

# Knowledge Regarding Autism among Primary School Teachers of Birgunj, Parsa

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## ABSTRACT

**Background:** Autism knows no racial, ethnic, or social boundaries; economic status; lifestyle choices; or educational levels, and can affect any family and any child. Although the overall incidence of autism is consistent around the globe, it is four times more prevalent in boys than in girls.

**Objective:** To assess the knowledge regarding Autism among private school teachers of Birgunj.

**Methods:** Researcher had selected 4 schools purposively out of 69 private schools. Under those schools, there were 63 school teachers and self-administered questionnaires were used. All the school teachers were taken as sample using census method. Socio-demographic variable was also elicited.

**Results:** The mean score of teachers' knowledge regarding autism was 25.22±9.24 ranges was 2-40 and mean score was 63.05.

**Conclusion:** Study revealed that less than half of the school teachers have a good knowledge regarding autism. Level of knowledge was significantly associated with educational qualification and exposure to autism.

**Key words:** knowledge, autism and primary school teachers

## INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopment disorder characterized by impaired communication both verbal and nonverbal, impaired social interface, repetitive and restricted behavioral pattern.

<sup>[1]</sup> The cause of autism is unknown however, genetic and environmental factors have been suggested among others. <sup>[2]</sup> Autism is the most common of the Pervasive Developmental Disorders, affecting an estimated in 88 births in the United States.

ASD is almost 5 times more common among boys (1 in 42) than among girls (1 in 189). Studies in Asia, Europe, and North America have identified individuals with ASD with an average of about 1%. A study in South Korea reported a prevalence of 2.6%. About 1 in 6 children in the United

States had a developmental disability in 2006-2008, ranging from mild disabilities such as speech and language impairments to serious developmental disabilities, such as intellectual disabilities, cerebral palsy, and autism. Rough estimates suggest as population of Person with Autism in India as two million, US 1.5 million, China 1.1 million, UK 0.65 million, The Philippines half million Thailand 0.18 million and Mexico about 0.15 million. <sup>[3]</sup> The global burden of disease indicates that by the year 2020, childhood neuropsychiatric disorders will increase by more than 50% internationally to become one of the five most common causes of morbidity and disability among children. <sup>[4]</sup>

According to WHO (2017), it is estimated that worldwide 1 in 160 children

has an ASD. <sup>[5]</sup> M. Hossain et al (2017) conducted a systematic review in six Asian countries that revealed prevalence of ASD was 14.8 per 10,000 children. The first community-based study carried out in India on the prevalence of autism among 1-10 years age and reported a prevalence of 15/10,000 children. <sup>[6]</sup>

There are no reliable estimates for Nepal as autism is not known to many people. There is a lack of awareness amongst people and diagnosis on this is weak. It is estimated that there are about 2,50,000-3,00,000 Person with Autism (PWAs) in Nepal. Among them about 60,000-90,000 PWAs are severely affected. <sup>[3]</sup> The majority of those who might attract a diagnosis of autism will not be recognized as such, but some will have significant functional difficulties and will be of concern to their parents and communities. <sup>[4]</sup> The teachers are challenged to find and provide best possible instructions to the children with learning disability as they find it difficult to adjust in schools. The source of best support and good resources should be initiated in the school environment by the teachers. <sup>[7]</sup>

Learning impairment in children consists of Autism that is under diagnosed in Nepal. Most learning disorders have long term consequences for a child and early detection is imperative. Teachers may play a key role in such identification. Children with special needs such as those with Autism have been recorded as ostracized and stigmatized in many parts of the world. Very little is known about such negative views are present among the teachers in Nepal. School teachers have an incomparable chance to play an important role in mental health and well-being of their students. Also, teachers are in a position to identify these problems and refer the students provided they are equipped with the basic knowledge of autism. Teachers are most significantly contributor to the identification of the autislated behaviors of the students and as such research on Nepalese teachers is conspicuously low. So,

the researcher felt to do the research on present topic.

