



KNOWLEDGE OF CHILDHOOD AUTISM AMONG THE PRIMARY SCHOOL TEACHERS

Occupational Therapy

K. Dhayanithi Mot Student, SRM College Of OT

Ms. Ester Debora M.O.T., Paediatrics, Asst Professor SRM College OF OT

E. Pachaippan* Lecturer Occupational Therapy *Corresponding Author

ABSTRACT

Objective: To assess the knowledge of childhood autism among primary school teachers in Villupuram district. **Methodology:** One hundred and nine teachers were participated in this study. The Knowledge about Childhood Autism among Health Workers (KCAHW) questionnaire was used to identify the knowledge of childhood autism among the primary school teachers. The filled questionnaires were collected for data analysis. **Result:** This result shows majority (78%) of teachers had poor knowledge of childhood autism. Only 22% of teachers had good knowledge of childhood autism. **Conclusion:** The result of this study paves way to create an awareness of autism among primary school teachers as awareness leads to early identification of autism and early intervention can be provided.

KEYWORDS

Childhood autism, Knowledge, Primary school teacher

INTRODUCTION

Autism spectrum disorder (ASD) is a neurodevelopmental disorder occurring in early childhood characterised by persistent deficits in social communication and interaction and restricted, repetitive behaviour, interest, or activities (American Psychiatric Association, 2013). Children with autism spectrum disorders appear normal on the outside, but they engage in puzzling and unsettling behaviour that sets them apart from other children (Elumalai, 2019).

Over the last decade, the prevalence of autism spectrum disorders has significantly climbed over the world. Autism spectrum disorder affects one out of every 160 children according to World Health Organization (WHO). In India, 2.3 million children have been diagnosed as ASD. The prevalence of autism among children aged 1-10 years is 15 per 10,000 children (Rai et al., 2018).

According to the areas studied and the screening method utilised, the prevalence of autism spectrum disorder in India ranges from 0.15 percent to 1.01 percent. ASD was found in 1 in 125 children aged 3 – 6 years and 1 in 85 children aged 6- 9 years in the INCLIN (International Clinical Epidemiology Network) study. The prevalence rate in rural areas is 0.90 percent, 0.6 percent in hilly areas, 1.01 percent in urban regions, 0.1 percent in tribal areas and 0.61 percent in coastal areas (Juneja & Sairam, 2018). In Tamil Nadu, the incidence of autism has been increased for the past two years. The prevalence rate is 0.42 – 0.5 per 10,000 population (Sonawane et al., 2017).

Although no single cause for autism has been identified, studies suggest that genetic and environmental variables may play a vital role. Advanced maternal age, foetal distress, and gestational respiratory infections were related to autism spectrum disorders. Perinatal and neonatal risk factors associated with ASD are labour complications, preterm birth, neonatal jaundice, delayed birth cry and birth asphyxia (Juneja & Sairam, 2018).

Early detection of autism spectrum disorders is important because early intervention for children with autism spectrum disorders may be more effective than for children with other developmental problems (Lipkin & Schertz, 2006). Early and appropriate intervention can ensure that children with ASD can be mainstreamed (Poon et al., 2010). Teachers are an essential part of a child's early social circle. Their expertise of the subject is vital to the early detection of autistic children, which is significant to their developmental outcome (Jehan et al., 2017).

Need for the study

The incidence of autism is increasing substantially, yet autism awareness is still low, especially in rural areas. Early identification of childhood autism is important because early intervention is more effective in autistic children. Awareness and knowledge of primary school educators on autism may play a significant role in the early detection of autism. A primary school teacher has an incomparable chance to play an essential role in children's mental health and well-

being. The teacher can identify the children with autism and refer them to a health professional for appropriate intervention. Therefore, this study aims to assess the knowledge of primary school teachers on childhood autism in Villupuram district.

