

## EXPLORING THE RELATIONSHIP OF MIND SKILLS AND SOCIAL SKILLS WITH AUTISTIC TRAITS AMONG DIAGNOSED CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD)

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### ABSTRACT

*Autism Spectrum Disorder (ASD) is considered as a neurodevelopmental clause that characterized by constant difficulties in social, mental, communicational, or repetitive behavior aspects of the child. The children who are diagnosed with this disorder usually report a very heterogeneous range of symptoms with unstable range of severity. The core purpose of this study was not only highlighting the deficit skills of autistic children but also endeavor to check the possible relationship of these deficit skills with autistic traits of the children. For that purpose, a sample of (N=30) diagnosed children with autism was selected from two autism centre i.e., Autism Resource Centre & Special Need Care Centre in Multan by using the purposive sampling technique. To collect the responses of the autistic children three valid and reliable measures were utilized. The Mind Task Battery was used to check the mind skills of the children; Social Skills Scale (SSS) was applied to check the social competency and Social Responsive Scale (SRS) was administered to check the autistic traits. The collected data was analyzed by using SPSS. The results from the collected data revealed that the autistic traits were higher among the children and these traits were significantly correlated with the mind skills of the children. Furthermore, the results reported that the children exhibit frequent repetitive behavior, low level of advance and basic skills and lower level of self-control. Hence, from the results it concluded that there is a dire need to address problems of autistic children and provide some intervention to improve these anomalies.*

**Keywords:** Autism Spectrum Disorder (ASD), Social Skills, Mind Skills, Autistic Traits.

### INTRODUCTION

Autism Spectrum Disorder (ASD) is known as a neurodevelopmental condition that markedly affects the child's behavior, communicational skills, social interaction in society and overall sensory processing. Due to this condition the child must face a wide range of challenges, in the realm of life. That's why it is called spectrum disorder. In many cases it is diagnosed in early childhood, around the age of 2 to 3. However, there is no specific age limit for being diagnosed with this disorder. Diagnosis can occur when the characteristics and symptoms become evident and meet the criteria for autism spectrum disorder (Faras et al., 2010). It has been observed that some children with autism spectrum disorder have mild symptoms and live their lives normally while others require special support from psychologists and psychiatrists. Children with autism have specific characteristics and features that need special attention such as social challenges, communication differences, repetitive behavior and interests, sensory sensitivities, routine and predictability and strengths (Sanchack & Thomas, 2016).

### Artistic Traits in Children with Autism Spectrum Disorder (ASD)

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Autism Spectrum Disorder manifests in a variety of ways. Some children with this disorder exhibit artistic talents that are distinct compared to neurotypical individuals. While it does not mean that all children with autism have such traits. The extent and presence of artistic abilities vary from children to children. These children may have keen attention to detail which proves as an asset in artistic pursuits. Some children can think visually and process information in visual terms. They are hyper focused and have unique, creative perspectives. Some children have sensory sensitivities which influence their art. They have intense interest in specific topics and repetitive behavior of autistic children can help in their artwork (Masataka, 2018).

### **Prevalence of Autism Spectrum Disorder (ASD) among Children in Pakistan**

Prevalence of Autism Spectrum Disorder varies across the world. It can change over time due to some factors such as changes in diagnostic criteria, increased awareness, and variable data collection method. Subgroup analysis indicated that prevalence of autism spectrum disorder in Australia, Africa, Europe, America, and Asia is 1.7%, 1%, 0.5%, 1% and 0.4% respectively (Salari et al., 2022). The prevalence of autism spectrum disorder in Asian countries such as Pakistan can be challenging same as in other countries. This is due to many factors such as limited access to health care services, differences in awareness and variations in diagnostic criteria. Therefore, it is difficult and challenging to determine an accurate ratio. However, some studies suggest that prevalence of autism spectrum disorder is increasing day to day but is lower than Western countries (Imran & Azeem, 2014). A study estimates that there are 350,000 children suffering from autism spectrum disorder in Pakistan. However, a substantial amount of research indicates that this disorder is more common in males as compared to females. Prevalence can vary by region, group, age, and other factors. Gender roles are important in how autism spectrum disorder is perceived and diagnosed and how children with autism spectrum disorder navigate and experience conditions. Therefore, Children with Autism Spectrum Disorder need proper care and attention from family members especially from mothers (Minhas et al., 2015).

