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Clinical Observation of Mealtime Behavior in Children with Autism Spectrum Disorder of Different Severity

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ABSTRACT

Introduction: Autistic children often search for predictability while eating. Yet, mealtimes are often a challenging task for parents. The mealtime behaviors of children with autism spectrum disorders make parents or caregivers burdensome as eating is vital and every parent expects their child to have nutritious and healthy growth. As a consequence, this altered mealtime may risk the social skills and well-being of the child and their family's stability.
Need for the study: There are very few studies available that talk about feeding problems in children with autism spectrum disorders and the association between the severity of autistic symptoms and feeding issues was not targeted. Thus, to examine the feeding abilities of autism spectrum disorders children across severity the present study was carried out.
Method: A total of 45 children with autism spectrum disorder between the age range of 4 to 7 years participated in the study. All the children attending the therapy for more than 6 months in an institutional setup. Participants of the study were divided into three groups based on their severity. All the parents were given the Brief Autism Mealtime Behaviour Inventory questionnaire and informed to complete the questionnaire by considering the child's behaviour from the last 6 months.
Results & discussion: The findings of the present study suggest that children with severe autism showed higher mealtime disruptive behaviors in comparison to milder severity. Thus, the present study also suggests that there is an association between severity and feeding behaviour that autistic child exhibits in their daily life and severe autism children show higher issues compare to milder severity.
Conclusion: The association between severity and mealtime behaviors can help parents and caregivers to reduce their burden during mealtime if identified and counseled earlier with professional support.

Keywords: autism, autism spectrum disorders, mealtime behavior, children

INTRODUCTION

Autism spectrum disorder (ASD) also referred to as multiple neurobiological disorders can be defined as a neurodevelopmental disorder with impaired social communication skills, and repetitive and restrictive behaviors (APA 2013). ASD is a developmental disability with varied severity caused by differences in the brain. Children with ASD may behave, communicate and learn things in different ways compared to peer groups due to which they need help or assistance in their daily living. Researchers have reported that ASD

begins before the age of 3 years and can last a lifetime with improvement in symptoms over time. Some autistic children will gain new skills and meet normal developmental milestones up to 2 years of age, and later they may stop acquiring skills or lose the known skills (Maenner MJ 2014).

The global prevalence of early-onset ASD is ~1%. Over 78 million people worldwide are affected by ASD and had an enormous impact on family members and caregivers (Richa Tiwari 2021). Researchers have reported the autism prevalence across five States in the north and west part of India in 125 children between 2-6 years of age group and 1 in 80 children between 6-9 years of age. The overall prevalence of ASD in India is estimated to be 1in 89 children. (Arora, N. K 2018).

The term "spectrum" in ASD refers to the broad range of symptoms and severity. Children eventually exhibit problems in functioning socially, in school, and at workplaces. Every autistic child is likely to have a unique pattern of behaviors and level of severity from low functioning to high functioning. Some children with ASD have difficulty learning, and some have signs of lower-than-normal intelligence, some may have normal to high intelligence and learn quickly but have trouble in communication in day-to-day life and social adjustments. Because of the unique mixture of symptoms in each child, severity can sometimes be difficult to determine. It's generally based on the level of impairments and how they impact the ability to function.

Several researchers have reported that children with ASD exhibit core symptoms like difficulty in socialization, communication deficits, and noticeable behavioral issues. In addition to these core symptoms, children with ASD also exhibit aberrant eating behaviors. Although the typical paediatric population shows some types of eating disturbances, such as food refusal or denial the prevalence was found to be significant in children with ASD ranging from 51% to 89%. Children (Ledford JR 2006, Archer LA 1991, Kerwin MLE 2003).

Mealtimes are complex for children with ASD. Autistic children often search for predictability while eating. Yet, mealtimes are often a challenging task for parents. The mealtime behaviour of children with ASD makes parents or caregivers burdensome as eating is vital and every parent expects their child to have nutritious and healthy growth. As a consequence, this altered mealtime may risk the social skills and well-being of the child and their family stability (Kodak and Piazza 2008, Levin 2012). Feeding problems in children can impact the overall health of an individual, especially for specially-abled children like ASD. Very few studies are available that talk about feeding problems in children with ASD and the association between the severity of autistic symptoms and feeding issues were not targeted. Thus, to examine the feeding abilities of ASD children across severity the present study was carried out.

METHOD

A total of 45 children with autism spectrum disorder between the age range of 4 to 7 years (M_{age} = 5.6 y) participated in the study. All the children were attending the therapy for more than 6 months in an institutional setup. Written and oral consent was obtained from all the parents of the children participated in the study. Participants of the study were divided into three groups based on their severity. Group 1 (N=15) consist children with mild autism, Group 2 (N=15) consist children with moderate autism and Group 3 (N=15) consist children with severe autism based on Indian scale for assessment of autism (ISAA).

Detailed background information about the child's life style and food habits were collected from the parents. All the children were diagnosed by a qualified speech language pathologist and attending therapy for more than 4 sessions in a week for more than 6 months. All the parents were given with the Brief Autism Mealtime Behaviour

Inventory (BAMBI) questionnaire and informed to complete the questionnaire by considering the child's behaviour from last 6months. All the results were tabulated and subjected to suitable statistical analysis.

RESULTS AND DISCUSSION

The analysed data was subjected to suitable statistical analysis. As the data was non normally distributed non parametric tests were carried out. The mean values of the findings were showing significant difference across the groups. Group 1 (milder) showed the mean value of 34.7, Moderate group mean value 41.4 and severe group showed mean value of 49.2. The Wilcoxon signed rank test was carried out to determine the significant differences between the groups. The alpha value was >0.05 between group 1 and group 2 showed no significance at 0.05 level. The alpha values between group 2 and group 3 showed significant difference with >0.05 level. The Wilcoxon sign rank value was <0.05 showing a significant difference between group 1 and group 3. Indicating milder and severe autistic children showed a statistically significant differences in their mealtime behaviour in comparison to moderate autistic.

Problems in feeding or eating behaviour can be seen as typical behaviour and may prolong as maladaptive behaviour. These problems are may be dependent on severity of clinical conditions and lead to other medical complications like malnutrition, obesity etc (Naets 2020). Many researchers have reported that feeding problems occur in 60% to 90% of young children with ASD and 25% to 35% of typically developing children (Kodak and Piazza 2008, Levin 2012). Several researchers have also reported that certain feeding problems like restricted diet, preferences while eating, denial of food, neophobia, sensory issues are common in ASD children Johnson *et al.* (2014), (Marshall *et al.* 2016) , (Lane *et al.* 2010) which can persist as a problematic ASD features as they grow.

Some of the researchers have hypothesised that neurophysiological change in the brain of autistic children would be the one of the causes for these feeding issues. As typically developing children also show some amount of feeding problems during their developing age but these autistic children shows higher intensity of feeding problems (Lane *et al.* 2010) in comparison which may suggest that the development disability and the autistic features would exaggerates the child's feeding behaviour and in turn leads to this mal adaptive behaviour (Anderson 2011). Thus the present study also suggests that there is an association between severity and feeding behaviour which autistic child exhibits in their daily life and severe autism children shows higher issues compare to milder severity.

CONCLUSION

The findings of the present study suggest that children with severe autism showed higher mealtime disruptive behaviours in comparison to milder severity. The association between severity and mealtime behaviours can help parents and caregivers to reduce their burden during mealtime if identified and counselled earlier with professional support. This mealtime behaviour analysis clinically at the time of diagnosis or during the therapy would help caregivers and parents and early measures can be taken and intervened accordingly at early stages and improves their quality of life and overall growth.

Declaration by Authors

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