



Distribution of Different Categories of Mental Retardation in Mentally Retarded Children of Age Group 6-18yrs.

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Abstract

Mental retardation is a pattern of persistently slow learning of basic motor and language skills during childhood, and a significantly below normal global intellectual capacity as an adult. Mental retardation is defined as an IQ score below 70–75. Levels of IQ are given as: mild=50-55 to 70, moderate=34-40 to 50-55, severe=20-25 to 35-40 and profound<20-25). Over the next 30 years, the definition of mental retardation focused on one of three aspects of development; the inability to perform common acts, deficits or delays in social development/competence, or low intelligent quotient IQ. The degree of mental retardation (which ranges from mild through moderate to severe) and its manner of manifestation greatly varies. An intelligence quotient or IQ is a score derived from one of the several different standardized tests attempting to measure intelligence. Mental retardation varies in severity. The Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR), which is the diagnostic standard for mental health care professionals in the United States, classifies four different degrees of mental retardation: mild, moderate, severe and profound. These categories are based on the person's level of functioning. For the present study data was collected from different regions of Himachal Pradesh of 500 subjects (MR children) and they were categorized into different categories of MR depending on their severity.

Keywords: *Mental retardation, Intelligence Quotient, DST Mild, Moderate, Profound and Severe MR.*

Introduction

Mental retardation is identified by significantly sub average intellectual functioning resulting in or associated with concurrent impairment in adaptive behaviour and manifested during developmental period (Grossman, 1983). It can be defined as the onset of

significant limitations in both general intellectual and adaptive functioning during the developmental period (18 years and under). Intellectual limitations refer to an Intelligence Quotient (IQ) which falls two standard deviations below the population mean of 100 (<70), and adaptive functioning limitations refer to impairments in at least two out of ten skill areas (2000).

Intellectual functioning level is defined by standardized tests that measure the ability to reason in terms of mental age (intelligence quotient or IQ).

Levels of IQ are given as: mild=50-55 to 70, moderate=34-40 to 50-55, severe=20-25 to 35-40 and profound<20-25).The degree of mental retardation (which ranges from mild through moderate to severe) and its manner of manifestation greatly varies. A study has been made by the American psychiatric association and the classification of mental retardation based on intelligent quotient (IQ) is given as: (APA, 1994).Levels of IQ are given as: mild=50-55 to 70, moderate=34-40 to 50-55, severe=20-25 to 35-40 and profound<20-25)

Approximately 75%- 85% of the mentally retarded population is in the mildly retarded category. Children with mild mental retardation are not likely to inherit mental retardation due to their genetic makeup, instead they are more likely to have the conditions due to environmental factors, such as nutritional state, personal health habits, socioeconomic level, access to health care and exposure to pollutants and chemicals (The Arc, 1993). In a finding no consistent pattern for mild mental retardation versus severe mental retardation was emerged, neither regarding frequency, male/female ratio, average age nor socio-economic status of household. By contrast, mild mental retardation did differ from severe mental retardation consistently regarding consanguinity of parents, the presence of associated impairments. The families of all mentally retarded children were found lower in socioeconomic status than comparison families (Stein et al., 1987). In 75 % of children with mild mental retardation the cause is unknown (Kozma and Stock,1992).

A Moderately retarded persons have IQ scores ranging from 35–55. They can carry out work and self-care tasks with moderate supervision. They typically acquire communication skills in childhood and are able to live and function successfully within the community in such supervised environments as group homes. About 10% of the mentally retarded population is considered moderately retarded. In a study it has been observed that 7% of moderate and 3.8% of mild idiopathic mental retardation in boys, and 2.5% of moderate and 3.3% of mild idiopathic mental retardation in girls may be due to the Martin-Bell syndrome (Webb and Thake, 1992).

Severely retarded persons have IQ scores of 20–40. About 3–4% of the mentally retarded population is severely retarded. They may master very basic self-care skills and some communication skills. Many severely retarded individuals are able to live in a group home. Prevalence of severe mental retardation is about 3 per 1.000 population and 30 per1.000 for mild mental retardation (Harper, 1993).

