Original Article

EVALUATION OF THE DIETARY PATTERNS AND EATING BEHAVIOR OF CHILDREN WITH AUTISM SPECTRUM DISORDER BY USING BRIEF AUTISM MEALTIME BEHAVIOR INVENTORY

Saba Nadeem Dar[1], Aqsa Nadeem[2], Sadia Rafiq[3], Hafsa Tahir[4]

Abstract:

Background: Autism spectrum disorder is a neuropsychiatric disorder. The objective was this study aimed to assess dietary patterns, eating behaviors of the children with autism spectrum disorder and to find out the association of different foods with BMI.

Material and Methods: It was a cross-sectional study. 65 participants between the ages of 5 to 20 years were selected by using non probability convenience sampling technique. Data on food preferences, portion sizes, and food types were collected using the Food Frequency Questionnaires (FFQ) and Brief Autism Mealtime Behavior Inventory (BAMBI). Data was gathered from caregivers using a structured questionnaire, and quantitative analysis was performed using SPSS version 30).

Result: Among children with autism 19 (35.2%) obese. The eating behavior of participant revealed that children exhibit resistive behavior at almost every meal which accounts for 12 (22.2) %. Significant proportion of children with ASD 13 (24.1%) had preference for the same food. The *p* value demonstrate that there was no association between BMI and intake of different food from various food groups.

Conclusion: The study revealed that most children with ASD were found to have abnormal BMI for their age. The results also showed that the consumption of beverage, fruits and meat groups were good but they lacked in consumption of other food groups like vegetables, grains and dairy groups which can impact their overall health.

Keywords: Autism Spectrum Disorder (ASD), Eating Behaviors, Dietary patterns, Food preferences.

doi: https://doi.org/10.51127/JAMDCV0702OA05

How to cite this:
Dar SN, Nadeem A, Rafiq S, Tahir H. Evaluation of The Dietary Patterns and Eating Behavior of Children with Autism Spectrum Disorder by Using Brief Autism Mealtime Behavior Inventory. JAMDC, 2025;7(2):83-91
doi: https://doi.org/10.51127/JAMDCV07I02OA05

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impaired social and communication skills and repetitive and restrictive behaviors manifesting in the first few years of life and tending to persist into adolescence and adulthood.[1] Genetics and neuroscience have identified intriguing patterns of risk, but without much practical benefit sofar.[2,3] The main cause responsible for autism is still unknown but the genetic factors along with a set of environmental and epigenetic element are said to play a key role. Almost 1 in every 100 children are diagnosed with autism spectrum disorder around the world.[4] Patients with ASD experience many co-existing developmental conditions. About 20% of children with ASD

[1,2,4] Asist Prof. University of Management & Technology, Lahore
[3] Lecturer University of Management & Technology, Lahore
Date of Submission: 08-04-25
Date of 1st Review: 25-04-25
Date of 2nd Review: 20-05-25
Date of Acceptance:05-06-25

have average or above average intelligence. They are most likely to develop speech skills by the age of six.[5] Some children may emerge intellectually impaired in some region, yet may be extraordinary in others. Some might show latest expertise in mathematics, perusal counting, memory, art, along with music. Thus, some children with ASD have the average intellectual ability.[6]

The diagnostic and statistical Manual of Mental Disorders, 5th edition (DSM-5) defined levels of ASD. The 5th edition criteria provide three clear levels based on the patient's requirement for help.[7] Level 1 is the mildest and or "highest functioning "form of autism. These children experience some inflexibility of behavior like difficulty in switching between tasks, planning, and staying organized.[8] Social communication and stereotyped behaviors are present more obviously in children with ASD level 2. ASD level 3 is characterized by severe challenges in social communication as well as extremely inflexible behavior.[9] Children with ASD suffer more feeding problems than children with normal developmental milestones. Food selectivity or picky eating, are common among children with ASD.