### **Formulation of Cognitive Skills among Children with (ASD)**

Most of the children with autism spectrum disorder exhibit wide range of behavioral and cognitive characteristics but there is significant variability from child to child. Many children with autism spectrum disorder exhibit detailed thinking. They can focus on specific details, facts or patterns which can be beneficial in certain problem solving tasks or academics. Children with Autism Spectrum Disorder do not feel good during social interaction, it becomes challenging for them, and however some children are known for their logical and straightforward communication style (Luculano et al., 2014). Some children with autism spectrum disorder think in a visual manner. They can use visual imagery to remember information and to understand various things. Many of them have a natural inclination toward systematic and logical thinking. Children with autism demonstrate vigorous pattern recognition skills, especially when it comes to remembering specific details or memorization and fact and excel analytical problem solving. They can solve problems in a methodical and structured way (Brent et al., 2004).

Memory abilities can be different among children with autism spectrum disorder. Some of them may have amazing memory skills, precisely in areas of recalling facts and details or interests, while some have difficulties with recalling information or working memory. Cognitive skills in autism spectrum disorder can oscillate broadly among children due to multifarious nature of condition. Some children may surpass in definite cognitive areas, others may face challenges (Kimhi, 2014).

### **Social Skills of Children with Autism**

Children with Autism Spectrum Disorder manifest extensive variety of social skills challenges because of the difficulties in navigating and understanding social interactions. These are different and vary from children to children. They show specific social behaviors and often have difficulty in communication. They may strive with verbal and nonverbal communication. Such as understanding humor, eye contact and using adequate gestures and facial expressions (Murray et al., 2009). Children with Autism Spectrum Disorder find it difficult to interact with other people, such as starting a conversation and greetings. They also have difficulty in taking turns in conversations. Mostly the interaction is one sided and they fail to respond appropriately. This situation can lead them to social isolation (Karkhaneh et al., 2010). These children can perform better in social interactions if they are provided with opportunities and appropriate ways to respond in social situations. Different therapies can help them develop and rehearse positive social interactions

(Amico & Lalonde, 2017). Some children with this disorder face anxiety in social situations. This leads them to withdraw themselves from social interactions. Most of them show repetitive and stereotype behavior which affects their social life. These behaviors include rocking, hand flipping and self-stimulatory actions. Due to all these behaviors, they are unable to make friends. However, with their artistic and mind skills most of them somehow manage to interact and make friends (Cotugno, 2009).

## **REVIEW OF LITERATURE**

People with autism spectrum disorders (ASD) have significantly worse social and mind skills. A study compared the mind skills and social information processing abilities of 52 children with (ASD) to those of 55 typically developing (TD) children. A mediation analysis was used to look at how mind competences could mediate social information processing skills. The results showed that autistic children lacked social skills and mind skills. The study suggested that mind skills are essential for the development of social skills, and children with autism lack mental abilities (Mazza et al., 2017).

Hale & Flusberg (2005) conducted a longitudinal study to investigate the developmental patterns of discourse abilities and theory of mind which is the ability to understand others. A sample consisted of 57 children diagnosed with autism spectrum disorder who participated in this study. Children underwent testing twice, with one year gap. In addition to receiving standardized vocabulary tests and a battery of theory of mind tasks that were administered in a developmental order, they also supplied a natural language sample each year while interacting with one parent. The conversational abilities of the kid, specifically his or her usage of topic-related dependent utterances, were coded in the language samples. Over the course of a year, autistic children significantly improved their ability to stay on topic during conversations. When contingent discourse ability was tested concurrently, hierarchical regression analysis showed that theory of mind abilities contributed distinctive variance to individual variations in contingent discourse ability and vice versa, but they did not predict longitudinal changes.