MATERIALS AND METHODS

A quantitative method was used for the study. The study uses a cross-sectional design descriptive method incorporating a convenient sampling method. The study uses a cross-sectional study conducted on primary school teachers in Villupuram district, Tamil Nadu, INDIA. The sample size included in the study consists of 109 school teachers. Prior to data collection, the investigator got familiarized with the KCAHW questionnaire. The study purpose was explained to teachers before data collection.

The consent form was obtained from primary school teachers. The questionnaire was given to teachers. A total of 109 teachers were participated in the time of data collection. The data collected were compiled and analyzed using Statistical Package for the Social Science (SPSS) version 23.0. The data was analyzed and interpreted.

RESULT:

Data from 109 school teachers were analyzed. The age distribution of primary school instructors shows that 73% of teachers are over 40 years old, 18% are in between 36-40 years old, 6% are in between 31-35 years old and 3% are in between 26-30 years old. According to the gender distribution, 58 % of teachers were female and 42% were male. In terms of educational qualifications, 83 % of primary school teachers had a B. Ed., 12 % had a degree (teacher training) and 5% had an M. Ed.

According to the years of experience, 82% of primary school teachers had more than ten years of experience, 12 % have 7-10 years of experience, 4% have 4-6 years of experience and 3% have less than three years of experience. Primary school educators were distributed by nature of employment, with 89% being permanent and 11% being temporary. Primary school teachers were distributed by work environment, with 69% of teachers working in government schools and 31% in private schools.

With regard to teachers come across with autistic children, 60% of teachers have come across autistic children, and 40% of teachers have not come across autistic children in their life. Looking into the autism training program, 52% had attended the autism training program, and 48% have not attended the training program on autism

Table No. 4.1 Demographic variables of primary school teachers in Villupuram district N = 109

S.No.	Demographic variable	Class	Frequency n (%)
1	Age	26-30 years	3 (3%)
		31-35 years	6 (6%)
		36-40 years	20 (18%)
		Above 40	80 (73%)

2	Gender	Female	63 (58%)
		Male	46 (42%)
3	Educational Qualification	Degree	13 (42%)
		B. Ed.	91 (83%)
		M. Ed.	5 (5%)
4	Year of experience	Less than 3 years	3 (3%)
		4-6 years	4 (4%)
		7-10 years	13 (12%)
		More than 10 years	89 (82%)
5	Nature of the employment	Permanent	97 (89%)
		Temporary	12 (11%)
6	Type of school	Government school	75 (69%)
		Private school	34 (31%)
7	Have you come across with autistic child before?	No	44 (40%)
		Yes	65 (60%)
8	Have you attended any training program in autism?	No	52 (48%)
		Yes	57 (52%)

