

Evaluation of Sociodemographic aspect in core relation with the risk factors of patients with intellectual disability visiting a tertiary care hospital in Marathwada region of Maharashtra

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Abstract

Background: Intellectual disabilities as neurodevelopmental disorders that begin in childhood and are characterized by intellectual difficulties as well as difficulties in conceptual, social, and practical areas of living. Worldwide prevalence of this global public health problem is 10.5 cases/1000. It is essential to understand the problem of intellectual disability in the context of age and socio-demographic profile of the sufferers for management and rehabilitation.

Aim & Objective: The study aimed at understanding the socio demographic profile of participants visiting for evaluation of intellectual disability with reference to the severity of disability and possible associated risk factors.

Method: Cross sectional observations based on predesigned semi structured questionnaire and

Intellectual Quotient of 198 participants who attended Out Patient Department of Dept. of Psychiatry in a tertiary care hospital in Marathwada region were taken.

Results: Significant number of cases were found to have mild intellectual disability. Majority were Males who belonged from rural areas, from nuclear families. Forty four percent of Participant parents being educated up to secondary level. Majority of study participants' caregivers were unemployed which was about 44.9%.

Conclusions: Findings suggested of significant no of participants about 161 came from rural areas and were above 10 years of age There was no co relation between age and severity of intellectual disability. So also, no significant differences could be obtained between male and females. Observations noted were in alignment with

epidemiological findings of meta-analysis from other regions of India.

Keywords: intellectual, Sociodemographic, caregivers

Introduction

Intellectual disability (ID) or mental retardation (MR) is a developmental disability characterized by significant limitations in both intellectual functioning and adaptive behaviour [1], and its prevalence in the general population has been estimated at more than 1/100[2]. Individuals with intellectual disabilities have below average intellectual growth and academic performance and limitations in skills such as communicating, social skills and self-help skills. substantial limitations in age appropriate intellectual and adaptive behavior and it is a lifelong condition and seldom a time-limited condition. These children are slow in reaching developmental milestones later than the normal children [3,4].

The World Health Organization Expert Committee (1968) different grades of mental retardation in conjunction with social factors and has provided a classification scheme of mental retardation in terms of IQ ranges – mild, moderate, severe and profound categories of retardation.

The Prevalence of intellectual disabilities (ID) in India is not well known and the several multicentric analysis can't generalize the findings, India being a diverse and vast country. India has the world's largest children population and thus substantial number are at higher risk of developmental disabilities.

It is seen that Socio-demographic factors which are adverse negatively affect developmental outcomes on cognitive and social domains. [7,14]

The burden of chronic and infectious diseases, the poverty, poor sanitation, poor access to health care, pollution, and exposure to harmful chemicals increase

the risk of ID in the nation. Accurate estimation of ID prevalence can help policy makers to work for designing appropriate welfare policies which can include healthcare, rehabilitation, educational, vocational and social needs of ID population vary with their age.

Many studies have supported the hypothesis that some prenatal (e.g., increasing maternal age, multiple gestation and maternal hypertension), perinatal (e.g., preterm birth and fetal distress) and neonatal (e.g., male sex, low birth weight and neonatal infection) exposures may increase the risk of ID [6,7][12-14]. However, the overall conclusions of these studies are inconsistent. Due to lack of The Limited knowledge available on the demographic data of Intellectually disabled persons, the present study aimed at delineating the demographic and clinical features of with intellectual disability and their parents.

Aim and objectives

Aim

Evaluation of Sociodemographic aspect in core relation with the risk factors of patients with intellectual disability visiting a tertiary care hospital in Marathwada region of Maharashtra.

Objectives

To study the socio demographic profile of patients of intellectual disability.

To study the correlation of various risk factors with intellectual disability.

Material and methods

Study design

Cross sectional observational study.

Study setting

Outpatient Department of Psychiatry at Dept of Psychiatry GMCH Aurangabad.

Study population

The study sample was consisted of patients who visited Dept of Psychiatry of GMCH Aurangabad in outpatient department for assessment of intellectual disability.

Inclusion criteria

All age group and both gender cases. Parents who gave consent to participate. Examinee accompanied with parents

Exclusion criteria

Not willing to participate in study. Incomplete Questioners.

Sampling technique

Convenient sampling technique used for data collection

Approval for the study

Written approval from Institutional Ethics committee was obtained beforehand. Written approval of Psychiatry department and related department was obtained. After obtaining informed consent from parents of patient, such subjects were included in the study

Methods of Data Collection and Questionnaire

Predesigned and semi structured questionnaire was used to record the necessary information. Questionnaires included general information, socio demographic details of parents of patient, such as age, sex, residential address, income education and others. Interview schedule intended to collect the socio demographic factors on the respondents such as socio-economic status that plays a dominant role in growth and physical development.

Socio-economic parameters like type of family, size of the family, educational status, family income and other details of the selected subjects was also collected. Clinical examination with detailed clinical history of patient was taken in record. IQ assessment was done based on BKT /VSMS. Birth history and self-

administered questionnaire was used to assess the risk factors that might have occurred during or immediately after delivery.

