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Research Paper

Knowledge regarding autism among pre-school teachers of Kathmandu, Nepal

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ABSTRACT

Introduction: Autism spectrum disorders (ASD) are a diverse group of conditions. They are characterized by some degree of difficulty with social interaction and communication. The aim of study is to find the level of knowledge among preschool teacher.
Methodology: Purposive sampling was taken to find out knowledge level of preschool teachers in Kathmandu.
Analysis: Both descriptive and inferential statistics was used to analyze the data. Socio demographic data were analysed using descriptive statistics Chi. Square test was used at 95% Confidence Interval where p value<0.05 be considered statistically significant to find significance of difference in level of knowledge. Chi-square test to determine the association between level of knowledge and selected demographic variables and source of information.
Results and Discussion: All respondents were female. The highest score was only 19. Near to one third of respondents i.e. 32.9% had poor knowledge, one fourth of respondents i.e. 25% had average knowledge on ASD and only 42.1 % of respondents had good level of knowledge on ASD. Mean score was only 10.5 in this study where the total score was 31.
Conclusion: The knowledge of preschool teachers on ASD is not adequate. All most all respondents were female. Training on disability and ASD was not taken by majority respondents.

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1. INTRODUCTION

The conditions that make up autism spectrum disorders (ASD) are varied. They are distinguished by a certain level of difficulties in communication and social engagement. Atypical patterns of behavior and activity, such as trouble switching between activities, an attention to detail, and peculiar responses to sensations, are additional traits. Autism affects about one child in every 100. [1] According to research, ASD is the most prevalent multifactorial condition impacting children [2].

One of the predisposing characteristics associated with autism is gender; boys are more likely to present with autism three/four times. Additional variables include the parents' ages, medical histories, and various conditions like epilepsy, Tourette's syndrome, tuberous sclerosis, and fragile X syndrome [3].

Research conducted in Asia, Europe, and North America has revealed that the prevalence of autism spectrum condition in newborns ranges from 0.6% to 1%. An investigation into the disparities in the diagnosis of autism spectrum disorders across the 50 states in the United States was carried out. According to the findings, states that spend more on healthcare and education had higher accuracy rates when diagnosing autism [4].

2. RELATED WORK

There is no credible estimate for Nepal because autism is unknown to many individuals. People are unaware of the issue, and the diagnosis is inadequate. It is believed that there are between 2, 50,000 and 3, 00,000 people with autism in Nepal. Approximately 60,000 to 90,000 People with Autism are seriously affected. (Center for Disease Control and Prevention, United States, 2023)0,000-90,000 People with Autism are severely affected [5].

Despite the fact that there are a large number of autistic children worldwide, knowledge of autism remains low, particularly in underdeveloped countries such as Nepal. A similar study conducted in Birgunj, Nepal found that 43% of teachers had good awareness of ASD. [6] However, there is a lack of explanations for why preschool instructors most usually fail to inform parents of recognized issues, and teachers' awareness of ASD is connected with their likelihood of alerting parents of identified concerns.

Early detection of Autism is critical because early intervention treatments may be more effective in children with Autism than in those with other developmental impairments. Early and adequate intervention can help many children with autism integrate into normal settings. [7] The study's focus is to measure preschool teachers' knowledge about Autism. Schoolteachers have an unparalleled opportunity to contribute significantly to their pupils' mental health and wellbeing. Furthermore, teachers can notice these issues and refer pupils if they have a basic understanding of autism. Teachers are the most important contributors to the detection of autistic symptoms in kids, and thus research on Nepalese teachers is glaringly lacking. So, the researcher decided to conduct research on the current issue.

