preoperational Stage

LO 6.6 Piaget’s Preoperational Stage

• Child begins to internalize images and use symbols
• Inability to perform operations
• Including
  ▪ Conservation
  ▪ Classification
  ▪ Egocentrism
  ▪ Animism
Conservation

LO 6.6 Piaget’s Preoperational Stage

- Children lack the ability to understand conservation
- This lack of understanding could be due to
  - Centration—focusing on one aspect of a problem while excluding others
  - Reversibility—reverse an action mentally
### Table

<table>
<thead>
<tr>
<th>Type of Conservation</th>
<th>Modality</th>
<th>Change in Physical Appearance</th>
<th>Average Age Conservation Is Grasped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Number of elements in a collection</td>
<td>Rearranging or dislocating elements</td>
<td>6–7 years</td>
</tr>
<tr>
<td>Substance (mass)</td>
<td>Amount of a malleable substance (e.g., clay or liquid)</td>
<td>Altering shape</td>
<td>7–8 years</td>
</tr>
<tr>
<td>Length</td>
<td>Length of a line or object</td>
<td>Altering shape or configuration</td>
<td>7–8 years</td>
</tr>
</tbody>
</table>

**Figure 6.2  Various Substances Used in Piaget’s Conservation Task** What cognitive limitations in young children lead to mistakes in these tasks? (continued on next slide)
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</thead>
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<tr>
<td>Area</td>
<td>Amount of surface covered by a set of plane figures</td>
<td>Rearranging the figures</td>
<td>8–9 years</td>
</tr>
<tr>
<td>Weight</td>
<td>Weight of an object</td>
<td>Altering shape</td>
<td>9–10 years</td>
</tr>
<tr>
<td>Volume</td>
<td>Volume of an object (in terms of water displacement)</td>
<td>Altering shape</td>
<td>14–15 years</td>
</tr>
</tbody>
</table>

**Figure 6.2 Various Substances Used in Piaget’s Conservation Task** What cognitive limitations in young children lead to mistakes in these tasks? (continued from previous slide)
Egocentrism/Classification

LO 6.6 Piaget’s Preoperational Stage

• Egocentrism

• An aspect of egocentrism is
  ▪ Animism

• Classification
Preoperational Substages

LO 6.6 Piaget’s Preoperational Stage

• Piaget’s preoperational stage is divided into two stages
  ▪ Symbolic function substage—capable of representational thought and using symbols
    – Language and play can represent this stage
  ▪ Intuitive thought substage—capable of asking questions showing curiosity but not why they know things
Evaluating Piaget’s Theory

LO 6.6 Piaget’s Preoperational Stage

• Criticisms of Piaget focuses on two main ideas
  1. Underestimated children’s abilities
     – Studies have shown young children can do conservation task w/smaller items to count.
     – Can perform modified egocentrism task with familiar objects instead of three mountains
     – They figure out what to do to annoy a sibling
  2. Development is more continuous and less stage like
Early childhood is when children have capacity for learning culturally specific skills.

- Can include food preparation, child care, and animal care.
- Developed countries may prepare grocery list, organize, count money, or hold conversations.
Two factors impact differences in cultural learning

- Time apart from families in developed countries
  - ex: child care

- Complexity of adult activity in the economy
  - ex: parents going to work in an office setting doesn't allow for children to participate and learn.
Early Childhood Education

LO 6.9 Preschool Quality

- Traditionally begins at age 7
- Consistently beginning earlier in developed countries
- Developing countries slightly later but changing
Importance of Preschool Quality

LO 6.9 Preschool Quality

• Some effects include
  ▪ Higher verbal skills, stronger performance on memory, and listening comprehension
  ▪ Children from low income families who attend preschool score higher on school readiness
  ▪ Social children are more independent and confident
Importance of Preschool Quality

LO 6.9 Preschool Quality

• Factors impacting quality of preschool
  ▪ Education and training of teachers
  ▪ Class size and child-teacher ratio
  ▪ Age appropriate materials and activities
  ▪ Teacher-child interactions

