



Mental Retardation and Giftedness

PSY 560: Intellectual Assessment

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Mental Retardation

- Why are we interested in mental retardation?
- Brief history of treatment for mental retardation
 - Institutionalization
 - Compulsory schooling
 - current

Mental Retardation

- Clinical Features (Diagnostic Criteria)
 - Significant subaverage general intellectual functioning that is accompanied by significant limitations in at least two of the following skill areas:
 - Communication
 - Self-care
 - Home living
 - Social/interpersonal

Mental Retardation

- Use of community resources
- Self-direction
- Functional academic skills
- Work
- Leisure
- Health
- Safety
- Onset before age 18

Mental Retardation

- General intellectual functioning
 - Measured by IQ tests
 - > 2 SD below mean
 - SEM of 5 points
- Adaptive Behavior
 - Measured by an Adaptive Behavior Scale
 - Must indicate impairment in at least two areas

Mild Mental Retardation

- 50-55 to 70-75
- Old terms:
 - Educable Mentally Retarded
 - Moron/feeblemind
- 85% of those with MR fall in this range
- Develop social and communication skills during preschool
- Minimal impairment in motor skills

Mild Mental Retardation

- Often not distinguished from those without MR until later years
- Can achieve at approximately the 6th grade level
- Can achieve social and vocational skills adequate for self-support
 - May need assistance when under stress
 - Supervision
 - Guidance
 - Therapy

Moderate Mental Retardation

- 35-40 to 50-55
- Old terms:
 - Trainable Mentally Retarded
 - imbecile
- 10% of those with MR fall in this range
- Develop communication skills during early childhood
- Profit from vocational training

Moderate Mental Retardation

- With assistance can attend to personal care
- Rarely move beyond the 2nd grade achievement level
 - Can benefit from social skills training
- May have problems with adolescent peer relationships
 - Problems with recognizing social conventions

Moderate Mental Retardation

- Can work under supervision
 - Sheltered workshops
 - General work force
- Adapt well to life in the community in sheltered settings

Severe Mental Retardation

- 20-25 to 35-40
- Old terms:
 - Custodial Mentally Retarded
 - idiot
- 3-4% of those with MR fall in this range
- Acquire little or no speech
- May learn to say some words and may be trained in elementary self-care skills
 - feeding, bathing, clothing

Severe Mental Retardation

- Can recognize a few survival words
 - STOP on the red sign
- As adults, may be able to perform simple tasks in closely supervised settings
- Most adapt well to life in the community, a group home, or with their families

Profound Mental Retardation

- <20-25
- 1-2% of those with MR fall in this range
- Most have identifiable neurological condition that accounts for MR
- Considerable impairments in sensorimotor functioning
- Optimal development may occur in a highly structured environment with constant aid and supervision with individual caregiver

Profound Mental Retardation

- Motor development, self-care, and communication may improve if appropriate training is provided
- Some may be able to perform very simple tasks in closely supervised and sheltered settings

Mental Retardation

- Associated Features
 - No specific personality or behavioral features
 - Some are passive, placid, and dependant
 - Others are aggressive and impulsive
 - Lack of communication skills may predispose aggressive and disruptive behaviors
 - Also makes getting a history difficult

Mental Retardation

- Comorbid disorders
 - 3-4 times more likely than in general population
 - May be due to shared etiology common to MR and associated mental condition
 - All types of mental disorders are seen
 - ADHD, Mood Disorders, Pervasive Developmental Disorders, Stereotypic Movement Disorder, Mental Disorders due to a General Medical Condition, Schizophrenia
 - No difference in quality of the associated mental disorder
 - Diagnosis can be complicated

Mental Retardation

- Individuals with MR due to Down Syndrome may be more at risk for developing Dementia of the Alzheimer's Type later in life
- Predisposing factors
 - 30-40% of the individuals seen in a clinical setting have no clear etiology
 - Heredity (5%)
 - Inborn errors of metabolism inherited through recessive processes