Only 1–2% of the mentally retarded population is classified as profoundly retarded. Their retardation is often caused by an accompanying neurological disorder. Their retardation is often caused by an accompanying neurological disorder. Profoundly retarded people need a high level of maintenance care and supervision.

Materials and Methods:

Data was collected from different regions of Himachal Pradesh mainly three districts Kullu ,Mandi and Sirmaur. To categorize the mentally retarded children into mild, moderate, severe and profound intelligence quotient (IQ) test using developmental screening test (DST) (Bharath Raj, 1983) has been performed.

The DST test is designed for the purpose of measuring mental age of children from birth to 15years of age. Having obtained the mental age, the IQ is calculated as.

$IQ = \text{Mental age} / \text{Chronological age} \times 100$

IQ score ranges (from DSM-IV).

Mild mental disability: IQ 50-55 to 70.

Moderate mental disability: IQ 35-40 to 50-55.

Severe mental disability: IQ 20-25 to 35-40.

Profound mental disability: IQ 20-25.

After categorizing into four different categories the statistical analyses was done to obtain the distribution of different types of Mental retardation in different age group.

Results and Discussion:

Intelligence Quotient (IQ) in relation to age: Present investigations revealed that out of 500 mentally retarded children observed 107(21%) were in the age group 0-8yrs and 260(52%) in the age group 8-14yrs. 133(27%) were above the 14yrs of age. Maximum of the mentally retarded children were of the age group 8 to 14 yrs (Table-2; Fig-4,5).

Mentally retarded children were classified on the basis of intelligence quotient (IQ) test in to different classes of mental retardation such as mild, moderate, severe and profound by performing intelligence quotient test (IQ). Levels of IQ are given as: mild=50-55 to 70, moderate=34-40 to 50-55, severe=20-25 to 35-40 and profound<20-25) (APA, 1994).

1. **IQ Score from 50–70: Mild MR children:** Prevalence of children with mild mental retardation was 66% in all the three districts. In Kullu district percentage of mild mental retardation was 63%, in Mandi district 66% and in Sirmaur district 68% (Table -1; Fig- 1,2,3). In age group 0-8yrs total of **mild mentally retarded** children were 66, in 8-14yrs mild MR children were 174 and in above 14yrs were 90children(Table -2; Fig- 4,5).

2. **IQ Scores from 35–55: Moderate MR children:** Prevalence of children with moderate mental retardation was 27% in all the three districts. In Kullu district percentage of moderate MR was 27.4%, in Mandi district 28% and in Sirmaur district 25% No much variations were found in the percentage of moderate mental retardation in three districts (Table -1; Fig- 1, 2,3). In case of **moderate mentally retarded** children the No. was 31 in 0-8yrs age group, 68 in 8-14yrs and in above 14yrs number was 35 (Table -2; Fig- 4,5).

In a study it was observed that 7% of moderate and 3.8% of mild idiopathic mental retardation in boys, and 2.5% of moderate and 3.3% of mild idiopathic mental retardation in girls may be due to the Martin-Bell syndrome (Webb and Thake, 1992).

3. IQ Scores from 20–40: Severe MR children: Prevalence of children with severe mental retardation was 5% in all the three districts. In Kullu district the percentage of severe mental retardation was highest (7.4%) among the three districts. In Mandi district 4% and in Sirmaur district 4% (Table-1; Fig-1, 2,3). In case of **severe mentally retarded** children the No. was 6 in 0-8yrs age group, 13 in 8-14yrs and in above 14yrs was 6 (Table -2; - 4,5). Earlier the prevalence of severe mental retardation was about 3 per 1.000 population and 30 per 1.000 for mild mental retardation (Harper, 1993).

4.IQ Scores from 20–25: Profound MR children: Prevalence of children with profound mental retardation was 2% in all the three districts. In Kullu district percentage of profound MR was 2.2%, in Mandi district 2% and in Sirmaur district 3% (Table-1; Fig-1, 2,3). In case of **profound mentally retarded** children the No. was 4 in 0-8yrs age group, 5 in 8-14yrs and above 14yrs was 2 (Table-2 Fig-4,5).

Only 1–2% of the mentally retarded population is classified as profoundly retarded. Profoundly retarded individuals have IQ scores under 20–25. Their retardation is often caused by an accompanying neurological disorder. There are hundreds of identified etiologies of organic MR (Lubs and Maes, 1977; Grossman, 1983).

There was no much variation in the percentage of mild, moderate, severe and profound MR children in three districts. Prevalence of severe mental retardation is about 3 per 1.000 population and 30 per 1.000 for mild mental retardation (Harper, 1993).

Earlier it was found that approximately 89% of MR children have mild mental retardation, 7% have moderate mental retardation and 4% have severe to profound mental retardation. About 2.0-7.5 million Americans of all ages may have mental retardation and that 1 in 10 families are directly affected by mental retardation (President's Commission on Mental Retardation, 1997; Grossman *et al.*, 2000).

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Table. 1. Different Categories of MR Children

Sr. No.	Region	Mild MR	Moderate MR	Severe MR	Profound MR	Total MR Children
1	Kullu	85 (63%)	37 (27.4%)	10(7.4%)	3 (2.2%)	135
2	Mandi	132(66%)	56 (28%)	8 (4%)	4 (2%)	200

3	Sirmaur	113(68%)	41 (25%)	7 (4%)	4 (3%)	165
4	Total	330 (66%)	134 (26.8%)(27%)	25 (5%)	11 (2.2%)	500

Table. 2. Distribution of different classes of MR Children age wise

Sr. No.	0-8yrs	8-14yrs	Above 14	Total MR Children
Mild MR	66	174	90	330(66%)
Moderate MR	31	68	35	134(26.8%)
Severe MR	6	13	6	25(5%)
Profound MR	4	5	2	11(2.2%)
Total MR Children	107(21.4%)	260(52%)	133(26.6%)	500

Figures:

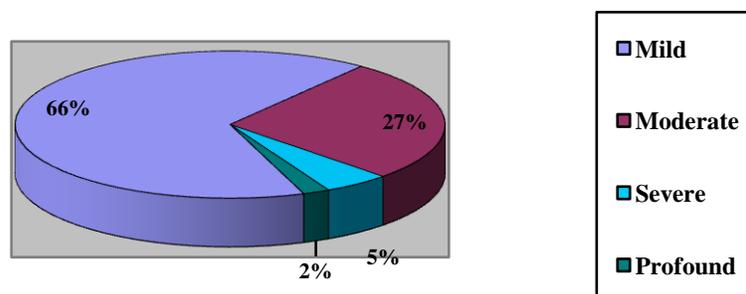


Fig. 1 Percentage of MR Children different class wise

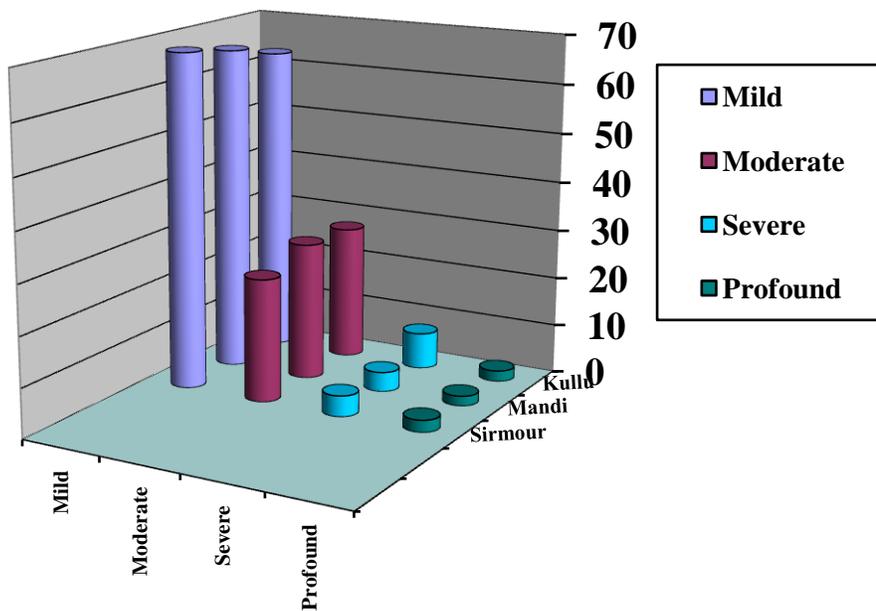
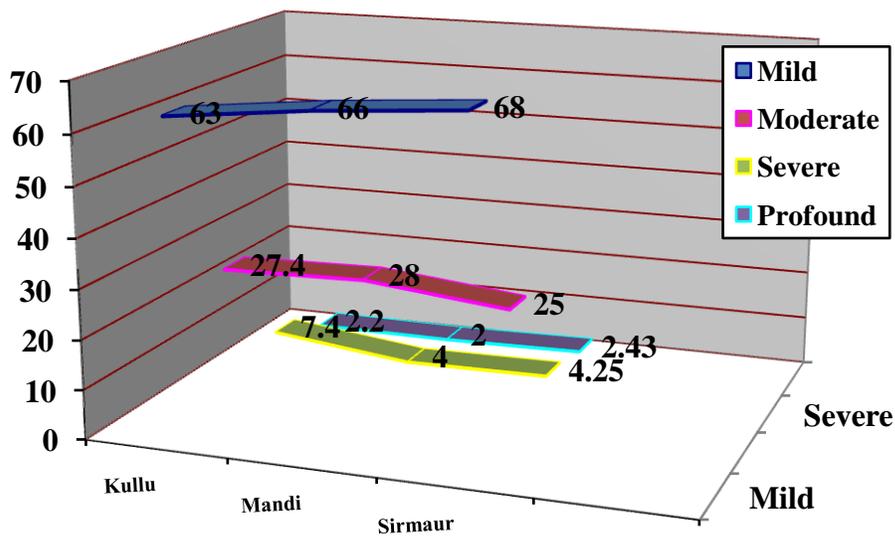


Fig. 2. Percentage of Mental Retardation in different regions.



3. Percentage of Mental Retardation in different regions

Fig.

Fig. 4. Percentage of Mental Retardation in different age groups

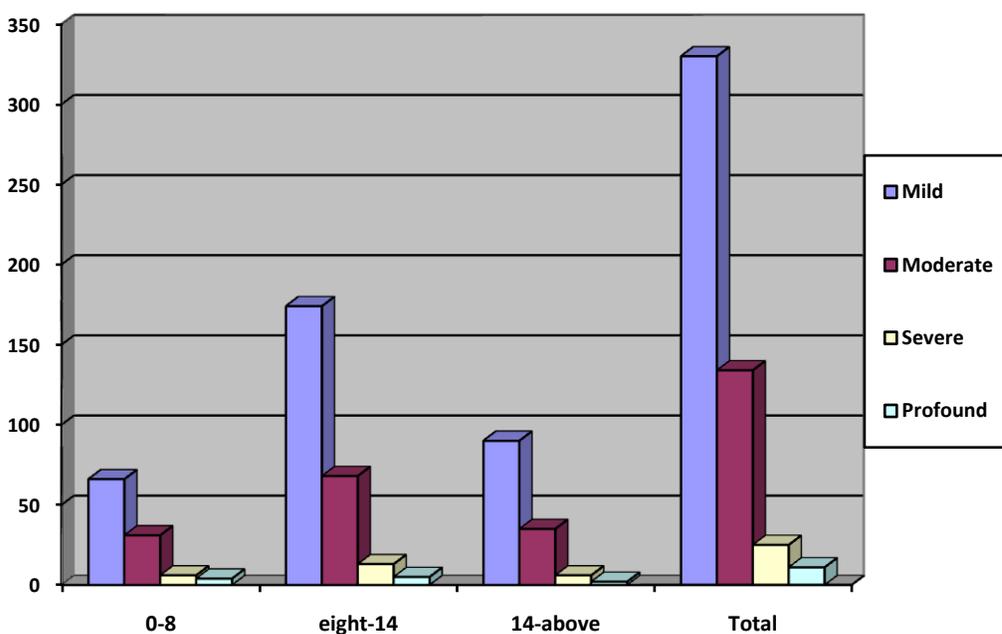


Fig. 5. Histogram showing IQ in relation to age of Mentally Retarded children in Himachal Pradesh.