2.1. Research Questions

1. What is the level of knowledge of ASD among preschool teachers? 2. What demographic factors (such as special education experience, education level, prior ASD-focused training, and past experience working with students with ASD) will influence preschool teachers' awareness of ASD? 3. Is preschool teachers' knowledge level positively connected with their ability to effectively identify ASD symptoms using the ASD identification checklist? 4. Does ASD knowledge affect the link between key demographic variables (e.g., education level, special education experience, prior training in ASD or past exposure to working with students with ASD) and the accuracy of ASD symptom identification among preschool teachers? 5. Does preschool teachers' awareness of ASD influence their chance of telling parents about identified concerns?

2.2. Objectives

- **General:** To find out the knowledge regarding Autism among private school teachers of Kathmandu Valley.

- **Specific:** To find out level of knowledge regarding Autism among preschool teachers to find out association between level of knowledge with selected socio demographic variables of school teachers to find out teachers' knowledge of ASD associated with their likelihood of informing parents of identified concerns.
- **Study Variables:** Independent Variables: Socio demographic: Age, Sex, Ethnicity, marital status, educational qualifications, And duration of teaching experience Source of information: Training, exposure to autism, social media (Facebook, Instagram) Dependent Variable: Knowledge on Autism.

3. METHODOLOGY

Descriptive Cross-sectional study was done in 6 preschools of Kathmandu and Bhaktapur Located in Bagmati Province, Nepal. Purposive sampling technique was done among 76 preschool teachers through Autism Spectrum Knowledge Scale General Population (ASKSG). The ASKSG is a valid and reliable 31-item measure that assesses one's knowledge and understanding of ASD. The ASKSG was scored by calculating the total number of items answered correctly out of 31. Responses to items were coded in a binary fashion (correct=1; incorrect=0) with "don't know" responses recoded as incorrect according to author suggestions. Higher ASKSG scores reflected more knowledge of ASD.

4. RESULTS AND DISCUSSION

Table 1. Sociodemographic Variables of Respondents N=76

Variables	Frequency (Percentage)
Age of Respondents	
20-25	36(47.4%)
26-30	23(30.3%)
31-35	6(7.9%)
36-40	10(13.2%)
41-50	1(1.3%)
Marital Status	
Married	43(56.6%)
Unmarried	33(43.4%)
Sex of Respondents	
Female	76(100%)
Male	0
Education of Respondents	
PCL	14(18.4%)
Bachelor	51(67.1%)
Masters	11(14.5%)
Experience of Respondents	
0-5	26(34.2%)
6-10	28(36.8%)
11-15	16(21.1%)
16-20	6(7.9%)
Religion of Respondents	
Hinduism	73(96.1%)
Christian	3(3.9%)
Ethnicity of Respondents	
Bhramin	19(25%)
Chhetri	23(30.3%)

Janajati	34(44.7%)

All of respondents are female. Near to half of respondent i.e. 47.4% were of age group 20-25years whereas near to one third of respondents were of age group 26-30 years of age. More than half of respondent's i.e. 56.6% were married whereas only 43.4% of respondents were unmarried. More than two third i.e. 67.1% of respondents had bachelor level of qualification whereas only 14.5% of respondents had master's level of qualification. Majority of respondents were Hindu i.e. 96.1%, only 3.9% of respondents were Christian. Near to half of respondents i.e 44.7% were of janajati ethnic group where as 30.3% were Chhetri and one fourth of respondents i.e 25% were Brahmin.

Table 2. Information about ASD N=76

Variables	Yes	No
Heard about ASD	71(93.4%)	5(6.6%)
Source of Information, n=71		
Social Media	18	25.35%
Friends/family	49	69.01%
Health Worker	4	5.63%

Table 2 depicts that Majority of respondents have heard about ASD. More than two third of them i. e 69.01% had heard from family/friends whereas only 5.63% of respondents had heard from health worker and one fourth of respondents i.e 25.35% had heard about ASD from social media.

Table 3. Training of Respondents of Disability and ASD N=76

Variables	Frequency	Percentage
Training on Disability		
Yes	35	46%
No	41	53.9%
Training on ASD		
No	49	64.47
Yes	27	35.52%

Table 3 depicts that more than half of respondent's i.e 53.9 had not taken training on disability whereas only 46% of respondents had taken training on disability. Near to two third of respondent i.e 64.47% had not taken training on ASD whereas only 35.52% of respondents had taken training on ASD.