Mental Retardation

- Other single-gene abnormalities
- Chromosomal aberrations
- Early alterations of embryonic development (30%)
 - Chromosomal changes
 - Damage due to toxins
- Pregnancy and perinatal problems (10%)
 - Fetal malnutrition
 - Hypoxia
 - Infections
 - trauma

Mental Retardation

- General medical conditions acquired in infancy and childhood (5%)
 - Infections
 - Trauma
 - Poisoning
- Environmental influences and other mental disorders (15-20%)
 - Deprivation of nurturance
 - Deprivation of social, linguistic or other stimulation,
 - Severe mental disorders

Mental Retardation

- Physical exam findings
 - If MR is part of a specific syndrome, the clinical features of that syndrome will be present
 - More severe the MR, the more likely there will be physical complications
- Cultural, Age, and Gender
 - Prevalence of MR due to biological factors is equally distributed across SES

Mental Retardation

- MR due to conditions such as lead poisoning and premature births is more prevalent in lower SES
- No specific etiology is also more prevalent in lower SES
- Developmental considerations need to be taken into account
- MR is more common in males
 - 1.5:1

Mental Retardation

● Prevalence

- 1%, though it could be higher
 - Poor academic functioning = 3%
 - 14% of exceptional students have MR

● Course

- Onset must be before age 18
- Age and mode of onset depend on etiology and severity of MR
- More severe is more likely to be diagnosed earlier

Mental Retardation

- MR of unknown origin is usually detected later
- MR from an acquired cause has a sudden onset
- Course of MR influenced by general medical conditions and environmental factors
- Not necessarily a life-long condition

Mental Retardation

● Differential Diagnoses

- LD
- Communication Disorders
- Pervasive Developmental Disorders
- Dementia
- Borderline Intellectual Functioning

Treatment for Mental Retardation

Previous treatment:

- Home living with relatives
- Institutionalization
- Special schools

Group homes

- Offer 24/7 supervision
- Work toward as independent living as possible

Treatment for Mental Retardation

School

- Develop programs that are designed to assist children with MR
 - Idiosyncratic
 - Not much information on the effectiveness of these programs
- Montgomery County?

Giftedness

Not as much coverage as MR

Democratic ideal

- Each person fulfills his/her potential
 - Done well with special education
 - Done poor with gifted
- Spend a lot of time trying to bring up those at the bottom that we have forgotten about those at the top
- Perceived difference between excellence and equity
 - Can't have both

Giftedness

- Confused meaning of equity
- Age of anti-intellectualism
- Martin Seligman
 - His argument
 - Government reply
 - Such attitudes are mistaken and dangerous
 - Neglect is not benign
- For the betterment of the country, we need elitism

Giftedness

- Improving education for the gifted does not mean large expenditures by schools
 - Largest requirement is administrative flexibility
 - Yet it is not being done

Giftedness

- What is giftedness?
 - No firm cutoff
 - Does not simply entail high IQ
 - IQ
 - Creativity
 - Focused motivation
 - Depends on conceptualization of IQ
 - See Gardner

Giftedness

• Gifted students excel in three areas:

- Higher order thinking processes
- Analogical thinking
- Transferring skills to new problems
 - Insight

• Differ from students with average intelligence in cognitive style

- More likely to think independently
- Take an active approach to learning

Giftedness

- Persist at tasks
- Less likely to need structure and adult scaffolding
- Higher on self-efficacy
- Internal locus of control

• Difference between moderately and profoundly gifted students

• Multipotential

Giftedness

• Levels of Giftedness

- Moderate
 - 130-150
- Severe (?)
 - 150-180
- Profound
 - 180+

Giftedness

● Etiology

- Inborn native ability
- Goal-directed hard work
 - Deliberate practice
- Interactions between the two