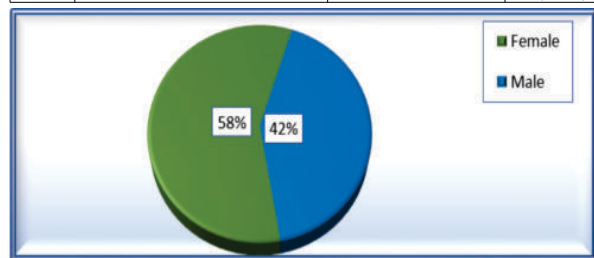


Figure No. 4.1 Gender distribution of primary school teachers

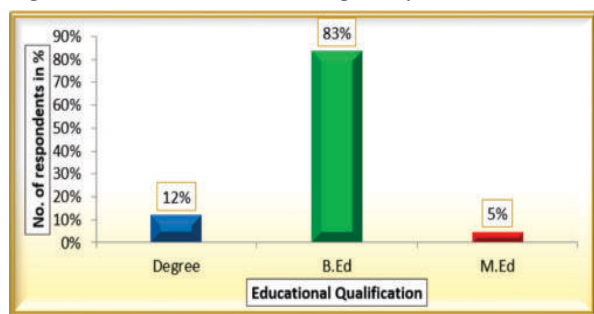


Figure No. 4.2 Educational qualifications of primary school teachers

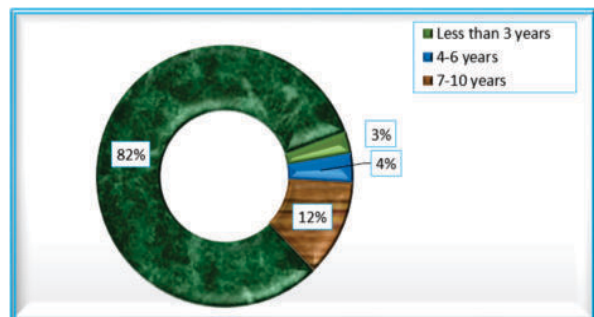


Figure No. 4.3 Experience of primary school teachers

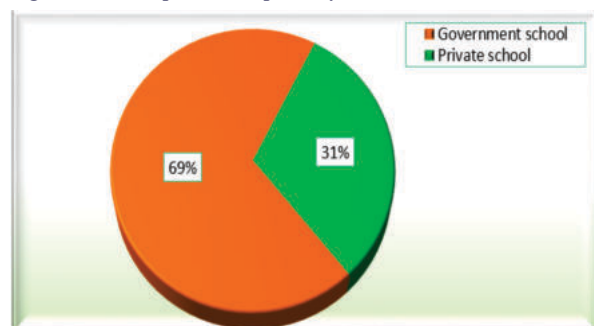


Figure No. 4.4 Distribution of primary school teachers based on work environment

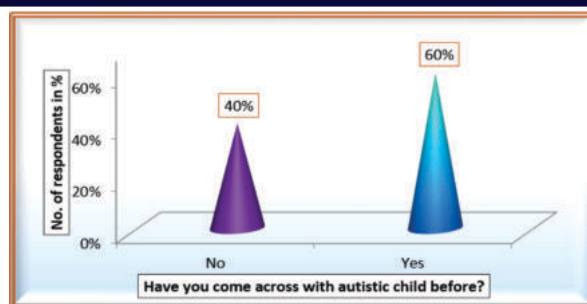


Figure No. 4.5 Primary School teachers came across with autistic child before

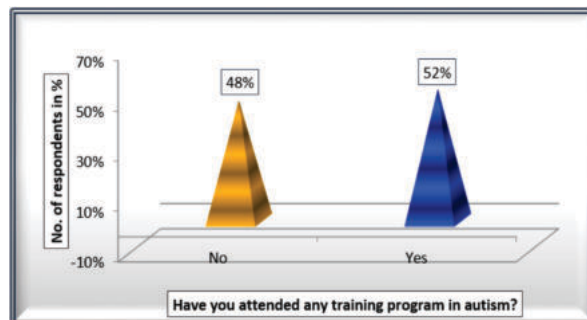


Figure No. 4.6 Distribution of primary school teachers according to training program in autism.

4.1.2 Mean scores of the KCAHW questionnaire

The mean score of KCAHW questionnaire is 11.91 out of 19. The lowest KCAHW score is three, and the highest score is 19 out of 19. The identification of symptoms related to impaired social interactions had the highest level of knowledge (88.1%) and identification of symptoms of love for regimented activities lowest level of knowledge (58.7%) among the participants. The widest knowledge gap was found in Q.No.14 "autism is childhood schizophrenia" 79.9% of participants were either wrong or unsure.