Results and observations

Majority of cases out of 198 were found to be with Mild IQ which was about 112 (56.56%) followed by Moderate IQ 67 (33.83%) Severe 13 (6.56%) and Profound with 6 cases (3.03%)

Intelligence Quotient	Frequency	Percentage
MILD	112	56.56
MODERATE	67	33.83
SEVERE	13	6.56
PROFOUND	6	3.03
TOTAL	198	100

Table 1: Distribution of cases according to Intelligence Quotient.

Age in years	Frequency	Percentage
5-10	50	25.25
11-15	99	50
16-20	42	21.21
above 20	7	3.53
Total	198	100

Table 2: Distribution of study subjects according to age.

The maximum number of study subjects belonged to the age group of 11-15 years i.e., 99(50%).

The participants belonged to the age group of 5-10,16-20, and above 20 years were 50(25.5%),42(21.21%), 7(3.53) respectively. When statistical analysis using Chi-square test was done, proportion of intellectual disability was statistically significant in above 10-year age group (p < 0.05).

Males constituted 56.6% of study population and females constituted rest 43.4% of study population.

Table 3:

Place of Residence	frequency	Percentage
Urban	37	18.7%
Rural	161	81.3%
Total	198	100%

Majority of participants were from Rural areas i.e., 161 (81.3%) and while 37 (18.7%) were from Urban area.

Table 4:

Education	Frequency	Percentage
Illiterate	17	8.6%
Primary	52	26.3%
Secondary	88	44.5%
High Secondary	30	15.2%
Graduate	11	5.6%
Total	198	100%

Majority of the study subjects' parents were educated up to secondary level i.e., 88 (44.4%). The participants who studied up to primary, High secondary, Graduate and illiterate were 52 (26.3%), 30 (15.2%), 11 (5.6%) and 17 (8.6%).

Table 5:

Socio-Economical Class	Frequency	Percentage
I	2	1.0%
II	9	4.5%
III	30	15.2%
IV	101	51.0%
V	56	28.3%
Total	198	100%

The majority of the study subjects belonged to IV Class i.e., 101 (51.0%). The study participants from Class I, II, III and V were 2 (1.0%), 9 (4.5%), 30 (15.2%) and 56 (28.3%).

Table 6:

Sex	Frequency	Percentage
Male	114	57.57
Female	84	42.42
Total	198	100

Association of intellectual disability with gender

When statistical analysis using Chi-square test was done, difference between two groups was not statistically significant ($p > 0.05$).

Table 7:

Prenatal risk factors	Frequency	Percentage
Advanced maternal age	30	19.69%
Multiparity	17	8.58%
Maternal infection	5	2.52%
Maternal diabetes	2	1.01%
Maternal hypertension /pre-eclampsia/eclampsia	9	4.54%
Total	63	100

The above table shows majority of cases of intellectual disability had mother with history of Advanced maternal age e.g., 30 (15.15%) followed by Multiparity 17 (8.58%) Maternal hypertension /pre-eclampsia/eclampsia 9 (4.54%) Maternal infection 5 (2.52%) and Maternal diabetes 2 (1.01%)

Discussion

In the study it was found that most of the participants were with Mild IQ i.e., 112 (56.56%) followed by Moderate IQ 67 (33.83%) Severe 13 (6.56%) and Profound with 6 cases (3.03%). Similar result were found in the study by Maulik PK et al (2011)²

Study Participants belonged from Rural areas which accounted for 161 (81.3%) and while 37 (18.7%) were from Urban area Also study subjects belonged from nuclear family followed by Joint family with similar result reported by Maulik PK et al (2011)²

Majority of Parents of study subjects were educated up to secondary level i.e., 88 (44.4%) followed by primary, High secondary, Graduate and illiterate were 52 (26.3%), 30 (15.2%), 11 (5.6%) and 17 (8.6%) respectively. Majority of the participants parents were unemployed i.e., 89 (44.9%), Unskilled, Semi-skilled, Skilled, Shop/Clerical/Farmer were 50 (25.3%), 2 (1.0%), 7(3.5%) And 50 (25.3%) respectively. Similar result reported by Maulik PK et al (2011)²

When statistical analysis using Chi- square test was done, proportion of intellectual disability was statistically significant in above 10-year age group ($p < 0.05$), which was similarly reported by large scale multicentric study of Maulik PK et al (2011)²

Majority of cases had mothers with Advanced maternal age i.e., 30 (15.15%) followed by Multiparty 17 (8.58%) Maternal hypertension /pre-eclampsia/eclampsia 9 (4.54%) and Maternal diabetes 2 (1.01%). Anderson JE et al also reported to have similar results. (2006)¹¹

Conclusion

Findings in this study suggest that they are somewhat aligned with the findings to other epidemiological studies that are done in India. This study was able to demonstrate relationships between age group and the participants from which area they belonged viz, rural/urban populations along with other socio demographic relations. This study could not identify the age specific severity of intellectual disability along with the prevalence, which is very important for planning purposes.

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