Table 4. Respondent's experience with ASD children N=76

Respondents Exposed to Child with ASD	Frequency	Percentage
Yes	16	21.1%
No	60	78.9%
Like to inform parents		
Yes	60	78.9%
No	16	21.1%

Table 4 depicts that majority of respondent's i.e. 78.9% had not been exposed to children with ASD. Majority of respondent's i.e. 78.9% would like to inform parents of child if they suspect Autism in children.

Table 5. Respondents' knowledge on ASD N=76

Knowledge Level	Knowledge Score	Frequency (Percentage)
Mean	10.5	
SD	3.92	

Range	19-3=16	
Poor	8-10	25(32.9%)
Average	11-13	19(25%)
Good	>13.75	32(42.1%)

Table 5 depicts the respondent's knowledge on ASD. While leveling their knowledge by: It was classified as Poor: less than first quartile, average: between first and third quartile and good: more than third quartile of total awareness score. The highest score was only 16. Near to one third of respondents i.e. 32.9% had poor knowledge, one fourth of respondents I.e. 25% had average knowledge on ASD and only 42.1 % of respondents had good level of knowledge on ASD.

Table 6. Association between level of knowledge and Selected Sociodemographic Variables N=76

Variables	Poor	Average	Good	P
Training on Disabilities	16	9	16	0.461
No	9	10	16	
Yes				
Training on ASD no				
yes	17	10	22	0.46
	8	9	10	
Marital Status				0.886
Married	15	10	18	
Unmarried	10	9	14	
Ethnicity				0.045¥
Bhramin	10	4	5	
Chhetri Janati	4	4	15	
	11	11	12	
Educational Qualification				
PCL	4	4	6	0.03¥
Bachelor and above	21	15	26	
Experience of Teachers				
0-5years	9	9	8	0.05
6-10 years	11	3	14	
More than 11 Years	5	7	10	

Table 6 depicts association of knowledge level on ASD with selected sociodemographic variables. Among all sociodemographic variables only ethnicity (P=0.045), educational qualification (p=0.03) and years of experience (0.05) were statistically significant with level of knowledge on ASD.

4.1. Discussion

In this study age of respondents are female. Near to half of respondent i.e. 47.4% were of age group 20-25years whereas near to one third of respondents were of age group 26-30 years of age. The finding is consistent with the similar study done in USA, most respondents were female (99.1%). [8] More than half of respondent's i.e. 56.6% were married whereas only 43.4% of respondents were unmarried. More than two third i.e. 67.1% of respondents had bachelor level of qualification whereas only 14.5% of respondents had master's level of qualification. Majority of respondents were Hindu i.e. 96.1%, only 3.9% of respondents were Christian. Near to half of respondents i.e 44.7% were of Janajati ethnic group where as 30.3% were Chhetri and one fourth of respondents i.e 25% were Brahmin.

Majority of respondents have heard about ASD. More than two third of them i. e 69.01% had heard from family/friends whereas only 5.63% of respondents had heard from health worker and one fourth of respondents i. e 25.35% had heard about ASD from social media. More than half of respondent's i.e 53.9

had not taken training on disability whereas only 46% of respondents had taken training on disability. Near to two third of respondent i. e 64.47% had not taken training on ASD whereas only 35.52% of respondents had taken training on ASD. In this study majority of respondents i.e 78.9% had not been exposed to children with ASD. Majority of respondent's i.e 78.9% would like to inform parents of child if they suspect Autism in children. While leveling their knowledge by: It was classified as Poor: less than first quartile, average: between first and third quartile and good: more than third quartile of total awareness score. The highest score was only 16. Near to one third of respondents i.e. 32.9% had poor knowledge, one fourth of respondents I.e. 25% had average knowledge on ASD and only 42.1% of respondents had good level of knowledge on ASD. Mean score was only 10.5 in this study where the total score was 31. SD: 3.49 and Range: 19-3=16. The finding is consistent with the study done in Birjung, Nepal where the mean score of teachers' knowledge regarding autism was 25.22±9.24 ranges was 2-40 [7].