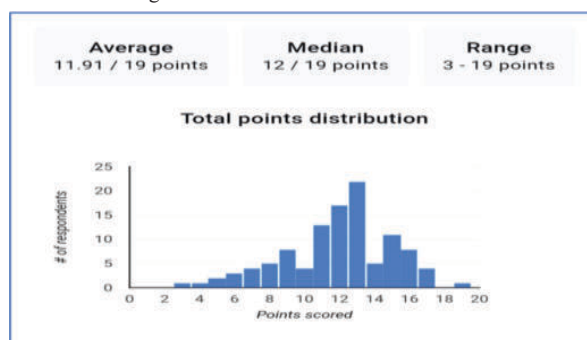


Figure No. 4.7 Total point distribution of KCAHW questionnaire

4.1.3 Level of knowledge

The interpretation of this questionnaire is that participants who score 15 and above have good knowledge and those who score below 15 have poor knowledge. A total of 109 teachers were participated in this study. Only 24 (22%) participants scored 15 and above and 85 (78%) participants score less than 15 in the KCAHW questionnaire. Hence, 22% had good knowledge and 78% of teachers had poor knowledge on childhood autism.

Table No. 4.2 Level of knowledge

S. No.	Level of knowledge	Frequency n (%)
1	Good knowledge	24 (22%)
2	Poor knowledge	85 (78%)

4.2 Statistical method

Chi-square test was used to find the association between the demographic variables and level of knowledge. Independent t test and one-way ANOVA was applied to find out comparison between the mean knowledge of various classes of demographic variables. P value was used to find the statistical difference between the groups.

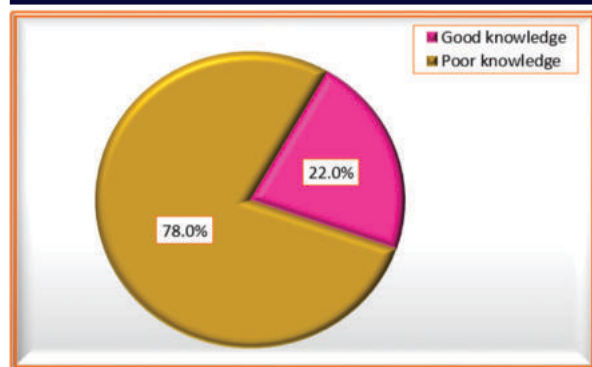


Figure No. 4.8 Level of knowledge

Table No. 4.3 Association between the demographic variables and the level of knowledge (Chi-Square test)

S. No.	Demographic variable	Class	Level of knowledge		P value
			Poor knowledge	Good knowledge	
1	Age	26-30 years	3	0	0.267
		31-35 years	6	0	
		36-40 years	17	3	
		Above 40	59	21	
2	Gender	Female	49	14	0.952
		Male	36	10	
3	Educational Qualification	Degree	10	3	0.601
		B. Ed.	72	19	
		M. Ed.	3	2	
4	Experience	Less than 3 years	3	0	0.442
		4-6 years	4	0	
		7-10 years	11	2	
		More than 10 years	67	22	
5	Nature of the employment	Permanent	73	24	0.051
		Temporary	12	0	
6	Type of school	Government school	58	17	0.808
		Private school	27	7	
7	Have you come across with autistic child before?	No	37	7	0.205
		Yes	48	17	
8	Have you attended any training program in autism?	No	44	8	0.110
		Yes	41	16	

RESULTS

From the Table No.4.3, the p values corresponding to the demographic variables are not less than 0.05 and are not significant at the 5% level; hence, we can say that there is no significant association between the demographic variables and the level of knowledge about childhood autism the primary school teachers.

Table No.4.4 Comparison between the mean knowledge of various classes of demographic variables (Independent t-test and one-way ANOVA)

S. No.	Demographic variable	Class	N	Mean	SD	P value
1	Age	26-30 years	3	11.33	2.887	0.482
		31-35 years	6	10.83	1.941	
		36-40 years	20	11.2	3.427	
		Above 40	80	12.19	3.114	
2	Gender	Female	63	11.81	3.141	0.701
		Male	46	12.04	3.112	
3	Educational Qualification	Degree	13	13.08	2.842	0.319
		B.Ed	91	11.71	3.067	
		M.Ed	5	12.4	4.561	