Avoidant-restrictive food intake disorder (ARFID) is a diagnosis in the “Feeding and Eating Disorders” section of the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5). These eating disturbances that lead to deficits in energy or nutritional intake. Parents of children with autism spectrum disorder (ASD) frequently report that their children have selective eating behaviors and refuse many foods.[10]

A cross-sectional study involving 144 children (55 with ASD and 91 neurotypical) aged 6 to18 years discovered that children with ASD exhibited significantly higher rates of food selectivity (60.6% vs. 37.9%), inadequate nutrient intake (50% vs. 22%) and mealtime behavioral issues compared to their non autistic peers.[11] Anorexia nervosa and binge eating is also common in children with ASD. Abnormalities in breastfeeding and acceptance of complementary foods have been described by most of the studies evaluating ASD early feeding history.[12] Among the various eating and mealtime behaviors identified in ASD children and adolescents, the most common was food selectivity.[13]

Frequent nutritional screening and evaluation of children with ASD is an important clinical consideration because they may have multiple risk factors that could increase the prevalence of nutrient deficiency. These children often present with nutrition-related health problems, including gastrointestinal discomfort, inflammation of the intestines, diarrhea, constipation, and acid reflux. To assess the nutritional status of these children, parents/caretaker are asked to provide detailed information on the child's food intake in order to locate a food intake record and complete a dietary questionnaire.[14]

Eating is recognized as one of the issues faced by children and adults affected by ASD so, it should be assessed using specific tools. The Brief Assessment scale for Mealtime Behavior in Children (BAMBI) and 24-h recalls is the most commonly used dietary assessment tools. BAMBI consists of 18 items which covers key domains such as food refusal, limited variety, mealtime rigidity, and disruptive behaviors. Its strength lies in its ability to capture behavioral feeding challenges unique to children with ASD, which may not be evident through dietary intake tools alone.[15]

Although global literature has established a link between ASD and feeding challenges such as food selectivity, emotional eating, and nutrient inadequacies, there is a significant lack of context-specific evidence from low- and middle-income countries like Pakistan. Most existing studies are concentrated in Western or high-income settings, where access to early diagnostic services, specialized dietary support, and parental education differs vastly from that of the Pakistani population. In Pakistan, dietary patterns are heavily shaped by sociocultural practices, economic constraints, and limited access to autism-specific nutritional care. Local

staple foods, frequent use of high-fat and sugary items, and food insecurity further complicate nutritional outcomes. Additionally, limited awareness of ASD symptoms, delayed diagnoses, and a shortage of trained paediatric dietitians and therapists create substantial barriers to early dietary intervention.

While a few Pakistani studies have addressed general ASD prevalence or parental satisfaction with dietary interventions, there is no comprehensive, evidence-based assessment focused on both mealtime behaviors and actual dietary intake patterns in this population, especially at the preschool level. This study aims to assess dietary patterns, eating behaviors of the children with autism spectrum disorder. The findings highlight the need for regular monitoring and early identification of mealtime behavioral and nutrition problems among preschoolers with ASD. This study also provides the recommended strategies to tackle the dietary patterns and eating behavior of children with ASD.

MATERIALS AND METHODS

A cross-sectional study was conducted in 4 autism centers which were Step ahead autism care center, Rising Sun Institute for Special Children, Autism Institute of Pakistan and Love and care autism center with approval from Research Ethics and Support Committee under approval number RE-008-2025 through a non-probability convenience sampling method.

A sample size of 65 was calculated using Open Epi based on a 95% confidence level. The study was completed in 3 months from December 2022 to February 2023. The participants included in this research were the caregivers of children with autism spectrum disorder. Caregiver of children from ages 5 to 10 years were the target population of this research.

All four centers helped to arrange meeting with caregivers to fill the questionnaire. Data regarding the food preferences, portion size and food type of the participant were collected using the Food Frequency Questionnaire (FFQs). The parent-reported 18-item Brief Autism Mealtime Behavior Inventory (BAMBI) was used in the study for evaluating the eating behavior problems exhibited by the participants. Responses to the questions were represented by Likert scale. After, taking permission from the centers, data was collected from the caregivers of children using a structured questionnaire.

Height and weight of children were recorded with the help of weighing scale and stadiometer and plotted on CDC growth charts. Quantitative data analysis of questionnaire was performed through statistical tools, excel and SPSS (IBM 30). The BMI, resistive behaviour, preference for the same food and food types intake per week were presented through frequency tables. The association between food intake from different food groups and BMI was checked by using chi square test. The p-value of 0.05 or less was considered significant.

RESULTS

The participants comprised both genders. i.e.61% of boys and 39% girls. The CDC growth chart BMI for age 2 to 2years were used for the interpretation of weight status. 12% children had BMI below 5th percentile and 16%have BMI between 5th and 85th percentile. 13 % children had BMI between 85th to 95th percentile. 19% had BMI above 95th percentile. (Table 1)

Table:1 Percentage of the health status of Children according to BMI

Health status according to BMI	No./Percentage of children
Underweight	**12 (22%)**
Healthy	**16 (30%)**
Overweight	**7 (13%)**
Obese	**19 (35%)**

Based on the data, the questions were divided into three broad categories. The categories include resistive behaviour, preference for the same food and food types intake per week. At the end the association between food intake and BMI was checked.