● Lab Findings

- Indirect evidence that gifted children have atypical brain organization
 - Superior in visual-spatial activities
 - Left handed (non-right handed)

Indications of Giftedness

● Infancy

- Long attention spans
- Good recognition memories
- Preference for novelty

● Childhood

- Intense curiosity
- Persistence/drive
- Metacognitive awareness of problem-solving strategies

Indications of Giftedness

● Early school years

- May read 1 or more years before peers
- Demonstrate a fascination with numbers and number patterns
- Excel at abstract and logical thinking

● Social and affective differences

- Solitary and introverted
- Fiercely independent
- Intrinsically motivated

Indications of Giftedness

- Visual/Performing Arts
- Creative Thinking
- Academic Ability
- General Intellectual Ability
- Leadership

Adjustment of Gifted Children

- Many problems in classroom
 - Ostracized
 - May have problems connecting with other students
 - Boredom
 - Only gifted child in the class
 - Lack of appropriate instruction
 - May feel extreme pressure
 - Comes from themselves many times

Adjustment of Gifted Children

- May try to hide giftedness
 - More so for girls than boys
- Some have found a higher rate of emotional problems
- Others indicate that gifted children are better adjusted
- While they like being alone, many want like-minded peers with whom to associate

Adjustment of Gifted Children

- Perfectionistic and overly sensitive to criticism
- Problems acknowledging weaknesses
- If disillusioned with school, may develop a pattern of low achievement
- Vocational problems due to multipotentiality

Lifetime Course of Giftedness

- High level of intellectual or artistic stimulation in family environments
- Families are child-centered
- Parents have high expectations and model hard work and high achievement
- Parents grant children high levels of independence

Lifetime Course of Giftedness

- Tempting to argue that gifted children will be eminent people in our culture
 - Terman study
 - Tracked 1500 gifted students from school through careers
 - No correlation between IQ and eminence
 - Most were successful, but not major creators
 - Why?

Opportunities for Gifted Children

- 1st part of 20th century, very few options
 - Special schools
 - Acceleration
- Even today, spend more time focusing on exceptional academic abilities and less on other areas of giftedness

Opportunities for Gifted Children

- Policies for education are determined by each individual state
 - Vary considerably
 - 1972 statistics
 - 1990 statistics
- Number of children participating in gifted programs is about half of the number of students participating in special education programs

Opportunities for Gifted Children

- Monetary disparity
 - \$.02 out of every \$100 spent in education goes to gifted programs
- Two Types of Programs
 - Those that supplement regular education
 - Those that make fundamental alterations to the classroom

Programs that Supplement Education in the Regular Classroom

● Pullout Programs

- Children selected from regular ed classes
- Spend several hours per week in Pullout Programs
- Identified by global IQ
 - Moderately, not profoundly gifted

Programs that Supplement Education in the Regular Classroom

● Three kinds

- Process-oriented programs
 - Teach creative problem-solving and critical thinking
 - Not much in the way of content
- Content-oriented programs
 - Minicourses or mentorship in specific areas
- Product-oriented programs
 - Involve students in projects that culminate in reports or presentations

Programs that Supplement Education in the Regular Classroom

● Criticisms

- Not leading to development of systematic knowledge base
- Not grounded in a particular subject area
- Not tailored to the students' individualized interests
- May not be effective

● Positive effects:

- Higher achievement scores for those who participate vs. those who do not participate

Programs that Supplement Education in the Regular Classroom

- Positive effects:
 - Gains greatest when pullout program extended what was being done in the regular education classroom
 - Improved attitudes toward learning
 - Helped underachievers reach potential
 - Students more likely to remain interested in the same area of study through college

Programs that Supplement Education in the Regular Classroom

- Talent Searches for Summer and Weekend Programs
 - Began in 1972
 - Students selected based on domain-specific achievement test rather than global IQ
 - Typical example of such a program:
 - Condensing 1 year of math into a 3-week intensive program