• Focus for high quality is developmentally appropriate educational practice
Cross Cultural Variation

LO 6.10 Japanese Preschool

- Japanese students score high in math, reading, and science in middle and high school
- Early childhood education doesn’t focus on academics
- Culture stresses group involvement and not academics
Preschool as a Cognitive Intervention

- Early intervention programs focus on cognitive development especially for at-risk children
  - Project Head Start—began in 1965
  - Can receive up to two years of preschool
- Some debate program effectiveness
- Children less likely to repeat a grade or placed in special education

LO 6.11 Early Intervention
Preschool as a Cognitive Intervention

• High Scope Preschool Project
  ▪ Full day, two year intervention program
  ▪ Similar IQ effects as Project Head Start but other long term effects
  ▪ Increased chance of graduating high school and attending college
  ▪ Less likely to become pregnant or arrested
  ▪ Increased income and family stability

LO 6.11 Early Intervention
Figure 6.4   Major Findings of the High Scope Preschool Study  High Scope participants showed better academic performance, IQ scores, and earning potential and were less likely to be arrested later in life than other children. Source: Schweinhart et al., 2005
Language Development
LO 6.12 Advances in Vocabulary and Grammar

• Language continues to progress at a rapid pace
• Cultural variations in fast mapping exist
  ▪ Eastern languages learn verbs first
  ▪ Western languages learn nouns first
• Grammar continues to develop; by age 4 about 90% of children use correct grammar
This is a wug.

Now there is another one.
There are two of them.
There are two _______.

Figure 6.5  Berko’s Language Study  How do the results of this study show young children’s grasp of grammar? Source: Adapted from Berko, 1958
Pragmatics: Social and Cultural Rules of Language

- Pragmatics - the social rules of language
  ex: saying “please” & “thank you”
- Understanding begins through gestures
- By age two some understanding of basic conversation
- By age 4 more sensitive to partners in conversation
Emotional and Social Development
Emotional Regulation

LO 6.14 Emotional Understanding

• Emotional self-regulation important for social relationships
• Extreme emotional expressions decline with age
• Effortful control allows children to focus attention on managing emotions
  ▪ Undercontrol - externalize problems
    ex: using aggression
  ▪ Overcontrol - internalizing problems
    anxiety, depression
Moral Development
LO 6.15 Moral Development

- Sociomoral emotions develop due to awareness of expected behavior for the child’s culture
- Empathy important for moral development
  - Better at perspective taking
  - Promotes prosocial behavior
By age 5, children grasp moral standards of their culture.

Children in India learn that eating beef is wrong.

Some children in US think that eating beef is acceptable.

Cultural differences in what is viewed as moral.
Moral Development

LO 6.15 Moral Development

- Morality can be learned through custom complexes
- Modeling is a variation of custom complexes found in American research
- Children learn by watching others who are rewarded and punished for behaviors
- Moral reasoning has some basic beginnings in early childhood
Gender Development

LO 6.16 Gender Socialization

- Ages 3–4 gender identity intensifies
- Ages 6–7 gender constancy is attained
- Parents and peers play important role in gender socialization
  - Fathers more insistent about gender roles
  - Peers reinforce gender appropriate behaviors
Gender Development

LO 6.16 Gender Socialization

• Gender socialization leads to gender schemas
  ▪ Behaviors and activities categorized as male or female
  ▪ Tendency to confirm schemas and ignore inconsistency

• Self-socialization is maintaining consistency between behavior and schemas
# Parenting Styles and the Two Dimensions of Parenting

<table>
<thead>
<tr>
<th>Responsiveness</th>
<th>Demandingness</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>Authoritative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
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<td></td>
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<td></td>
<td>Low</td>
<td>Permissive</td>
<td>Disengaged</td>
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</table>
## TABLE 6.2 Outcomes Associated With Parenting Styles in White Middle-Class Families