## **MATERIALS AND METHODS**

Descriptive cross sectional research design was used to assess the knowledge regarding autism among 63 school teachers. 4 schools were purposively selected out of 69 private schools. All the school teachers were taken as sample using census method. Self-administered questionnaire was used for data collection. The research instruments were divided into two parts. The part A contained questions related to socio-demographic characteristics such as age, sex, qualification, training, teaching experience, exposure with the autistic child. Part B contained questions regarding knowledge about autism its meaning, causes, incidence, sign & symptoms, treatment and management of autism. The content validity of the tool was maintained through the opinion from experts in the related field. Instrument was pretested among 6 respondents (10% of sample) who were teaching in Primary level of Birgunj public school of Birgunj, Parsa. The reliability of the tool calculated by using split half method and the obtained value was 0.99. Formal permission was taken from campus and the selected 4 schools. The objectives were explained to the each respondent before data collection. Verbal informed Consent was taken before data collection. Respondent were explained that their participation to this study was voluntary and can withdraw from the study at any time if they wished. Coding and organization was done by data entry using the software program SPSS 20. The finding was analyzed using descriptive statistics like (mean, percentage and frequency) and interferential statistics (chi square test).

## **RESULTS**

Table 1 shows that among 63 respondents, highest percent (55.6%) of the respondents were age of 20-29 years and lowest percent (1.6%) were age of 60-69 years of age group. Regarding gender,

majority (71.4%) of the respondents was female and 28.6% were male.

**TABLE 1: Socio-demographic Characteristics of the Respondents. N=63**

Characteristics	Frequency	Percent
Age group		
20-29	35	55.6
30-39	14	22.2
40-49	8	12.7
50-59	5	7.9
60-69	1	1.6
Sex		
Male	18	28.6
Female	45	71.4
Educational qualification		
Masters	14	22.2
Bachelor	31	49.2
Higher secondary	18	28.6
Attending training on autism		
No	61	96.8
Once	2	3.2
Teaching experience		
Less than 1 year	8	12.7
1-5 year	31	49.2
6-10 years	8	12.7
10 years above	16	25.4
Exposure to autism		
Own home	5	7.9
School	19	30.2
Neighborhood	10	15.9
Others	29	46.0

Concerning educational qualification, highest percent (49.2%) of the respondents had bachelor level education and lowest percent (22.2%) had master's degree. With regards to attending training on autism, almost all (96.8%) of the respondents had no such training and a few (3.2%) had once. Table further shows that highest percent (46%) of the respondents said others as the exposure to autism and lowest percent (7.9%) said own home.

**TABLE 2: Knowledge regarding Meaning and Incidence of Autism. N=63**

Characteristics	True	False	Don't Know
Autism is a developmental disorder	*55 (91.7%)	4 (6.5%)	4 (7.1%)
The majority of children with autism are female	6 (10.0%)	*36 (58.1%)	21 (37.5%)

\*Correct answer

Table 2 reveals that among 63 respondents, most (91.7%) said true for autism is a developmental disorder and highest percent (58.1%) said false for the majority of children with autism are female.

**TABLE 3: Knowledge regarding Causes of Autism. N=63**

Characteristics	True	False	Don't Know
In many cases, the cause of autism disorder is unknown	*45 (75.0%)	11 (17.7%)	7 (12.5%)
Genetic factors play an important role as a cause of autism disorder	*23 (38.3%)	30 (48.4%)	10 (17.9%)
Poor parenting practices can cause autism disorder	23 (38.3%)	*29 (46.8%)	11 (19.6%)

\*correct answer

Table 3 represents that three-fourth (75%) of the respondents said true for the statement in many cases, the cause of autism disorder is unknown and highest percent said false for the rest statement i.e., genetic factors play an important role as a cause of autism disorder (48.4%) and poor parenting practices can cause autism disorder (46.8%).