Programs that Supplement Education in the Regular Classroom

- Four regional centers:
 - Center for Talented Youth (Johns Hopkins University)
 - Talent Identification Program (Duke University)
 - Center for Talent Development (Northwestern University)
 - Rocky Mountain Talent Search (University of Denver)
- Mainly summer programs

Programs that Supplement Education in the Regular Classroom

- Students who participate have maintained a positive self-concept
- 85% of the 1st Johns Hopkins cohort graduated from college with excellent academic records
 - Compared to a matched sample on gender and SAT scores:
 - Took college placement exams earlier
 - Took more college courses in high school
 - Attended more selective colleges

Programs That Make Fundamental Alterations

- Ability Grouping in the classroom
 - Can take a number of forms:
 - Placing students in self-contained classrooms
 - Grouping high-ability students together in a classroom
 - Grouping high-ability students for certain subjects
 - Maybe not the same students all the time
 - Placing students in specially-designed schools

Programs That Make Fundamental Alterations

- Not tracking
- Ability grouping is used in 90% of elementary schools
- Caution:
 - Ability grouping by itself, without appropriate curriculum changes, leads to minimal gains
 - However, when curriculum is appropriately strengthened, effects are positive
 - Gains equal about 1 year

Programs That Make Fundamental Alterations

- Meta-analyses show gains of 2-3 months over students who were not grouped
- Some argue that cooperative learning is better
 - Li & Adamson (1992)
 - Gifted students did not like cooperative learning; they were frustrated by having to explain concepts to uninterested students while they did all of the work

Programs That Make Fundamental Alterations

- Special Schools for Gifted Students
 - Always been around
 - Recently, state-funded high schools have been established
 - Teachers are experts in their area
 - Some even hold Ph.D.s
 - Classes are longer
 - Students engage in research
 - Have a number of high achieving students

Programs That Make Fundamental Alterations

- Magnet schools
- No controlled studies examining the effectiveness of these schools
- Acceleration
 - Misnomer
 - Can mean different things
 - Taking a fast-paced course
 - Early entrance into school
 - Advanced placement within a subject area
 - College course enrollment while in high school

Programs That Make Fundamental Alterations

- Grade skipping
- Completing 2 years in 1 year
- Compressing curricula
- Individual tutoring
- Usually pitted against enrichment, but courses can be accelerated and enriched
- Acceleration can be seen as an equitable solution for gifted students
- Not elitist

Programs That Make Fundamental Alterations

- Students in Terman study who skipped grades went on to successful careers
- Accelerated students have higher achievement scores than those who are not accelerated
 - About 1 year better
 - Accelerated students do as well as unaccelerated students in college
 - These differences are noted even up to 5 years after the acceleration

Programs That Make Fundamental Alterations

- Problems:
 - Educators and administrators oppose acceleration due to preconceived notions
 - Educational reasons
 - Students may burn out
 - Opposing argument: there is a higher risk of boredom if students are kept in classes that are not challenging
 - May lead to gaps in knowledge
 - Careful evaluation and monitoring of students' progress will indicate whether or not this is a problem

Programs That Make Fundamental Alterations

- Psychosocial reasons

- Gifted students have deficient psychosocial development and will not fit in with more mature classmates
 - Research has failed to support this
- Gifted students enrolled in special classes will lose the ability to interact with those of average abilities
 - Research has failed to support this
- Accelerative programs emphasize differences between people; therefore, gifted students won't be socially accepted
 - Research has failed to support this

Programs That Make Fundamental Alterations

- Gifted students will become conceited and self-centered
 - Research has failed to support this
- Self-esteem of gifted students may suffer if they are set apart from their age-peers
 - Some support: self-esteem does drop upon enrollment in accelerated programs
 - However, it may be due to a more realistic evaluation of abilities rather than an indication of disastrous decline
- Gifted students have strong personal resources and are unlikely to suffer educational or psychosocial harm from acceleration
