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
Re-acquaint yourself (2003-2009)

- tv shows
- music
- history
  - Middle East War
- “the place”

Back In My Day...

- tv shows
- music
- history
  - Gulf War
- “the place”

- pop culture
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 poor nutrition
      - malnutrition affects curiosity, responsiveness, motivation to learn --> huge consequences for schooling, later success, esp dev world!
- girls growth spurt ~10 years
  - huge individual differences tho!

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 answer?
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 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

- only 1/1000 require special-ed for visual problems
- early caught less effect on lang
  learned lang already, no significant threat
  - possible to not understand or produce speech if severe
  - cognitive: prob w abstract concepts

- not well understood
  - env? bio?
  - wide & varied symptoms (e.g. visual misperception of letters, unusual difficulty in spelling or sounding out letters, L/R confusion)

- 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)

- some abilities early than Piaget suspected
- different ages across cultures (can be sped up if taught)
- likely due to different experience (e.g. Conservation Task w Aborigines v urban Aussies)
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 Triachic Theory of Intelligence
  - Componential
  - Experiential
  - Contextual
- Racial Differences in IQ and The Bell Curve

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:
  