Peterson et al. (2016) assessed peer social skills and theory of mind in children with autism disorder. A sample of 195 with an age range of 13 years and above participated in the research. Mind abilities were assessed by theory of mind (ToM) tests and the interactive skills were reported by their teachers. The findings showed different dimensions. Notably, ToM knowledge predicted peer social skills regardless of age, gender, language ability.

Relationship between mind skills and abilities of autism children and their social interaction skills were illuminated by much research with different variables and different conditions including trainings from which it can be generalized that trainings with autism children will improve their deficits. Research investigated the impact of a theory-of-mind (ToM) and social skill training program on the ToM evaluations and social interactions of a high-functioning autistic student in sixth grade. The effectiveness of the training program on participants' learning outcomes was evaluated using a multiple probe approach that included behaviors and surroundings. The results showed a functional relationship between the intervention and the participant's degree of skill mastery. Particularly, through time and various circumstances, the participant's appropriate social interactions greatly improved, and the results of the ToM test also significantly improved showing that social skills and mind abilities are related. (Feng et al., 2008).

### **Rationale of the Study**

In fact, autism spectrum disorder (ASD) is known as a developmental disorder. It is a lifelong disorder and affects children all over the world. It has been observed that some children with mild symptoms are able to live relatively normal lives whereas, the others with severe autistic traits need specialist/therapist support. In Pakistan, more than three lakh children are suffering from this fatal disease. They are living without getting any social support from their caregivers. The core aim of this study was to highlight social skills, mind skills and their relationship with autistic traits among the children with autism spectrum disorder (ASD). Up till now, many researches were conducted to check the prevalence of autism among the children but there are rare studies to highlight the relationship of these autistic children with their other social and mental skills. This research will fill the existing gap and explore new knowledge and will also be an addition in the literature.

### **Significance of the Study**

This is an acknowledged fact that the children and adults who are diagnosed with autism disorder are in dire need to seek help to improve their learning skills, social skills and regarding the mind related problems. In this way they can enhance or improve the level of confidence, communication skills and learning skills. The results of this study will be helpful for teachers and parents to understand the problems of the autistic children and to deal with them. The findings of this study will also help the psychologist and psychiatrist to better understand the psychosocial and learning issues of children with autism.

## **METHOD OF THE STUDY**

The method and strategies adapted to carry out this research are described below.

### **Statement of Problem**

This study was carried out to check the relationship of mind and social skills with autistic traits among autistic population.

### **Objectives of the Study**

1. To assess the level of mind skills and social skills of diagnosed children with autism.
2. To assess the level of autistic traits of diagnosed children with autism.
3. To check the relationship of mind and social skills with autistic traits of children with autism.

### **Hypotheses of the Study**

1. There will be a lower level of mind and social skills among children with autism.
2. Level of autistic traits will be higher among the autistic children.
3. There will be a significant relationship between mind skills, social skills and autistic traits among children with autism.

### **Research Participants**

The participants of this study were the diagnosed autistic children selected from the autism resource centre and special need care centre Multan. In this study, both girls and boys with autistic symptoms were included.

### **Nature of the Study**

This study was quantitative in nature.

### **Sample Population**

The sample of this study was the autistic children selected from autism resource centre and special need care centre Multan.

### **Sampling Method**

The sample of this study was selected by using purposive sampling method.

### **Research Design**

All the autistic children were belonging from diversified demographic features, so the research design adapted in this study was cross-sectional research design.

### **Measures and Covariates**

In this study, three valid and reliable tools were used to measure the variables of this study. Firstly, the mind skills of the autistic children were measured by using the Mind Task Battery. In this Battery, a set of 15 questions were administered to check the mind skills of the autistic children. Secondly, the social skills of the autistic children were measured by using Social Skills Scale (SSS). This scale was consisting of 24 items each of which aimed to check the social skills of the autistic child. The reliability of this scale ranged from 0.91 to 0.93. Thirdly, the autistic traits of the children were measured by using Social Responsiveness Scale (SRS). This was a 4-point scale ranging from zero to four. The internal consistency of the scale was 0.9 to 0.97 and test-retest reliability was 0.84 to 0.87.