The finding is not consistent with the similar study done in US where the mean ASKSG score was 20.04 (SD = 3.94). [8] The finding is consistent with the similar study done in Saudi Arabia where a total of 164 preschool teachers took part in the questionnaire. The most common age group was 30 – 40 years (58.5%). The total mean score of AKQ was 15.0 (SD 4.97). [9] Nearly threequarters (74.4%) of teachers were classed as having a low level of awareness, whereas 25.6% had a high level of awareness [9] range from 8.00 to 29.00. [8] The results were contradictory with a comparable survey conducted in the United States, where the mean perceived knowledge score was 3.7 on a 7-point Likert scale, with 7 indicating very informed and 1 indicating no understanding. [10] Reported a mean actual knowledge score of 19.1 out of 26. In this study, only ethnicity (P=0.045), educational qualification (p=0.03), and years of teaching experience (P=0.05) were statistically significant with ASD knowledge level. The results are congruent with a similar study conducted in the United States, which found that ASD knowledge mediates the link between education level and accurate symptom identification (a*b = 0.0320, 95% CI = [0.011, 0.06]. In this model, teacher education level substantially predicted ASD knowledge (b =.6651, t (324) = 3.639, p =.0003). [8] The findings are congruent with a similar study conducted in Saudi Arabia, where having more years of experience was substantially related with understanding of the proper pattern for diagnosing children with autism (p=0.049) [9].

5. CONCLUSION

All respondents were female. The highest score was only 19. Near to one third of respondents i.e. 32.9% had poor knowledge, one fourth of respondents i.e. 25% had average knowledge on ASD and only 42.1 % of respondents had good level of knowledge on ASD. Mean score was only 10.5 in this study where the total score was 31.

5.1. Recommendation

While licensed professionals (e.g., psychologists, developmental pediatricians) are typically involved in diagnosing ASD, teachers can play a crucial role in early screening and identification of mental health issues in children.

After all, preschool instructors are in a unique position to notice ASD symptoms and, given the nature of their profession, they have a baseline for comparison. Preschool instructors, unlike pediatricians, have the chance to observe young children for extended periods of time in social settings with peers. This is crucial because social problems are a defining aspect of ASD. Preschool teachers play an important role in identifying and referring children who fit criteria for the illness. Most teachers have limited knowledge. ASD is becoming more prevalent among children. Training on identifying disabilities and ASD is necessary for timely management. Use mass media and campaigns to promote awareness. Professionals must be educated on ASD through various forms of communication.

5.2. Limitation

Majority liked to inform parents if they suspect ASD in children, but few who answered no didn't write the reason for not informing the parents.

5.3. Implication

This study is unique to Nepalese special needs schooling, focusing on ASD. This quantitative study creates various potential for future research in the areas of ASD understanding and awareness, as well as teaching students with ASD. This study demonstrates a knowledge gap among preschool teachers on ASD. As a result, the Nepalese government and other NGOs will benefit from developing teacher training programs as well as ASD-related plans, policies, and initiatives.

Similarly, this study will discover the reality of teachers' knowledge, understanding, and attitudes concerning ASD, assisting in determining how to move forward in Nepal.

This study also contributes to boosting skill levels, conveying extensive knowledge, and modifying educators' perceptions on disability, notably in the field of ASD in the Nepali setti. This study will play an important role in providing Nepalese special and integrated teachers with expertise and relevant information to expand associated policies, initiatives, and teacher training programs, mostly in the first phase, in the near future.

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Author Contributions Statement

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Dr. Machhindra Lamichhane	✓	✓	✓	✓		✓		✓	✓	✓	✓		✓	
Ms. Archana Bagale	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓

C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Informed Consent

All participants were informed about the purpose of the study, and their voluntary consent was obtained prior to data collection.

Ethical Approval

Not Applicable.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

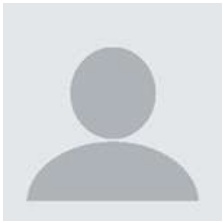
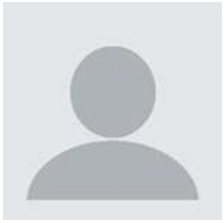
REFERENCES

[1] Autism Spectrum Disorder, World Health Organization (2023).
[2] S. Taresh, A. N. Ahmad, S. Roslan, A. I. Marof, and S. Zaid, 'Pre-School Teachers' Knowledge, Belief,Identification Skills, and Self-Efficacy in Identifying ASD', Brain Science, Mar. 2020.

doi.org/10.3390/brainsci10030165
[3] SADIA, M. O. (2015). Awareness of autism among primary school teachers in kisumucentral sub-county, kenya.
[4] M. M. Arif, A. Niazy, B. Hassan, and F. Ahmed, Awareness of Autism in Primary School Teachers. Hindawi Publishing Corporation, 2013. doi.org/10.1155/2013/961595
[5] Autism spectrum disorder (ASD) (2024) Centers for Disease Control and Prevention.
[6] S. Rai, J. Bhattarai, and S. Chaudhary, 'Knowledge Regarding Autism among Primary', International Journal of Health Sciences and Research, vol. 8, no. 11, Nov. 2018.
[7] S. Upendra, Knowledge of Autism Among Pre School Teachers. 2013. doi.org/10.1155/2013/961595
[8] Prizer, J. (2022) PRESCHOOL TEACHERS' KNOWLEDGE OF AUTISM SPECTRUM DISORDER (ASD) AS I DISORDER (ASD) AS IT RELATES TO ACCURACY OF SYMPT CY OF SYMPTOM IDENTIFICATION, St. John's University. Available at: https://scholar.stjohns.edu/cgi/viewcontent.cgi?article=1438&context=theses_dissertati ons (Accessed: 16 April 2024).
[9] M. M. Arif, A. Niazy, B. Hassan, and F. Ahmed, Awareness of Autism in Primary School Teachers. Hindawi Publishing Corporation, 2013. doi.org/10.1155/2013/961595
[10] Johnson, P., Porter, K., & McPherson, I. (2013, jan 23). Autism Knowledge among Pre-Service Teachers Specialized in Children Birth through Age Five. American Journal of Health Education, 43(5), 279-287.

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	**Dr. Machhindra Lamichhane,** seems to be an Assistant Professor in the Department of Pediatrics, at Maharajgunj Medical Campus, Tribhuvan University Teaching Hospital in Nepal, and he has really broad experience from clinical work, teaching, to hospital administration, kind of all mixed together. He also co-authored many studies in Nepalese pediatric plus public health research, for example hyponatremia in children who have severe respiratory infections, and then maple syrup urine disease, especially around how diagnosis is done. There is also work connected to preconception health awareness, and another area about autism knowledge among preschool teachers. So overall his research interest feels more wide ranging, covering child health and development, and also clinical pediatrics, rather than only one narrow theme. Email: lamichhanemachhindra@gmail.com
	**Ms. Archana Bagale,** works as a Transplant Coordinator at Shahid Dharmabhakta National Transplant Centre, Bhaktapur Nepal and she is also a PhD student in Child Development at Tribhuvan University. She has an M.Sc in Nursing from B.P. Koirala Institute of Health Sciences and an MA in Child Development and Gender Socialization, which kind of shaped her focus. With more than a decade of hands-on clinical work, along with academic roles she has worked as a Lecturer at Yeti Health Science Academy, and her research interests revolve around child development, family health autism spectrum disorder and caregiving for long term pediatric conditions.