4	Experience	Less than 3 years	3	9.33	2.309	0.510
		4-6 years	4	11.25	2.872	
		7-10 years	13	12.08	3.353	
		More than 10 years	89	12	3.119	
5	Nature of the employment	Permanent	97	11.9	3.239	0.915
		Temporary	12	12	1.954	
6	Type of school	Government school	75	11.81	3.14	0.639
		Private school	34	12.12	3.102	
7	Have you come across with autistic child before?	No	44	11.41	3.098	0.170
		Yes	65	12.25	3.108	
8	Have you attended any training program in autism?	No	52	11.6	2.76	0.320
		Yes	57	12.19	3.409	

DISCUSSION

This study was carried out among the primary school teachers in Villupuram district to find out their knowledge on childhood autism. The KCAHW questionnaire was used to assess the teacher's knowledge on childhood autism. The questionnaire contains a total of 19 items divided into four domains, namely: Domain 1 - social interaction; Domain 2 - impairment in communication; Domain 3 - obsessive and repetitive behaviour and Domain 4 - characteristics of autism disorder and its comorbidities.

Table No. 4.2 reveals that most of the primary school teachers (78%) in Villupuram district had poor knowledge on childhood autism and 22% of primary school teachers had good knowledge on childhood autism. This result of the study is almost similar to a cross-sectional study conducted in Andhra Pradesh which reported that 78% of teachers had insufficient knowledge and 22% had good knowledge regarding autism (Elumalai, 2019). In addition, another article is supported by a descriptive study conducted in Vellore district, Tamil Nadu which reports 72.5% of primary school teachers have inadequate knowledge and 27.5% of primary school teachers have moderate knowledge on autism (Muthulakshmi & Yamuna, 2018).

In India, the prevalence of autism has been increasing steadily over the past year. With the rise in the prevalence of ASD, more public awareness is needed to diagnose it at an early age to begin the early intervention program (Elumalai, 2019). However, the result of this study indicates a low total mean score of 11.91 out of 19.

This reflects teacher have poor knowledge, education, understanding and awareness on childhood autism among the participants. The majority of the participants (78%) are unaware of fundamental facts concerning childhood autism.

Teachers' knowledge, attitudes, and practises on childhood developmental and behavioural issues were lacking in a survey of 503 preschool teachers done in Singapore (Arif et al., 2013). Similarly, the current study discovered that most teachers had poor knowledge on childhood autism.

Teachers could play a vital role in recognising children with developmental problems and counselling and guiding parents through the referral process. However, there is relatively little collaboration between educational and medical workers. Greater collaboration between the health and education sectors could provide meaningful results (Shetty & Rai, 2014).

It is important to recognise common autism behaviours as soon as possible so that children with autism can be referred for further investigation. Parents, health care providers, and educators can all notice these behaviours in children with ASD. As a result, it is critical for parents/caregivers, teachers, to gain sufficient knowledge on ASD in order to provide early intervention and proper educational planning and family support (Jehan et al., 2017).

Teachers have the ability to identify children with autism as they play an essential role in engaging with children during their early stages thereby improving the child ability's in long term (Elumalai, 2019). According to a study on the effectiveness of the early intervention as indicated by retention in mainstream schools, 76.5 per cent of children who finished the early intervention programme was incorporated into regular schools (Karanth & Chandok, 2013).

Screening is an essential step in identifying children at risk for ASD and facilitating early behavioural and educational interventions to help them yield better performance. Teachers who spend more time with young children are obliged to give appropriate care and counselling to their families. Unfortunately, they lack sufficient knowledge on autism. As a result, there is a need for knowledge on childhood autism, which can be offered through continuing medical education and by emphasising childhood autism in the training curriculum (Elumalai, 2019).

CONCLUSION

Our study clearly elaborates the lack of awareness amongst teachers regarding autism. We suggest that Government should develop many training curricula about childhood autism and other childhood disorders to enhance early identification. schools has to implement proper training programs for teachers through qualified professional to train them in early identification of Autistic children and referring them to the qualified professional for early intervention.