The data represented the frequency distribution of responses of children with Autism Spectrum Disorder (ASD) regarding their resistive behaviour towards food.The data represented the frequency distribution of responses of children with Autism Spectrum Disorder (ASD) regarding their preference for the same food. The responses were categorized into five different levels, ranging from "never/rarely" to "at almost every meal."(Table 2)

Overall, the data highlights the diversity of preferences for the same food among children with ASD. Significant proportion of children in this study had a strong preference for the same food and were likely to eat the same thing repeatedly. (Table 3)

This data showed the association of different food with BMI. According to Table no. 4 Chi-square analyses revealed no statistically significant association between BMI and the consumption of milk ($p = 0.464$), yogurt ($p = 0.930$), or cheese ($p = 0.798$). (Table 4) Chi-square analysis showed no statistically significant association between BMI categories and the intake of bananas ($p = 0.748$), apples ($p = 0.331$), oranges ($p = 0.604$), or fruit juice ($p = 0.632$). No significant linear-by-linear trends were observed for any fruit item, suggesting that fruit consumption was not associated with BMI status in this population."

Association of BMI with vegetable shows that there was no significant associations between BMI and the intake of carrots ($p = 0.132$), mixed vegetables ($p = 0.369$), peas ($p = 0.237$), or cucumbers ($p = 0.924$) based on the Pearson Chi-Square test. Association of MBI with cereal shows that there was no statistically significant association between BMI categories and the intake of white bread ($p = 0.653$) or whole grain bread ($p = 0.206$) and white rice ($p=0.203$) Association of MBI with animal protien shows that there was no significant relationship between BMI and intake of eggs ($p=0.117$), chicken ($p=0.273$) and fish ($p=0.934$). We asked parents about the different food types their children take every week. The food categories included were dairy foods, fruits, vegetables, bread, cereals, and starchy foods, meat and meat group. The weekly intake of various food groups among children was assessed, focusing on dairy products, fruits and juices, vegetables, and the meat and fish group. Regarding dairy products, 15 (28%) of children never consumed yogurt, 10 children (19%) never drank milk, and 20 (37%) never ate cheese. Only 12 (22%) consumed milk daily, compared to 7 (13%) for yogurt and 3 (6%) for cheese. A significant proportion also reported consumption once per week—milk 7 respondents (13%), yogurt 14 respondents (26%), and cheese 16 respondents (30%). Regarding fruit and fruit juice consumption, 30 respondents (39%) said they had never eaten oranges or 21 respondents (55%) said they had never consumed fruit juice. Apples and bananas were never eaten by 8 (19%) and 10 (14%) of people, respectively. In all categories, daily intake was low, with only 4 (8%) of people eating apples and 3 (6%) eating bananas. For vegetables, many children had limited intake. A sizable portion never ate mixed vegetables 19 (35%), peas 20 (37%), cucumber 18 (34%), or corn 22 (41%). Lentils16 (30%) and carrots 9 (16%) had somewhat less "never" answers. The majority of kids only ate vegetables once a week, with 24 (45%) of them consuming carrots, 17 (31%) corn, 25 (47%) peas, and 14 (25%) lentils. All vegetables were consumed at relatively low levels each day, with mixed vegetables accounting for 3 (6%) and carrots for 4 (8%).Fish consumption was likewise restricted in relation to the meat group. According to the report, 21 (38.89%) of children ate fish once a week, 5 (9.26%) twice a week, 3 (5.56%) three times a week, and only 1 (1.85%) four times a week or daily.

Table: 2 Frequency and Percentage of resistive behaviour towards food. (n=54)