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<tr>
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<th>Authoritarian</th>
<th>Permissive</th>
<th>Disengaged</th>
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</thead>
<tbody>
<tr>
<td>Independent</td>
<td>Dependent</td>
<td>Irresponsible</td>
<td>Impulsive</td>
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<tr>
<td>Creative</td>
<td>Passive</td>
<td>Conforming</td>
<td>Behavior problems</td>
</tr>
<tr>
<td>Self-assured</td>
<td>Conforming</td>
<td>Immature</td>
<td>Early sex, drugs</td>
</tr>
<tr>
<td>Socially skilled</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>
Parenting
LO 6.18 Cultural Variations in Parenting

• Cultural differences in traditional cultures
  ▪ Asian culture—filial piety
  ▪ Latino culture—Respeto/familismo

• Cultures have different forms of warmth and control
Discipline and Punishment

LO 6.18 Cultural Variations in Parenting

• Cultures differ on systems of discipline for misbehavior
  ▪ Western culture may emphasize authoritative approach including time out
  ▪ Japanese emphasizes withdrawal of love and shame

• Culture influences consequences of discipline
Physical punishment (corporal punishment) is common in most parts of the world.

Many studies (western countries) have found detrimental effects of physical punishment.
Physical Punishment and Its Consequences

- U.S. research indicates differences between African American families and white families
- White children = antisocial behavior
  AA children = normal behavior
- Highlights the importance cultural context in children’s response to parents’ behavior
- White/European cultures physical punishment is combined w/anger
- Africa American families it mild & delivered in a calm and stern manner.

LO 6.19 Cultural Variations in Discipline
Child Abuse and Neglect

LO 6.19 Cultural Variations in Discipline

• Physical abuse—physical harm
• Emotional abuse—ridicule and humiliation
• Sexual abuse—sexual contact with a minor
• Neglect—not meeting child’s basic needs
Child Abuse and Neglect

LO 6.19 Cultural Variations in Discipline

• Risk factors: child characteristics
  ▪ Difficult temperament
  ▪ Unusually aggressive

• Risk factors: parental characteristics
  ▪ Poverty
  ▪ Unemployment
  ▪ Single motherhood
  ▪ History of abuse (spousal included)
<table>
<thead>
<tr>
<th>Age</th>
<th>Term</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–2</td>
<td>Lap child</td>
<td>Needs constant care; doted on by others</td>
</tr>
<tr>
<td>3–4</td>
<td>Knee child</td>
<td>Still cared for mainly by mothers, but spends more time with other children</td>
</tr>
<tr>
<td>5–6</td>
<td>Yard child</td>
<td>More time spent with same-sex peers; sometimes unsupervised</td>
</tr>
</tbody>
</table>
Sibling Relationship

LO 6.20 Sibling Relationships

- Sibling relationships include
  - Jealousy
  - Mixed feelings
- Being an only child has shown mixed results
  - Higher self esteem, social maturity, and intelligence
  - Less successful social relationships (American)
Peers and Friends

LO 6.21 Quality of Friendships

• Peer- age mate (person of same age)
• Friend- person with whom you have a valued, mutual relationship
• Tend to see increased gender segregation in early childhood
• Cultural differences in age groups in early childhood peer groups
• Children in West tend to be same age, in developing countries tends to be mixed age groups
Play in Early Childhood

LO 6.21 Quality of Friendships

- Solitary and parallel play decline while cooperative and social play begin to increase
- Increased sex segregation in play
- Increased experience in preschool can lead to increased success in social play
Figure 6.6 Play in Four Cultures Across cultures, play is the most common activity in early childhood. Source: Based on Tudge et al. (2006)
Aggression
LO 6.21 Quality of Friendships

- Instrumental aggression
- Hostile aggression
- Relational aggression
- Physical aggression tends to decline
- Verbal and relational aggression tend to increase
Children watch 1.5–3 hours of television a day
Effects include increased aggressive behavior and susceptibility to advertising
Positive effects include higher language and math skills
Media in Early Childhood

LO 6.22 Media Use

• Electronic gaming is increasing with boys playing more than girls
• More research on music may need to be done