ASSESSMENT OF LEVEL OF AUTISM AMONG CHILDREN ACROSS GENDER

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ABSTRACT

*Autism spectrum disorder (ASD) is characterized by impairment in social interactions and communication and restricted, repetitive, and stereotyped patterns of behaviour. ASD symptoms are often noted early in life and diagnosis can occur as early as 2 years of age' ASD' Autism Spectrum Disorder, refer to a category of developmental disabilities with problems in initiating and maintaining social interaction, problems in communication and the use of idiosyncratic language and repetitive motor mannerism.***Objective:** With this background, this study was carried out with the objectives to assess the level of Autism among children across gender. **Methods**: A standardized scale "Indian Scale for Assessment of Autism" used to assess category of autism among children. Total 100 children from different NGOs working for special children were selected for the study. In the present study descriptive statistics like frequency, percentage, mean and standard deviation were used to analyse. The data and relational statistics like f-test were used to analyse the data. **Results:***It was found that more than half (55.0%) of the respondents had mild autism, where, 51.1% were boys and 5.0% were girls while (43.0%) respondents had moderate autism in which 42.2% were boys and 5.0% were girls. Very few respondents (2.0%) belonged to sever autism category and all were boys. Result depicted that as p<0.05,thus null hypothesis was rejected, which means that there is no significant difference in the mild level of autism across gender and Result revealed that as P>0.05,thus null hypothesis was accepted, which means that*

there is no significant difference between the moderate level of autism across gender.Mean value also shows the same.

Conclusion: The present study showed that Autism is much more prevalent in male than female but category of autism is not gender oriented.

Keywords: *gender, Autism, children.*

INTRODUCTION

Autism was first defined by psychiatrist Leo Kanner more than 60 years ago, but it has only been seen in the last fifteen years that public interest in this developmental disorder has increased.

Autism spectrum disorder (ASD) is characterized by impairment in social interactions and communication and restricted, repetitive, and stereotyped patterns of behaviour. ASD symptoms are often noted early in life and diagnosis can occur as early as 2 years of age [1, 3].

The term autism is derived from the Greek word *Autos*: means **self**. Autism is a behaviourally-defined condition, but is caused by brain dysfunctions that affect the developing brain's ability to handle information. Autism is a neuro developmental disorder. The different way of processing information, such as perceiving, processing and interpreting information, learning new things and behaving in a well-adapted way, leads to the behavioural deviations that can be observed. The majority of children with autism also have a learning disability (mental retardation) and have average intelligence

'ASD' Autism Spectrum Disorder, refer to a category of developmental disabilities with problems in initiating and maintaining social interaction, problems in communication and the use of idiosyncratic language and repetitive motor mannerism.[1]

ASD (Autism Spectrum Disorder is used as an umbrella term which include-

- Autism disorder,
- Asperger disorder
- Childhood disintegrative disorder,
- Rett disorder
- Pervasive developmental disorder – not otherwise specified.[1-4]

Children with Autism Disorder can appear to have little or no interest in making friends or establishing relationships with others and appear more interested in objects than people. [2]

Asperger's Disorder is characterized by highly impaired social skills, children with Asperger's develop typical communication skills in the first few years of life and do not understand social rules and might lack empathy for others. [2]

Childhood disintegrative disorder is characterised by deterioration in cognitive, language and social functioning following a period of at least two years of normal development. The child with Childhood Disintegrative Disorder loses previously acquired skills such as language, social skills, bowel or bladder control, play and motor skills.

Rett's disorder appears only in females and is characterised by deteriorating cognitive and physical development usually occurring between 6 and 12 months of age. Some of their characteristic behaviors include: loss of speech, repetitive hand-wringing, body rocking, and social withdrawal. Those individuals suffering from this disorder may be severely to profoundly mentally retarded.

A child with PDD-NOS (Pervasive developmental disorder – not otherwise) specified has severe impairment in verbal or non -verbal communication skills or displays unusual behaviors, interests, and activities. [2]

Prevalence figures for presentation of ASD (Autism Spectrum Disorder) in boys and girls have consistently shown that ASD (Autism Spectrum Disorder) is more common in boys. Typically the literature suggests a ratio of 4: 1 for classic autism and 9:1 for AS. [6]

Studies have reliably documented greater prevalence of attention deficit/hyperactivity disorder and other developmental conditions in males compared to females. [14]

Some studies have documented a higher incidence of intellectual impairment in girls with autism than in boys. Six times as many males as females with autism have normal intellectual ability. This ratio drops significantly, to less than two to one, in children with moderate to severe intellectual impairments .Sex differences are inconsistent after controlling for IQ .[7]

The literature has some disparities in identifying clear differences between males and females with ASD (Autism Spectrum Disorder), females with an ASD (Autism Spectrum Disorder)

diagnosis and IQ scores within the average range show increased functional social behavior compared to males with ASD.[10-11]

This interaction with IQ may be compounded by a lower mean IQ in the girls with ASD(Autism Spectrum Disorder) that are identified in scientific research studies compared to the males, further exaggerating the sex bias.[14]

Gender differences in the ASD phenotype remain poorly understood. Boys with ASD evidence more stereotyped and repetitive behaviors. Toddler girls with ASD had more severe communication impairments than males. [9]

Females with ASD also show less repetitive behaviors compared to males.[12]

Males may show more of the behaviors that trigger a clinical evaluation, such as hyperactivity and aggression.[13]

ASDs are almost 5 times more common among boys than girls. Girls are less likely to be diagnosed with autism than boys, unless they also have intellectual or behavioral problems.[5]

Objective: To assess level of Autism among children across gender.