	Never/rarely	Seldom	Occasionally	Often	At almost every meal
Children who scream during meal time					
Frequency	32	3	4	4	11
Percentage	59.3%	5.6%	7.4%	7.4%	20.4%
Children who remain seated at the table during mealtime					
Frequency	11	7	9	6	21
Percentage	20.4%	13.0%	16.7%	11.1%	38.9%
Children expel almost at every meal					
Frequency	29	8	3	4	10
Percentage	53.7%	14.8%	5.6%	7.4%	18.5%
Children who turn away from food					
Frequency	31	5	4	7	7
Percentage	57.4%	9.3%	7.4%	13.0%	13.0%
Children who show aggressive behavior during mealtime.					
Frequency	29	7	3	3	12
Percentage	53.7%	13.0%	5.6%	5.6%	22.2%
Children who show self-injurious behavior during mealtime					
Frequency	33	2	5	2	12
Percentage	61.1%	3.7%	9.3%	3.7%	22.2%
Children who show disruptive behavior during mealtime					
Frequency	33	7	2	3	9
Percentage	61.1	13.0	3.7	5.6	16.7
Children who show closes mouth during mealtime					
Frequency	30	4	6	5	9
Percentage	55.6	7.4	11.1	9.3	16.7

Table: 3 Frequency and Percentage of Children with ASD regarding their preference for the same food n=54

	Never/rarely	Seldom	Occasionally	Often	At almost every meal
Children who remain flexible during mealtime					
Frequency	19	5	5	8	17
Percentage	35.2%	9.3%	9.3%	14.8%	31.5%
Children who are willing to try new foods					
Frequency	13	14	2	13	12
Percentage	24.1%	25.9%	3.7%	24.1%	22.2%
Children who dislike certain foods					
Frequency	8	4	8	9	25
Percentage	14.8%	7.4%	14.8%	16.7%	46.3%
Children who refuse to eat chewable food					
Frequency	30	3	4	6	11
Percentage	55.6%	5.6%	7.4%	11.1%	20.4%
Children who prefer same food at every meal					
Frequency	14	5	14	6	15
Percentage	25.9%	9.3%	25.9%	11.1%	27.8%

Children who prefer crunchy food					
Frequency	16	5	5	16	13
Percentage	29.6%	9.3%	7.4%	29.6%	24.1%
Children who accept variety of foods at each meal					
Frequency	18	5	8	11	12
Percentage	33.3%	9.3%	14.8%	20.4%	22.2%
Children who prefer to have serve in a particular way					
Frequency	25	2	11	5	11
Percentage	46.3%	3.7%	20.4%	9.3%	20.4%
Children who prefer only sweet foods at each meal					
Frequency	32	8	6	7	1
Percentage	59.3%	14.8%	11.1%	13.0%	1.9%
Children who prefer food prepared in a particular way					
Frequency	15	6	9	8	16
Percentage	27.8%	11.1%	16.7%	14.8%	29.6%

Table 4: Association of food products with BMI

	p-Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)
	Milk with BMI			Yogurt with BMI			Cheese with BMI		
Dairy Products	17.880[a]	18	.464	12.339[a]	21	.930	15.478[a]	21	.798
	White Bread with BMI			Whole Grain with BMI			White rice		
Cereal	17.934[a]	21	.653	19.166[a]	15	.206	26.103[a]	21	.203

	Banana with BMI			Apple with BMI			Orange with BMI			Fruit Juice With BMI		
	p-Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)
Fruits	16.385[a]	21	.748	23.248[a]	21	.331	15.831[a]	18	.604	9.814[a]	12	.632
	Carrot with BMI			Mix Vegetable with BMI			Peas with BMI			Cucumber with BMI		
Vegetable	28.305[a]	21	.132	19.370[a]	18	.369	11.596[a]	9	.237	5.843[a]	12	.924
	Egg with BMI			Chicken with BMI			Beef with BMI			Fish with BMI		
Animal Protein	28.875[a]	21	.117	24.433[a]	21	.273	12.877[a]	18	.799	7.728[a]	15	.934

DISCUSSION:

The findings of the study provide important new information about the eating habits and mealtime routines of kids with ASD. It was discovered that a significant amount of participants had abnormal BMIs, with 22% being underweight and 35% being obese. This dual burden of malnutrition is consistent with new research that indicates, depending on dietary and socioeconomic circumstances, children with ASD may be at risk for both undernutrition and obesity.[4,17] Our results indicate a higher prevalence of obesity than under nutrition, which contrasts with the findings of Amjad et al, who found that 61% of

