

# Normal Behavioral Development-2

Elham Shirazi MD  
Board of General Psychiatry  
Board of Child & Adolescent Psychiatry



# 2-6 Years Cognitive Development

## “Preoperational stage”

 Egocentrism:

See them selves as the center of the universe

Have limited point of view

Unable to take the role of another person

Unable to modify their behavior for someone else



# 2-6 Years Cognitive Development

## Preoperational stage

- Centration
- Private speech
- Self-guidance & self-direction
- Talks to self & teaches self
- Lack of hierarchy
- Irreversibility



# 2-6 Years Cognitive Development

## Preoperational stage

- Transductive reasoning
- Thinking & reasoning are intuitive
- Children learn without the use of reasoning
- Unable to learn logically or deductively



# 2-6 Years Cognitive Development

## Preoperational stage

- Their concepts are primitive
- Can name objects
- Can not name classes of objects
- Can not grasp the sameness of an object in different circumstances
- No conservation



# 2-6 Years Cognitive Development

## Preoperational stage

- Events are not linked by logic
- No sense of cause and effect  
(e.g. if they drop a glass that then breaks, they believe that the glass was ready to break)
- Lack of hierarchy



# 2-6 Years Cognitive Development

## Preoperational stage

- Phenomenalistic causality:

A type of magical thinking: Events that occur together are thought to cause one another

- Benefit more from role-playing than verbal descriptions



# 2-6 Years Cognitive Development

## Preoperational stage

### Animistic Thinking:

Endow physical events & objects with lifelike psychological attributes, such as feeling & intentions

### Things are represented in terms of their function

(e.g. defines a bike as "to ride" & a hole as "to dig")





# 2-6 Years Cognitive Development

## Preoperational stage

- Have a sense of what is good or bad
- But cannot deal with moral dilemmas
- Immanent justice: Believe that punishment for bad deeds is inevitable
- Interpret physical illness as punishment for bad thoughts or deeds



# 2-6 Years Cognitive Development

## Preoperational stage

- Most important sign that a child is still in the preoperational stage:

**Have not achieved conservation & reversibility!**



# 3 Years Motor & Sensory Behavior

- Rides tricycle
- Jumps from bottom steps
- Alternates feet going up stairs

# 3 Years Adaptive Behavior

- Builds tower of 9-10 cubes
- Imitates a three-cube bridge
- Copies a circle & a cross



# 3 Years Personal & Social Behavior

- Puts on shoes
- Unbuttons buttons
- Feeds self well
- Understands taking turns

# 3 Years Cognitive Development

- Count 1-3 objects
- Know colors
- Know age



# 4 Years Motor & Sensory Behavior

- Walks down stairs one step to a tread
- Stands on one foot for 5-8 seconds

# 4 Years Adaptive Behavior

- Copies a cross
- Repeat 4 digits
- Counts 3 objects with correct pointing



# 4 Years Personal & Social Behavior

- Washes & dries own face
- Brushes teeth
- Joint play

# 4 Years Cognitive Development

- Fantasize without concrete props



# 5 Years Motor & Sensory Behavior

- Skips, using feet alternately
- Complete sphincter control
- Fine coordination improves



# 5 Years Adaptive Behavior

- Copies a square
- Draws a recognizable person with a head, a body, limbs
- Counts 10 objects accurately





# 5 Years Personal & Social Behavior

- Dresses & undresses self
- Prints a few letters
- Plays competitive exercise games

## 5 years Cognitive Development

- Get humor
- Understand good & bad
- Can do some chores



# 6 Years Motor & Sensory Behavior

 Rides two-wheel bicycle

# 6 Years Adaptive Behavior

 Prints name

 Copies triangle

# 6 Years Personal & Social Behavior

 Ties shoelaces



# 7-11 Years Cognitive Development

- Concrete operational stage
- Hierarchical classification  
*Can organize objects into hierarchies*
- Categorization
- Reversibility
- Conservation
- Decentration  
*Worry about small details*  
*Obsessive*



# 7-11 Years Cognitive Development

■ Spatial Operations  
*Like models for directions*

■ Horizontal decalage  
*Conservation of weight*  
*Logic*

■ Transitive inference  
*Syllogism*  
*Compare everything*  
*Brand names important*



# 7-11 Years Cognitive Development

- Internal speech
- Complex cognition
- Self-reflection
- Sustained attention
- Good memory



# 7-11 Years Cognitive Development

- Recall
- Problem solving
- Planning
- Begin to think logically
- Seem rational & organized



# 11-19 Years Cognitive Development

## “Formal operational stage”

Is characterized by the ability to:

- Think abstractly
- Propositional thinking (logic)
- Reason deductively
- Define concepts
- Deal with permutations
- Deal with combinations
- Grasp to concept of probabilities



# 11-19 Years Cognitive Development

## Formal operational stage

- Hypothetical-Inductive reasoning:  
Moves from particular to general
- Hypothetical-Deductive reasoning:  
Moves from general to particular (more complicated)  
Highest organization of cognition!
- Enables the person to make a hypothesis & to test it against reality





# 11-19 Years Cognitive Development

## Formal operational stage

- Language use is complex & is grammatically correct
- May return to egocentric thought but on a higher level:
  - May think they can accomplish everything
  - May think they can change events by thought alone



# 11-19 Years Cognitive Development

## Formal operational stage

- Personal fable  
*Inflated opinion of themselves*
- Imaginary audience  
*Everyone is looking at them!*
- Adolescent quick thinking & excuses
- Can think of all possibilities



***Some people may not reach  
the stage of  
formal operational thought  
at all!***



■ Adult under stress may regress cognitively & emotionally

➤ Their thinking may become preoperational, egocentric & sometimes animistic!