**TABLE 4: Knowledge regarding Sign and Symptoms of Autism. N=63**

Characteristics	True	False	Don't Know
Children with autism frequently repeat the talk they hear	*39(65.0%)	12(19.4%)	12(21.4%)
Children with autism usually manifest special abilities like drawing, facts and figures remembering	*35(58.3%)	19(30.6%)	9(16.1%)
Autistic children prefer routine activities	*29(48.3%)	25(40.3%)	9(16.1%)
Most autistic children do not talk	*39(65.0%)	18(29.0%)	6(10.7%)
Most children with autism have an intellectual disability	*41(68.3%)	12(19.4%)	10(17.9%)
Generally, children with autism understand feelings and emotions of others	15(25.0%)	*41(66.1%)	7(12.5%)
Child with autism appears like a deaf	*24(40.0%)	22(35.5%)	17(30.4%)
Autism could be associated with epilepsy	*25(41.7%)	19(30.6%)	19(33.9%)
Behavioural patterns in children with autism are similar	13(21.7%)	*41(66.1%)	9(16.1%)
Children with autism do not make eye to eye contact during conversation with others	*43(71.7%)	8(12.9%)	12(21.4%)
Children with autism tend to be auditory learners	*24(40.0%)	24(38.7%)	15(26.8%)
Most children with autism have a problem with imaginary playing	*40(66.7%)	7(11.3%)	16(28.6%)
Some children with autism have high or low sensitivity of visual, auditory, tactile, or olfactory stimuli	*42(70.0%)	10(16.1%)	11(19.6%)

\*correct answer

Table 4 reveals that highest percent of the respondents said true to the statements children with autism frequently repeat the talk they hear (65.0%), children with autism usually manifest special abilities like drawing, facts and figures remembering (58.3%), autistic children prefer routine activities (48.3%), most autistic children do not talk (65.0%), most children with autism have an intellectual disability (68.3%), child with autism appears like a deaf (40.0%), autism could be associated with epilepsy (41.7%), children

with autism do not make eye to eye contact during conversation with others (71.7%), most children with autism have a problem with imaginary playing (66.7%) and some children with autism have high or low sensitivity of visual, auditory, tactile, or olfactory stimuli (70.0%). And highest percent said false to the statements generally, children with autism understand feelings and emotions of others (66.1%) and behavioral patterns in children with autism are similar (66.1%).

**TABLE 5: Knowledge regarding Diagnosis of Autism. N=63**

Characteristics	True	False	Don't Know
Autism disorder is usually diagnosed during the first three years of the child's age.	*32(53.3%)	7(11.3%)	24(42.9%)
Autism disorder is diagnosed by medical methods	*35(58.3%)	16(25.8%)	12(21.4%)
Children must exhibit impaired social interaction and language communication to be diagnosed with autism	*31(51.7%)	14(22.6%)	18(32.1%)
We can diagnose autism disorder depending on physical features	28(46.7%)	*15(24.2%)	20(35.7%)
Autism disorder can be diagnosed through behavioural observation	*46(76.7%)	4(6.5%)	13(23.2%)

\*correct answer

Table 5 reveals that 53.3% response true to the statement that autism is diagnosed during the first three years of the child's age. More than half (58.3%) response true to the statement that autism disorder is diagnosed by medical methods. Less than half (46.7%) of the respondent responded true to the statement that autism can be diagnosed depending on physical features.

**TABLE 6: Knowledge regarding Treatment of Autism. N=63**

Characteristics	True	False	Don't Know
Behavioural intervention is considered the most effective treatment method of autism.	*39(65.0%)	6(9.7%)	18(32.1%)
Proper intervention, most children with autism disorder will eventually outgrow the disorder.	11(18.3%)	*42(67.7%)	10(17.9%)
Medication can alleviate the core symptoms of autism disorder	*30(50.0%)	21(33.9%)	12(21.4%)
Children with autism behave better only in organized educational environments.	*49(81.7%)	8(12.9%)	6(10.7%)
If a particular method of treatment achieved effective results with some children with autism, then it is necessarily effective with all children with autism.	20(33.3%)	*25(40.3%)	18(32.1%)