REFERENCES

1. Al-Sharbaty, M., Al-Farsi, Y., Ouhtit, A., Waly, M., Al-Shafae, M., & Al-Farsi, O. et al. (2013). Awareness about autism among school teachers in Oman: A cross-sectional study. *Autism*, 19(1), 6-13.
2. American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders. *American Psychiatric Association, Arlington, VA, USA*; 5th edition.
3. Arif, M., Niazy, A., Hassan, B., & Ahmed, F. (2013). Awareness of Autism in Primary School Teachers. *Autism Research and Treatment*, 2013, 1-5.
4. Augustine, S., Paul, S., Thomas, T., George, J., Rodrigues, L., & Jacob, V. (2017). A Descriptive Study to Assess the Knowledge Regarding Autism Spectrum Disorder among the Teachers of selected Primary schools at Mangaluru with a view to Develop an Information Booklet. *Asian Journal of Nursing Education And Research*, 7(4), 491.
5. Elumalai, P. (2019). Assessment of Knowledge about Childhood Autism among IERT/SSA teachers in the State of Andhra Pradesh, India. *Disability, CBR & Inclusive Development*, 29(4), 117.
6. Eseigbe EE, Nuhu FT, Sheikh TL, Eseigbe P, Sanni KA, Olisah VO (2015). Knowledge of Childhood autism and challenges of management among medical doctors in Kaduna State, Northwest Nigeria.
7. Haimour, A., & Obaidat, Y. (2013). School Teachers' Knowledge about Autism in Saudi Arabia. *World Journal of Education*, 3(5).
8. Jehan, I., Ayub, A., Naeem, B., Ahmed, W., Srichand, S., & Aziz, K. et al. (2017). Knowledge and perception regarding autism among primary school teachers: A cross-sectional survey from Pakistan, South Asia. *Indian Journal of Community Medicine*, 42(3), 177.
9. Juneja M, Sairam S (2018). Autism spectrum disorder - An Indian perspective. *SMGroup*.
10. Karanth P, Chandhok TS (2013). Impact of early intervention on children with autism Spectrum disorders as measured by inclusion and retention in mainstream schools. *Indian Journal Paediatrician*; 80: 911-919.
11. Lipkin, P., & Schertz, M. (2006). Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening. *PEDIATRICS*, 118(1), 405-420.
12. Mukherjee, S., Malhotra, M., Aneja, S., Chakraborty, S., & Deshpande, S. (2015). Diagnostic accuracy of Indian Scale for Assessment of Autism (ISAA) in Children aged 2-9 years. *Indian Pediatrics*, 52(3), 212-216.
13. Muthulakshmi, C., & Yamuna, N. (2018). A Study to assess the Knowledge of Autism among the Primary School Teachers in Vellore District. *Research Journal Of Pharmacy And Technology*; 11(11), 4805.
14. Rai S, Bhattarai J, Chaudhary S. Knowledge regarding autism among Primary school teachers of Birgunj, Parsa. *Int J Health Sci Res*. 2018; 8(11):154-160.
15. Rohanachandra, Y., Dahanayake, D., Rohanachandra, L., & Wijetunge, G. (2017). Knowledge about diagnostic features and comorbidities of childhood autism among doctors in a tertiary care hospital. *Sri Lanka Journal Of Child Health*, 46(1), 29.
16. Shetty, A., & Rai, B. (2014). Awareness and Knowledge of Autism Spectrum Disorders among Primary School Teachers in India. *International Journal Of Health Sciences & Research*, 4(4), 80-84. Retrieved 9 July 2021, from.
17. Sonawane, J., P. A., & R, J. (2017). Effectiveness of Sensory Motor Oral Stimulation for Reducing the Self Biting Behavior in Children with Autism. *International Journal of Science and Research (IJSR)*, 6(8).
18. Upendra, S. (2015). Effectiveness of Self Instructional Module on Knowledge of Autism among Pre School Teachers. *International Journal of Nursing Education*, 7(2), 197.