ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation Journal Home Page: www.ijrps.com

Prevalence of autism among children with intellectual disabilities

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Article History:

Received on: 30 May 2020
Revised on: 18 Jul 2020
Accepted on: 23 Jul 2020

Keywords:

Autism,
Intellectual Disability,
Pervasive Developmental Disorder,
Primary School Children

ABSTRACT

Autism is prevalent among primary school children, and these children exhibit difficulty in communication. They have reduced communication skills, problems with social relationship, especially they experience isolation by their family members, and they have persistence of stereotyped behaviours and have low social development. Children experience a high incidence of intellectual disability. We aim to estimate the prevalence rate of autism among children with a developmental disability. 50 children who have been diagnosed and underwent treatment for their intellectual disability were screened and assessed by direct observation method. Initially, every child was screened by using the DSM criteria for autism with the help of the caregivers and teachers as well as other therapists who previously treated children were also included selectively. The children after the screening programme, if found be diagnosed as autism in DSM criteria were reevaluated with the checklist appropriate for their age grouped. Indian Scale for Assessment of Autism was used to screen autism children. After the baseline assessment, the researcher collected the data and results were analyzed. Results conclude that 20 children out of the 50 children were found to have autism and the prevalence estimated as 40% among children's in Kancheepuram district. We conclude that prevalence of children with autism was considerable increasing and these children were prevalent among children with other pervasive developmental disorder and especially the prevalence was high in children with mental retardation and the study highlights that all children with intellectual disability must be screened for autism.

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ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v11i4.3439

Production and Hosted by

IJRPS | www.ijrps.com

INTRODUCTION

Autism is prevalent among primary school children, and these children exhibit difficulty in communication. They have reduced communication skills, problems with social relationship, especially they experience isolation by their family members, and they have persistence of stereotyped behaviours and have poor social development. Children experience a high incidence of intellectual disability (Centres for Disease Control and Prevention, 2007).

The previous researcher in 1966 has documented that the prevalence estimates suggest that prevalence was 11 per 10000 population for the year 1971, and the early diagnosis methods were rare in those times. But recent studies suggested an increased prevalence estimate of, autism and Centers for Disease Control and Prevention (CDC) estimated that the overall prevalence of ASD was 14% and one in 68 children of the age of 8 years were

affected with ASD (Zablotsky *et al.*, 2014).

However, debates exist that the prevalence of autism was increased when compared to the previous year, whether the increase was due to the variation in the practice of assessment methods or whether the prevalence estimate varies when the standardizations of assessment tool differ or whether the increase in prevalence was due to increase in incidence (Lyall *et al.*, 2017).

Some researchers estimated that each assessment method is different, and the therapist used their clinical expertise in identifying children with autism rather than depending on the assessment tools. However, the increased prevalence estimate was due to enhanced awareness about the disorder among therapist, doctors and even caregivers and parents were aware of the characteristics of the disorder and teachers were also aware of the characteristic features of the disorder (Indian Scale for Assessment of Autism (ISAA), 2009).

The most typical co-morbid disorder exists among persons with autism, and the previous researcher has an intellectual disability. Studies documented by previous researchers that 18 -19 % of persons with intellectual disability have autism. Diagnosis of autism in children with an intellectual disability is mandatory as these children exhibit difficulties due to the cognitive deficits, language delay and stereotyped movements (Strømme and Diseth, 2000). Hence a study was initiated by us to determine the prevalence of autism in children with intellectual disability.

Methodology

The permission for initiating the study was obtained after a scientific proposal presented in SRM College of occupational therapy. Fifty children who were previously diagnosed as intellectual disability were recruited from special schools located in and around Kancheepuram, Tamilnadu. These children were recruited into the study after mailing the therapist head in various special schools. The special educator was included in the study to educate the parents and caregivers regarding the status of their child's prognosis and whether they need any additive treatment regimens (Lakhan, 2013).

After recruited the children, each child underwent an assessment session with the primary researcher. Direct observation and Likert response scale were used to rate their performance. Assessment findings were cross-checked with the teachers of children to rate their performance in schools. Children were identified as autism using DSM IV-TR FOR AUTISM criteria were confirmed by Indian Scale for Assessment of Autism ISAA (Eapen *et al.*, 2007). Data obtained was further evaluated, and the prevalence percentage was reported. Indian Scale for Assessment of Autism- the ISAA rates children based on the severity of the presence of symptoms and scored from 1- 5.

RESULTS

Twenty out of fifty children are with autism among the intellectual disability children, and the prevalence rate was 40%. The results elaborate that 10% had autism with cerebral palsy, 10% had Autism with Attention-deficit Hyperactivity Disorder and remaining 40% cases had autism with Mental Retardation. Prevalence was higher among the age group of 11 to 12 years.

Table 1: Depicts age wise Prevalence of Autism

S.no	Age	Number of children
1	1-2	0
2	3-4	2
3	5-6	2
4	7-8	1
5	9-10	2
6	11-12	10
7	13-14	3

DISCUSSION

It is well established that autism is predominant among children's intellectual disability. In our study, it is suggested that among 50 children with intellectual disability, the prevalence of autism is 20 cases (40%). However, the increased prevalence of autism among children with an intellectual disability is because of the neuro-developmental aetiology (Fombonne, 2008). More boys were affected with autism than girls, and the reason is not well established. Documented evidence by the previous researchers that male sex was prone for autism is because of the ascertainment bias (Fombonne, 2009).

The current study suggests that the prevalence rates vary according to age (Table 1). This depicts that prevalence of autism increases as age advances for children. But further research in a large sample of children is needed to conclude the findings of age and symptom development among children with autism. Few researchers believe that children will remain the same, and they don't advance or come out of their symptoms (Fabio *et al.*, 2009). In our study, the highest prevalence was recorded in the

age group of 11-12 years.

Young children's were not diagnosed as autism or intellectual disability. The debate lies here is whether young children were not having the prevalence of autism or their parents and teachers were not aware of their condition or left therapist attention over these children. There is no laboratory test to diagnose autism, and the therapist has to apply their clinical skills to confirm the findings. Thus determining its prevalence is challenging. In the Indian context, parents and caregivers as due to their poor socioeconomic standard tend to avoid treatment, and they lack awareness of specific conditions their children suffer from. They lack the knowledge to assess their child's difficulty in executing the simple activities of daily living skills. Thus they miss the early identification and screening part for their young children with autism.

CONCLUSIONS

It is documented that Intellectual disability and autism commonly coexist. Poor clinical manifestations will diagnose the clinical characteristics of autism. There is a need to identify children at their earliest age so that effective interventions and outcomes can be planned.

ACKNOWLEDGEMENT

We thank the participants for their active engagement in the research

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

Funding Support

The authors declare that they have no funding support for this study.

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