\*correct answer

**TABLE 7: Knowledge regarding Management of Autism. N=63**

Characteristics	True	False	Don't Know
Teacher should prepare conducive comfortable classroom learning environment to address the need of the student.	*52(86.7%)	2(3.2%)	9(16.1%)
Teacher should put appropriate strategies to help child to understand unique behaviour of the child.	*51(85.0%)	2(3.2%)	10(17.9%)
Teacher should provide additional time to complete assignments.	*51(85.0%)	5(8.1%)	7(12.5%)
Teacher should give small manageable achievable task to the autistic child.	*50(83.3%)	4(6.5%)	9(16.1%)
Visual cues (symbol and pictures) should be used to support a child understanding of an activity.	*50(83.3%)	6(9.7%)	7(12.5%)
Teacher should use language that is clear and precise so that child can understand.	*48(80.0%)	5(8.1%)	10(17.9%)
Praise the child if he/she does complete the task or do right things.	*50(83.3%)	4(6.5%)	9(16.1%)
With equal partnership of parents and teacher child behaviour modification will be possible.	*51(85.0%)	6(9.7%)	6(10.7%)
Teacher should assist the child to establish mutual relationship with peers.	*52(86.7%)	7(11.3%)	4(7.1%)
Autism care Nepal society is the supportive organization who works for autistic children	*40(66.7%)	3(4.8%)	20(35.7%)
Teachers should get training regarding child behaviour problem.	*53(88.3%)	5(8.1%)	5(8.9%)
If teacher find a autistic child in the school then teacher should consult to parents, doctors and seek early intervention services	*46(76.7%)	6(9.7%)	11(19.6%)

\*correct answer

Table 6 shows that highest percent of the respondents said true to the

statements behavioral intervention is considered the most effective treatment

method of autism (65.0%), medication can alleviate the core symptoms of autism disorder (50.0%) and children with autism behave better only in organized educational environments (81.7%) and highest percent said false to the statements proper intervention, most children with autism disorder will eventually outgrow the disorder (67.7%) and if a particular method of treatment achieved effective results with some children with autism, then it is necessarily effective with all children with autism (40.3%).

Table 7 represents that majority of the respondents said true to all the statements regarding management of autism and only a few said false to all these statements except the statement that teacher should assist the child to establish mutual relationship with peers. More than half (86.7%) of the respondents said true to the statement that teacher should prepare conducive comfortable classroom learning environment to address the need of the student. In this study 66.7% of the respondents responded correct answer for the statement autism care Nepal society is

the supportive organization who works for the autistic children, 4.8% of respondents gave false statement and one third of the respondents do not know about this organization. The study also revealed that more than two third of the respondents felt that teacher should get training regarding child behavior problem 8.1% of the respondents didn't think for the need of teachers training and 8.9% of the respondents didn't knew about the training.

**TABLE 8: Level of Knowledge regarding Autism**

Level of Knowledge	Frequency	Percent
Low	13	20.6
Average	23	36.5
Good	27	42.9

Table 8 represents that 42.9% of the respondents had good knowledge regarding autism, 36.5% had average and 20.6% had low knowledge regarding autism. Knowledge Score Regarding Knowledge of Autism

The mean score of teachers knowledge regarding autism was  $25.22 \pm 9.24$  ranges was 2-40 and mean score was 63.05

**TABLE 9: Respondent's Level of Knowledge with Socio-demographic Characteristics**

Variable	Low n(%)	Average n(%)	Good n(%)	$\chi^2$ Value	p Value
<b>Age Group</b>					
20-29	8(22.8)	14(39.9)	13(37.05)	4.04	0.401
30-39	4(28.56)	5(35.7)	5(35.7)		
>= 40	1(7.14)	4(28.56)	9(64.26)		
<b>Sex</b>					
Male	2(11.1)	8(44.4)	8(44.4)	1.557	0.459
Female	11(24.42)	15(33.3)	19(42.18)		
<b>Educational qualification</b>					
Masters	5(35.7)	7(49.98)	2(14.28)	9.949	0.041
Bachelor	4(12.88)	8(25.76)	19(61.18)		
Higher secondary	4(22.2)	8(44.4)	6(33.3)		
Attending training	13(21.19)	21(34.23)	27(44.01)	3.592	0.166
No	0(0%)	2(5)	0(0%)		
Once					
<b>Teaching experience</b>					
Less than 1 year	3(37.5)	4(50)	1(12.5)	4.547	0.337
1-5 year	6(19.32)	12(38.64)	13(41.86)		
> 5 years	4(16.64)	7(29.12)	13(54.08)		
<b>Exposure to autism</b>					
Own home/ Neighborhood	7(49.98)	1(7.14)	7(49.98)	12.434	0.014
School	3(15.78)	7(36.82)	9(47.34)		
Others: Hospital, on the way and relatives marriage	3(10.32)	15(51.6)	11(37.84)		

Table 9 reveals that respondent's level of knowledge is statistically significant with educational qualification ( $\chi^2 = 9.949$ ,  $p =$

0.041) and exposure to autism ( $\chi^2 = 12.434$ ,  $p = 0.014$ ) and not significant with age group ( $\chi^2 = 4.04$ ,  $p = 0.401$ ), sex ( $\chi^2 = 1.557$ ,  $p =$



0.459) and teaching experience ( $\chi^2= 4.547$ ,  $p= 0.337$ )

## DISCUSSION

Concerning the demographic characteristics the study revealed that the mean ages of respondents was 31.47. Age wise knowledge was highest among respondents of age 20-29 which was significantly higher than that of age group 60-69 years. The study finding done by Mendonsa & Ismail, 2013 in Mangalore India was similar to this study. The study results revealed that younger age less than 45 were well informed about the behavioral problem of the students than the older teacher's age more than 45 year.<sup>[8]</sup> This may be due to advance course, training, social networking sites, exposure, additional program, modified curriculum.

In this study most of the respondent 96.8% did not get training on autism and very few number 3.2% has got training once. The study finding done by Shetty & Rai, 2014 was contrary to this study which revealed that prior training was given to 31 out of 71 teachers.<sup>[9]</sup> Prior training had a positive co-relation with knowledge. Training therefore helps in improving the ability to identify relevant cues and tentatively screen child which was very poor in this study. This may be due to the lack of government or concerned authority attention for the child behavior problem.

In relation to level of knowledge, this study revealed that 42.9% have good knowledge, 36.5% have average knowledge, and 20.6% have low knowledge. This finding was contrary with the study conducted in Saudi Arabia by I. Abdulhade, 2013 which reported that 58% of school teacher had average level of knowledge on autism and 42% have good knowledge regarding autism.<sup>[10]</sup> The findings was contrary it may be due to research conducted in small scale population.

The study also revealed that more than two third of the respondents (88.3%) felt that teacher should get training regarding child behavior problem 8.1% of

the respondents didn't think for the need of teachers training and 8.9% of the respondents did not knew about the training. The study findings by Shetty & Rai, 2014 stated that more than two third of teachers had prior training on autism so had high level of knowledge than the respondents who did not get any training.<sup>[9]</sup> If the teachers get training on autism then teachers could play a pivotal role in identifying children with developmental disabilities and counsel the parents and guide them on referral.

The study revealed that the respondent's level of knowledge is statically significant associate with educational qualification (  $P=0.041$ ).The study findings was similar with the study conducted in Saudi Arabia by I. Abdul hade, 2013 which revealed that level of knowledge of the respondents was statically significant with educational qualification.<sup>[10]</sup>

## CONCLUSION

The present study revealed that less than half of the school teachers have a good knowledge regarding autism. Level of knowledge was significantly associated with educational qualification and exposure to autism. One third was still unaware about Autism Care Nepal Society which is only supportive organization who works for the autistic children. Very few of respondents got training regarding autism. Less than one third of the respondents do not knew where to get referral if they find any of the autistic children.

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