Physical & Cognitive Development of Tweens (6-12 year olds)

Psychology 307, Development
Guest Lecture 3/24/09
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Topics We Will Cover Include:

• Growth
• Motor Development
• Learning Disabilities
• Cognitive & Language Development
• Quantifying Intelligence
Growing Up

- Height & Weight Changes, AKA awkward school dances
  - variations in height up to 6-7"
  - typically grow 2-3" / year
  - girls, enjoy being taller while you can!
  - Around the world: diet, nutrition, disease
  - Nutrition
  - social, cognitive & emotional consequences to nutritional health

And Growing Out...

- Obesity
  - 40% 9-10 year old girls try to lose weight
  - Great divide between reality & media
  - Genetic & social influences
    - Poor diet - school lunches as the culprit?
Motor Development

- Gross
  - Gender differences pronounced in this age group (likely social)
  - Examples of Gross motor skills through development
    - 6 year olds: skipping; 7 year olds: hopscotch, jumping jacks

- Fine
  - 6 year olds: tie shoes, fasten buttons; 8 year olds: use hands independently
  - 11-12 year olds: near adult capacity

Health

- Accidents:
  - Car & bike accidents most frequent, then fires, burns, drownings & gun-related deaths
  - Boys rate > girls

- Cyberstalkers:
  - Software & Parent monitoring
  - Awareness of risks & what information is appropriate to provide

- Psychological Disorders:
  - Using Rxs that aren’t meant to treat children, dosage?
    - Long term effects & disorders later in life?
    - Used when traditional methods are ineffective
    - Risks of Suicide (SSRIs)

1/5 kids & teens are impaired from some type of psych disorder
Depression < anxiety most common
Learning Disorders

• Sensory Problems:
  • Visual (rare): blindness (below 20/200 acuity after correction)
  • Color perception & depth perception not addressed
  • Auditory:
    • Types of problems: particular pitches/ frequencies, amplification
    • How is language effected?
      • Comprehension?
      • Production? (3-5% kids have speech impairment, e.g. stuttering -- don’t interrupt, draw attention)

Learning Disorders

• Learning Problems:
  • E.g. Dyslexia
  • ADHD
    • inattention, impulsiveness, low tolerance for frustration
    • est 3-7% under 18 are affected
    • Treatments: behavioral therapy, diet modification, medication controversy

- can’t finish tasks, follow instructions, organize
- inability to be still/wait
- excessive talking/interruption
- long term effects unknown
- stimulants
- incr attn span, concentration, compliance
- but irritability, reduced appetite, depression
Intellectual & Language Development

• Piagetian Stage: Concrete Operational
  • Active & appropriate use of logic (e.g. Ozonas on Margarita Monday)
  • Decentering
  • Reversibility
  • So how does this hold up across cultures?

• Information Processing
  • Memory: encoding, storing, retrieving
  • Improved working memory (strategies: e.g. rehearsal)
  • Metamemory

Teaching Tweens

• Vygotsky’s Contribution:
  • interactive, experiment-based environment
  • both child-child and adult-child interactions promote cog growth
  • Cooperative Learning (insights of others, serve as other’s tutor/pupil)
  • Reciprocal Teaching (reading comprehension)
Language Development

• Syntax:
  • use of conditional (If-then) and passive voice (was -ed)

• Lexicon:
  • from 8000-14000 words

• Phonology:
  • j, v, th, zh (post 7 years)

• Pragmatics:
  • stress & intonation
  • turn-taking to give and take

Language Development continued

• Metalinguistic Awareness

5 years:
• understand concept of syntax
• blame themselves for miscommunications/misunderstandings

8 years:
• may be due to other person (dynamic communication, asking for clarification)

~10 years
• understand explicitly what some of the rules are
Bilingualism

• Bilingual Education: teach in native language, introduce English (strong in content)

• Immersion: all subjects in English (encourages students to learn English)

• Advantages of being Bilingual:
  • greater metalinguistic awareness
  • increased cognitive ability (verbal & non-verbal)
  • enhances ability to learn other languages

Tests of Intelligence

• Binet’s Test: Mental Age/ Chronological Age
  • Average = 100
  • Bell Curve Population

• Stanford-Binet (age appropriate items)
• Wechsler (verbal: comprehension; nonverbal: copying, sequencing, assembling),
• Kaufman (ability to integrate different stimuli simultaneously, sequential thinking - more flexible)

• Fluid v. Crystallized Intelligence

Binet:
  - trial & error
doesn’t address
underlying nature of intelligence
good at test

Fluid: processing capacities,
reasoning, memory (grouping according to a criterion)
crystallized: cumulation of skill, info, strategies (puzzle, mystery)
Theories and Controversy

• Vygotsky: look at those processes in development!
• Gardner: 8 independent types of intelligence

• Sternberg’s Triarchic Theory of Intelligence
  • Componential
  • Experiential
  • Contextual

• Racial Differences in IQ and The Bell Curve
  • ZPD: current abilities
  • ZPD: achieveable
  • Current abilities
  • Componential: how efficiently process & analyze info
  • Infering relationships, solving problem, evaluating solution (hi on traditional tests)
  • Experiential: insightful combing new & old info, new creative ways
  • Contextual: everyday life & demands thereof

Mental Retardation & The Gifted

• Mental Retardation Mainstreaming v. Full inclusion
  • Familial retardation (biological, no history) - FAS or Downe’s
  • Mild: 90% at low deficit levels (IQ 50-70) - 3rd-6th grade achievable
  • Moderate: 35-50 5-10% - 2nd grade achievable (schooling not always possible, slow overall intellectual development
  • Severe: 20-35 Nursing home care, some basic self-care skills,
  • Profound: below 20

• The Gifted
  • 3-5 % of population
  • Programs often cut for budgetary reasons
  • Healthier, better coordinated, better adjusted, earned more $, than other classmates
  • Acceleration v. Enrichment
Topics We Covered (1 more slide left, don’t pack up!):

- Growth
- Motor Development
- Learning Disabilities
- Cognitive & Language Development
- Quantifying Intelligence

End

- This lecture will be posted on elearning tonight
- Dr. Bortfeld will be back on Thursday 3/26/09
- If you have any questions about this lecture you can email me: eswen@mac.com or speak with Dr. Bortfeld about its content
- Cool NY Times article on Tweens: