International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Socioeconomic Profile of Intellectually Disabled Children

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Abstract: ***Intellectual Disability (ID) (formerly called mental retardation) is the most common developmental disability. Intellectual disability (ID) is characterized by significant impairment in cognitive and adaptive behavior. The overall prevalence of intellectually challenged children is between 1-3% among all children under 18 years of age. Intellectual disability can be mild, moderate or severe. Children with such disability typically require more support from the family, society and especially from school. Children with milder IDs can gain some independent skills, especially in communities with good teaching and support. There are many programs and resources available to help these children as they grow into adulthood. The education for children with intellectual disabilities has changed from no education to special education and so many special schools have evolved in the community to cater to the needs of the intellectually disabled children. Children enrollment in these schools has increased to a greater extend at present. This study aims to understand the socioeconomic profile of the families of the children attending schools. Questionnaire was framed to collect the needed data of 338 children's family and individual record of the children maintained by the institution where the child is enrolled were used to get the pertinent information. It is inferred from the study results that, the study population belonged to the age group of 9-16 years. The percentage of boys in the study population was 67.2% and female 32.8%. Majority of the children who attended the school were from nuclear type of family (71.3%) and hailed from urban area (65%). The religion of majority of the children was Hindu and the financial position was moderate in 62% of the family. The educational level of the children's father (Middle School) was better than the mothers (Primary School). Consanguineous type of marriage was found in 66.9% of the family. The obtained results showed a statistically significant association between the level of retardation and socioeconomic determinants such as age and gender.***

Keywords: Intellectual Disability, Intelligence quotient, Conceptual skills, Domain.

1. Introduction

Intellectual disability is a condition of arrested or incomplete development of mind of a child and is specifically characterized by sub average intellectual functioning existing concurrently with limitations in conceptual, social, practical adaptive skills [1]. Intellectual disability involves impairment of general mental abilities that impact adaptive functioning in 3 domains: The conceptual domain includes skill in language, reading, writing, math, reasoning, knowledge and memory. The social domain refers to empathy, social judgment, inter personal communication skills, the ability to make and maintain friendships, and similar capacities. The practical domain centers on self-management in areas such as personal care, job responsibilities, money management, recreation, and organizing school and work tasks. In the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5, intellectual disability is considered to be approximately two standard deviations or more below the normal population which equals to an IQ score of 70 or below.

The prevalence of intellectual disability in India is 2-3% of general population [2]. Recent studies show that Intellectual disability affects approximately 1%–4% of the world population [3]. For a developing country like India Intellectual disability produces great challenges. In general, it is considered that 2% of the Indian population has this disability [4]. The psychosocial and demographic factors surrounding an individual play a great role in his/her development. It affects one's intellectual development as well as adaptive skills [5]. There is a growing body of research which envisaged that there is a strong association between socioeconomic determinants and mild Intellectual disability. Several research carried out in different countries have also indicated the importance of socio-demographic factors and ID. Leonard et al [6] stated that "many sociodemographic factors that they identified in their study can be modified. Therefore such studies can be carried out which may provide a proper way to primary prevention. Knowledge regarding the effects of socio demographic factors in the intellectually disabled children is required to help policy makers to formulate appropriate interventional policies. In India, there is a lack of sufficient number of studies on intellectually disabled children attending schools. Thus this study aims at understanding the various related socio-demographic factors and types of intellectual disability.

2. Materials & Methods

A total of 338 children of both genders between the ages of 9 to 16 years were selected. This study was carried out in different special schools located in urban areas of Madurai city after taking proper approval of the Institutional Ethics Committee. The study excluded long absentee subjects and families who were not willing to give their consent.

3. Description of Tools

3.1 Socio-demographic Proforma:

A proforma was designed and standardized to get pertinent information regarding sociodemographic variables. The variables studied were age, gender, religion, family type,

domicile, socioeconomic status, occupation and education of the children's parents. The I.Q. (intelligence quotient) score estimation as well as the adaptive behavior scoring in the study was carried out by trained faculty of the institutions. Individual file of the children maintained by the teachers at the institutions where the child attended was also referred for getting the needed information.

3.2 Interview Procedure

After obtaining the informed consent from the parents/guardians, all subjects were interviewed using the various tools to get the needed data. Parents, teachers and the caregivers were also interviewed where it was necessary and confidentiality was maintained in every case.

3.3 Scoring

Scoring was done as described by the manuals for the three types of scales applied. Based on the I.Q. scores and adaptive behavior scores obtained, the children were classified as having mild, moderate, severe, or profound Intellectual disability.

3.4 Statistical Analysis

Data were collected and tabulated and appropriate statistical analysis was applied. The Statistical Package for the Social Sciences (SPSS v 22) was used for analysis of the collected data. Chi-square was applied to evaluate 'p' value to test the significance

4. Results & Discussions

The demographic factors surrounding an individual play a great role in one's intellectual development as well as adaptive skills. The sociodemographic data obtained from the subjects are tabulated in Tables 1 and 2.

Table 1: Socio-demographic variables of the Subjects (n=338)

Variables		Number	Percentage
Age	9 - 10	86	25.5
	11 - 12	97	28.6
	13 - 14	103	30.5
	15 - 16	52	15.4
Gender	Boys	227	67.2
	Girls	111	32.8
Birth Order	First	147	43.5
	Second	158	46.7
	Third	33	9.8
Type of Family	Nuclear	241	71.3
	Joint	97	28.7
Religion	Hindu	287	84.9
	Christian	14	4.1
	Muslim	37	10.9
Locality	Rural	118	34.9
	Urban	220	65.1
Type of Marriage	Consanguineous	226	66.9
	Non-Consanguineous	112	33.1

Table (1) reveals the sociodemographic data collected from the subjects studied. The mean age of the subjects was 12.5±2.45years. The subject's age ranged between 9-16 years. Majority of the subjects belonged to the age group of 13-14 years (30.5%). Among the total subjects studied 67.2 per cent were boys and 32.8 per cent were girls. This study results corroborate with the results of Durkin et al [7] and Murphy et al [8] commented that "regardless of I.Q. level or the presence of neurological conditions, boys are more likely than girls to have mental retardation".

In the order of birth most of the subjects belonged to second followed by first and third. Subjects who are from a nuclear and joint type of families were 71.3 per cent and 28.7 per cent and this coincides with the results of some studies [9][10] where the intellectual disability was predominant in nuclear families and in those with urban background.

With regard to the religion, 84.9 per cent of the subjects were Hindus followed by 10.9 per cent Muslims and 4.1 per cent Christians. The result of this study is on par with the reports by some studies [11] which shows a Hindu predominance among the Indian intellectual disabled population. The domicile of 65.1 per cent of the subjects was urban and 34.9 subjects hailed from rural areas. The type of marriage was Consanguineous in 66.9 per cent of the subject's parents and Non- consanguineous in 33.1 percent. These results corroborate with the results of some studies [12][13][14][15].

Table 2: Education and Occupational Status of the Subjects Family (n = 338)

Variables		Number	Percentage
Fraternal Education	Illiterate	26	7.7
	Primary	104	30.7
	Middle	123	36.4
	Secondary	27	8.0
	Graduate & above	58	17.2
Maternal Education	Illiterate	36	22.5
	Primary	114	33.7
	Middle	75	22.2
	Secondary	37	10.9
	Graduate & above	76	10.7
Fraternal Occupation	Working	324	95.9
	Not Working	14	4.1
Maternal Occupation	Working	76	22.5
	Not Working	262	77.5
Monthly Income	Low (<12k)	62	18.0
	Moderate (12-25k)	209	62.0
	High (>25k)	67	20.0

Table (2) clearly shows the education and occupational status of the subjects. The results envisaged that, majority of the subject's father had completed middle school education (36.4%) followed by primary (30.8%), graduates (17.2%) and secondary education (8%). Only 7.7 percent were illiterates. Among the variable of maternal education, 33.7 percent had primary school education and 22.2 percent middle school education. Secondary and graduate education among the mothers was only 10.9 and 10.7 percentage. Illiteracy prevailed among 22.5 per cent of the mothers. It was found that, illiteracy was more prevalent in mothers compared to fathers.

Ninety five per cent of the fathers and 22.5 per cent of the mothers were employed. Majority of the subjects (62%)

hailed from middle socioeconomic strata followed by 20 per cent and 18 per cent from high and low monthly income category respectively.

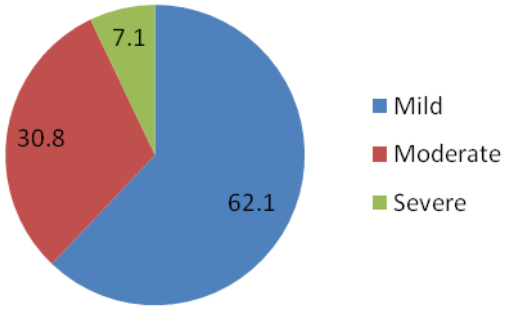

Figure 1: Distribution of the Subjects According to the type of Disability (n=338)

Figure (1) represents the distribution of the subjects according to the type of disability. The study results indicate that, the percentage of mild retardation was prevalent in 62 per cent of the subjects followed by moderate and severe in 31 per cent and 7 per cent respectively. The same pattern of distribution of disability was observed in some studies conducted in India, where the percentage of mild retardation was more followed by moderate and severe [16] [17].

The study conducted in and around Delhi, India[16], reported the distribution of the types of intellectual disability in their study subjects as 43.4%, 34.2%, 18.4%, and 2.6% for mild, moderate, severe and profound Intellectual disability, respectively, while in another study conducted at Mangalore, India,[18] reported that out of the observed 324 children with intellectual disability 48.15% showed mild intellectual disability followed by moderate (29%), severe (14.2%), and profound (8.6%) intellectual disability.

Table 3: Distribution of Age According to the Type of Intellectual Disability (n=338)

Age	Type of Intellectual Disability						X2, df	p-value
	Mild		Moderate		Severe			
	No	%	No	%	No	%		
9 - 10 (n=86)	62	29.5	24	23.1	0	0.0	21.246,6	.002*
11 - 12 (n=97)	58	27.6	30	28.8	9	37.5		
13 -14 (n=103)	63	30.0	35	33.7	5	20.8		
15 – 16 (n=52)	27	12.9	15	14.4	10	41.7		
Total	**210**	**100**	**104**	**100**	**24**	**100**		

* Significant P<0.05

Table (3) shows the distribution of the type of disability according to age of the subjects. Majority of the subjects (30%) with mild disability were between the age group of 9-10 years, moderate (35%) 13-14 years and severe (41.7%) between the age group of 15-16 years. No severe category was observed in the age group 9-10 years. Statistical analysis proved that there was a significant difference (P<0.05) in the age between the types of intellectual disability. The study clearly envisage that only mild category of disabled children get enrolled in schools rather than other level of disabilities and this could be one of the reasons for the high prevalence of mild disability among the subjects studied.

Table 4: Distribution of Gender According to the Type of Intellectual Disability

Gender	Type of Intellectual Disability						X2, df	p-value
	Mild		Moderate		Severe			
	No	%	No	%	No	%		
Boys	153	72.9	69	66.3	5	20.8	26.475,2	.000
Girls	57	27.1	35	33.7	19	79.2		
Total	210	100	104	100	24	100		

* Significant P<0.05

Table (4) represents the distribution of the type of disability according to gender of the subjects. Among the mild and moderate disabilities majority of the subjects were boys and the percentage of prevalence among the severe disability was found to be in girls. Statistically significant difference was observed between gender and intellectual disability (P<0.05). This may be due to more enrollments of boys in special school compared to girls.

5. Conclusion

This study is one of the very few studies conducted among the intellectually disabled population in Tamil Nadu, India and it provides an insight of the children attending special schools. The estimates of this study pave way to understand the percentage of disabled children getting into special schools among the general population and helps for early intervention for capacity building and raising awareness among parents on the importance of special school education in the development of social and adaptive skills of the disabled children.

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