Hypothesis: There exists no significant difference between level of Autism among children across gender**.**

MATERIAL AND METHODS

An exploratory research design was used for the study. This study was carried out on children with Autism in Lucknow city. Nine Non –government organisations (NGO's) working with Autistic children were first identified, then children enrolled in these NGO's were selected for the study. Total 100 children were selected through purposive random sampling technique for the study. Standardized tool Indian Scale for assessment of Autism by National Institute for the Mentally Handicapped (Ministry of social justice and Empowerment Government of India) was used to collect data from selected sample. The Statistical analysis was done by SPSS version 20. In the present study descriptive statistics like frequency, percentage, mean and standard deviation and relational statistics like f-test were used to analyse the data.

STUDY TOOLS

The survey tools (Indian scale for Assessment of Autism) were developed to capture information on children with autism. This scale contain 40 statements which are divided under six domains like Social Relationship and Reciprocity, Emotional Responsiveness, Speech Language and Communication, Behaviour Pattern, Sensory Aspect and Cognitive Component. Each questions provided respective score (Rarely upto 20% Score 1,Sometimes 21 - 40% Score 2, Frequently 41 – 60% Score 3, Mostly 61-80% Score 4, Always 81-100% Score 5). First domain is Social Relationship and Reciprocity were presented as 9 questions with dichotomous response formats. For example: Has poor eye contact? with the separate tick box response for the question etc. This measure focused on ability of eye contact of children. So each domain contains questions accordingly and present. At the last total score of respondent present the category of autism (No Autism<70, Mild Autism 70-106, Moderate 107 -153, Sever Autism > 153.

RESULTS AND DISCUSSION

Table 1. Frequency distribution of respondents having Autism on the basis of gender

Gender	Frequency	Percentage
Boy	90	90.0
Girl	10	10.0
Total	100	100.0

Results in table 1 depicted frequency and percentage distribution of respondents across gender. From the data it was revealed that from the total sample, 90 percent boys and 10 percent girls were having Autism. This meant that majority of respondents were boys. The results were found at par with American Psychiatric Association Diagnostic and Statistical Manual 5[th]ed, (2013).

Table2. Frequency distribution of respondents on the basis of category of Autism across gender

Category of Autism	Gender of Respondents		Total N=100 F (%)
	Boy N=90	Girl N=10	
Mild autism	50 (51.1)	5(50.0)	55 (55.0)
Moderate autism	38(42.2)	5(50.0)	43(43.0)
Sever autism	2 (2.2)	0 (0.0)	2 (2.0)

Table No.2 discussed distribution of respondents on the basis of category of autism and gender. Results showed that more than half (55.0%) of the respondents had mild autism, where, 51.1% were boys and 5.0% were girls while (43.0%) respondents had moderate autism in which 42.2% were boys and 5.0% were girls. Very few respondents (2.0%) belonged to sever autism category and all were boys.

Table-3:Distribution of respondents on the basis of Level of Autism

S.NO	Level of Autism	Respondents N=100
1	Mild autism 70-82 83-94 95-106 Total	 20(20.0%) 12(12.0%) 21(21.0%) =53(53.0%)
2	Moderate autism 107-122 123-138 139-153 Total	 20(20.0%) 22(22.0%) 3(30.0%) =45(45.0%)
3	Sever autism More than 153 Total	 2(2.0%) =2(2.0%)

Table 3: discussed distribution of respondents on the basis of scores obtained on the Autism scale. The level of autism was categorized as mild, moderate and sever. Results showed that 53.0percent respondents had mild autism. The scores obtained varied from 70-106. It was also noticed that 20.0percent respondents scored between 70-82, while 12.0percent respondents scored between 83-94 and 21.0percent respondent scored between 95-106. Results also showed that 45.0percent respondents were having moderate autism. The score obtained varied from 107-153.It was also noticed that 20.0percent respondents scored between 107-122, while 22.0percent respondents scored between 123-138 and 30.0percent respondents scored between 139-153.Very few respondent 2.0percent were having sever autism and their score obtained were more than 153.

Testing of Hypothesis-

Ho 1:There is no significant difference between level of autism and gender.

Table 4:Distribution of respondent's level of autism across Gender

Category	Mean	df	P	Conclusion
Levels of Autism				
Mild				
Boy Girl	1.94 2.80	1,51	0.037	S

F (1,51) = 4.568, P<0.05

Result depicted that as p<0.05,thus null hypothesis was rejected, which means that there is no significant difference in the mild level of autism across gender.

Category	Mean	df	P	Conclusion
Levels of Autism				
Moderate				
Boy Girl	1.65 2.40	1,43	0.0397	N.S

F(1,43)= 0.733,p>0.05

Result revealed that as P>0.05,thus null hypothesis was accepted, which means that there is no significant difference between the moderate level of autism across gender.Mean value also shows the same.

Table 5:Distribution of respondent's level of autism across Gender

S.NO	Level of Autism	Respondents (N=100)	
		Boys (N=90)	**Girls(N=10)**
1	Mild autism 70-82 83-94 95-106	 20(22.2%) 11(12.2%) 17(18.8%)	 0 1(10.0%) 4(40.0%)
	Total	48(53.3)	5(50.0%)
2	Moderate autism 107-122 123-138 139-153	 17(18.8%) 20(22.2%) 3(3.3%)	 3(30.0%) 2(20.0%) 0

	Total	30(33.3)	5(50%)
3	Severe More than 153	2 (2.2%)	-

Result in table 4.7 showed level of autism across gender. Data showed that 53.3percent boys and 50.0percent girls were having mild Autism. While 33.3percent boys and 50.0percent girls were having moderate Autism.Very few only 2.2percent boys had severe autism.

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