

DEP 4053  
Developmental Psychology

Christine L. Ruva, Ph.D.

## CHAPTER 13: PHYSICAL AND COGNITIVE DEVELOPMENT IN ADOLESCENCE

	<b>Early* Adolescence</b>	<b>Middle Adolescence</b>	<b>Late Adolescence</b>
<b>Age</b>	from beginning of puberty to about age 13	ages 14-16	17 to early adulthood
<b>Developmental Milestones</b>	most of the major physical changes of adolescence and accompanying changes in relationships with parents and peers	increasing independence, preparation for adult occupations or further education	continued preparation for adulthood, often in college or other educational settings

*\*This table is for Michelle and Margot*

### Puberty: Norms & Individual Differences

- Puberty
  
- The clearest markers of this change are:

## Puberty ≠ a single event

- Primary Sexual Organs
- Secondary Sexual Characteristics
- Major growth spurt
- Increases in weight, strength, and endurance.

## What Triggers These Changes?

### *Hormonal Control of Puberty.*

<b>Pituitary gland</b>	A small gland at the base of the brain that plays a major role in regulating other glands' hormonal output.
<b>Hypothalamus</b>	Part of the brain that regulates many body functions, including production of pituitary hormones.
<b>Gonadotropins</b>	Pituitary hormones that affect hormone output by the gonads.
<b>Gonads</b>	The sex glands: Testes in men and ovaries in women.

## Puberty and Body Image

- Who has the most positive self-image?
  - Early maturing boys or Late maturing boys
  - Early maturing in girls or Late maturing girls

## Timing of Puberty and Overall Adjustment

### ■ Early-maturing girls

- Girls who are \_\_\_\_\_ generally have the most positive body image and the greatest feelings of attractiveness.

### ■ Late-maturing boys

### ■ Early-maturing boys

## Puberty and Social Relationships

- Increased interest in opposite sex
- Increased dating and interests in sex may be due to:
  - Conflicts with mothers often increase
    - Who has more conflicts with parents? Late or early maturing children?
    - What are these conflicts due to?

## NEUROLOGICAL CHANGES AT PUBERTY

- **Brain Plasticity**
  
- **The loss of the brain's plasticity has benefits as well as drawbacks:**
  
- **Brain Lateralization or Hemispheric Specialization (HS):**
  - Left Hemisphere:
  
  - Right Hemisphere:
  
  
  - Adults vary in the extent of HS -- Why?
  
- **Decrease in the number of Synapses:**
  - btw 10-14 yrs --

## CHANGES IN THINKING DURING ADOLESCENCE

Major cognitive advances of adolescence include:

- Logical thinking is now applied to \_\_\_\_\_
- Ability to think about relationships \_\_\_\_\_
- Adolescents' thinking becomes even more \_\_\_\_\_

## **Piaget's Theory of Formal Operations**

- Formal operations a set of principles of formal logic on which the cognitive advances of adolescence are based.

### **Piaget's Experiments**

- Piaget had children of different ages conduct science experiments with an apparatus or set of materials to test their reasoning abilities.
  - The Law of Floating Bodies Study
  - The Pendulum Study
  - The All Possible Combinations Study

### **Formal Operations**

- How Pervasive Are Formal Operations?
- Can Formal Operations Be Taught?
- Formal Operations & Academic Performance?

## Other Advances in Adolescent Cognition

- increased capacity
- improved cognitive strategies
- automatization of basic mental processes
- expanded knowledge base
- increase ability in selective and divided attention tasks.

### ADOLESCENT EGOCENTRISM

- David Elkind (1967) 2 aspects of adolescent egocentrism:
  - Imaginary Audience
  
  - Personal Fable
  
- Eventually, adolescents grow out of this egocentrism.
  
- Formal vs. concrete operation thought

## Moral Development

- The process by which an individual comes to understand what society accepts as right and wrong.

### Moral Reasoning: Piaget's Model

- Amoral stage, until about age 7.
- Moral realism
- Autonomous morality

### Moral Reasoning: Kohlberg's Model

- Preconventional morality
- Conventional morality
- Postconventional (principled) morality

- **Research on Kohlberg's Stage Sequence**

- Longitudinal studies provide evidence that individuals move through the stages in the order that Kohlberg expected.
- Evidence also supports that moral development is very slow and gradual.

## Kohlberg's Theory

- Hypothetical versus Real-Life Moral Dilemmas:
  - When participants generate real-life moral problems,
  - Rather than developing in a neat stepwise fashion,

## Criticisms of Kohlberg's Model

- weak relationship between reasoning & behavior
- methods used to assess moral reasoning:
- reliability of his measures
- culture specific
- bias against women:
  - Carol Gilligan (1982, 1988): morality of care v. morality of justice.
- 11 year old girl: If he stole the drug, he might save his wife then, but if he did, he might have to go to jail, and then his wife might get sicker again, and he couldn't get more of the drug, and it might not be good. So, they should really just talk it over and find some other way to make the money.



## Are There Sex Differences in Moral Reasoning?

- Carol Gilligan believes that feminine morality emphasizes an \_\_\_\_\_ but Kohlberg's system devalues it. According to Gilligan, a \_\_\_\_\_ is a different, not less valid, basis for moral judgment than a focus on impersonal rights.
- Studies show that adolescent and adult females do not fall behind males in moral development. In addition,
- Research findings suggest that although Kohlberg emphasized \_\_\_\_\_ rather than \_\_\_\_\_ as the highest of moral ideals, his theory does tap both sets of values.
- A difference in emphasis between men and women appears most often on \_\_\_\_\_. This may be a consequence of women's greater involvement in daily activities involving care and concern for others.

## Influences on Moral Reasoning

- Personality
- Child-Rearing Practices

## **Influences on Moral Reasoning (cont.)**

- **Schooling**
  - Higher education introduces young people to social issues that extend beyond personal relationships to entire political and cultural groups.
- **Peer Interaction**
  - Interaction among peers promotes moral understanding.
  - When teenagers directly confront and criticize each other's statements, moral development is likely to have much greater stage change.
  - Because moral development is a gradual process, it takes many peer interactions to produce moral change.
- **Culture**
  - Individuals in technologically advanced, urban cultures move through Kohlberg's stages more quickly and advance to higher levels than do individuals in village societies.

**THE END**