### **Procedure of the Study**

In this research, the researcher selected the participants from two autism centre in Multan. First of all, the informed consent was taken from the mothers and informants of the autistic children. The researcher administered the three valid scales to collect the desired data. After collecting the data, the scoring was done as described in the manual of the scale. The collected responses were further analyzed by using SPSS.

### **Ethical Consideration**

In this study the APA ethical guidelines were followed. All the participants were voluntarily selected in this study. A brief purpose and aim of the study were described before administering the study tools. It was also

told to the informants of the autistic children that there is no risk and harm in this study. They were also told that all the responses of the autistic children were kept as confidential and will be used for research benefits only.

## RESULTS

The results from the collected data are as under.

Table 1 Prevalence of Social Skills, Mind Skills and Autistic Traits among the Sample of (N=30)

Variables	Aspects	Minimum	Maximum	Mean	S.D
Social Skills	Assertion	5	11	7.30	1.56
	Self-Control	3	8	5.33	1.56
	Cooperation	2	5	3.43	0.82
Mind Skills	Early	1	3	2.20	0.71
	Basic	0	2	0.13	0.43
	Advance	0	0	0.00	0.00
Autistic Traits	Social communication and Interaction	81	137	101.50	13.40
	Restricted Repetitive Behavior	13	29	20.13	4.30

Note: The above table depicts the descriptive statistics of study variables. From the analysis, it reveals that the autistic children reported lower score on mind skills scale.

Table 2 Showing correlation matrix of overall variables under study (N=30)

Clinical variables	Age	Social Skills Scale	Theory of Mind Inventory	Social Response scale
Age	1			
Social Skills	-0.153	1		
Mind Skills	0.019	0.596**	1	
Autistic Traits	-0.303	0.157	-0.273	1

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Note:. In the table the values with star (\*) shows correlation is significant at 5% level and values with double star (\*\*) are significant at 1% level of significance.

## FINDINGS AND DISCUSSION

This study was sets out to explore the autistic traits and their relationship with their social & mind skills. In this respect three core objectives were formulated. The first hypothesis was formulated to check the level of mind skills & social skills of the children with autism. It was hypothesized that “there will be a lower level of mind skills and social skills among autistic children”. The results from the collected data depicted that the autistic children were lower in advance and basic skills. Similarly, they were also weak in their social skills i. e. self control & social cooperative skills. Hence, the hypothesis accepted. The results of this hypothesis are in connection with the past studies. Such as, Landa et al. (2007) conducted a research to describe the problems of the autistic children. The results of their study reported that the autistic children score lower on social and mental tasks. They also stated that the children with autism are lower in communication, lack of confidence, lack of expressing the emotions and self-control. The second hypothesis of this study was design to check the level of autistic traits among autistic children. It was hypothesized that “the level of autistic traits will be higher among the children”. The results of this hypothesis were also accepted because the children exhibit more repetitive behavior. These findings are also in line with the previous research such as, Orsmond et al. (2013) conducted a study to address the autistic traits among the children and reported that they are weaker in communication, gesture, eye contact, self-control and also showed low confidence.

The third and last hypothesis was aimed to check the relationship of autistic traits among children. It was hypothesized that “There will be a significant relationship between mind skills, social skills and autistic traits among children with autism”. The results of this hypothesis were also accepted at 0.1 level of alpha value. The findings showed a significant correlation of mind skills with autistic traits of the children with autism. The results of this hypothesis also in accordance with the previous research conclusions such as, Kopp & Gillberg (1992) conducted a study to check the cognitive deficits among the autistic children and reported a higher level of cognitive and mental deficit. Hence, this hypothesis is also accepted.

## CONCLUSION

Based on the findings of this study, this concluded that the autistic children are not only suffering from autism related issues but also with the other related issues as well. Not restricted that the study also explores that the autistic traits are correlated with other social and cognitive issues. In the light of the results this also concluded that dealing with these autistic children also requires an insight into their related issues as this study reported.

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