children with ASD were underweight in a local Pakistani study, while recent work by de Souza et al identified obesity as a rising concern in Brazilian ASD populations, driven by unbalanced diets and reduced physical activity. In this study, resistive mealtime behaviors were highly prevalent among children with ASD.[18,19] For example, 38.9% of kids had trouble staying seated during meals, and 22.2% of kids behaved aggressively and hurt themselves. These results are in line with those of Nygren et al, who noted that a high prevalence of Avoidant/Restrictive Food Intake Disorder (ARFID) in children with ASD leads to behavioral outbursts and disturbed feeding.[20] Additionally, Lázaro and Ponda associated these behaviors to sensory sensitivity, which is prevalent in ASD and influences social eating interactions as well as food choices. When it comes to food selectivity, 24.1% of the children in this study preferred crunchy foods, and 27.8% of them preferred the same food at every meal.[14] Taste, texture, and temperature sensitivity-related food aversions associated with ASD are reflected in these behaviours [21,22]. Such selectivity has also been linked to dietary deficiencies and restricted nutrient intake in children with ASD. The consumption of vegetables, grains, and dairy products was found to be below optimal, despite a comparatively high intake of eggs, meats, and beverages. As previously noted by Amin et al and García et al, who noted that ASD diets often lack fiber, calcium, and several micronutrients essential for healthy development. Interestingly, there was no statistically significant correlation between BMI and consumption of meat, dairy, fruits, vegetables, or grains.[23,24] These results are in line with those of Ghimire,[25] who also found no connection between autistic children's BMI and their food preferences, level of physical activity, or behaviour during mealtimes. This implies that metabolic variations, sedentary lifestyles, or medication use—factors other than dietary intake—may be more significantly responsible for weight abnormalities in this population.[26] Lastly, as also recommended by Khan and Ahmed, these results highlight the necessity of routine nutritional screening, behavioural evaluation, and caregiver support.[27] Addressing the behavioural and nutritional aspects of ASD requires a multidisciplinary team that includes behavioural specialists, occupational therapists, and registered dietitians.

LIMITATIONS

The sample size is relatively small, with only 54 respondents. Study did not explore the underlying reasons for children's eating behaviours, such as their sensory sensitivities and rigidity in routines and preferences.

CONCLUSION

This study demonstrates as no statistically significant association was found between BMI and intake of specific food groups. These results highlight the necessity of caregiver education, early screening for feeding issues, and tailored nutrition interventions. Promoting balanced nutrition and healthy eating habits in children with ASD requires multidisciplinary support from pediatricians, behavioral therapists, and dietitians.

SOURCE OF FUNDING

None

CONFLICT OF INTEREST

None

REFERENCES:

1. Lord C, Elsabbagh M, Baird G, Veenstra-Vanderweele J. Autism spectrum disorder. Lancet. 2018 Aug 11;392(10146):508-20. doi: 10.1016/S0140-6736(18)31129-2.
2. Willsey HR, State MW. Functional neurogenomics in autism spectrum disorders: A decade of progress. Curr Opin Neurobiol. 2024;79:102663. doi: 10.1016/j.conb.2024.102663.
3. Tordjman S, et al. Autism Spectrum Disorder: Neurodevelopmental Risk Factors

and Their Interactions. Int J Mol Sci. 2023;24(3):1819.
doi: 10.3390/ijms24031819.

4. Zeidan J, Fombonne E, Scorah J, et al. Global prevalence of autism: A systematic review update. Autism Res. 2022 May;15(5):778-90.
5. Brzóska A, Kazek B, Kozioł K, et al. Eating behaviors of children with autism—Pilot study. Nutrients. 2021 Aug 3;13(8):2687.
doi: 10.3390/nu13082687.
6. Takarae Y, Sweeney J. Neural hyperexcitability in autism spectrum disorders. Brain Sci. 2017;7(10):129. doi: 10.3390/brainsci7100129.
7. Weitlauf AS, Gotham KO, Vehorn AC, Warren ZE. Brief report: DSM-5 "levels of support:" A comment on discrepant conceptualizations of severity in ASD. J Autism Dev Disord. 2014 Feb;44(2):471-6.
doi: 10.1007/s10803-013-1882-z.
8. Lordan R, Storni C, De Benedictis CA. Autism spectrum disorders: diagnosis and treatment.
9. Huerta M, Lord C. DSM-5 criteria for autism spectrum disorder maximizes diagnostic sensitivity and specificity. J Am Acad Child Adolesc Psychiatry. 2012 Jun;51(6):571-3.
doi: 10.1016/j.jaac.2012.03.014.
10. Valenzuela-Zamora AF, Ramírez-Valenzuela DG, Ramos-Jiménez A. Food selectivity and its implications associated with gastrointestinal disorders in children with autism spectrum disorders. Nutrients. 2022 Jun 27;14(13):2660.
doi: 10.3390/nu14132660.
11. Molina-López J, Leiva-García B, Planells E, Planells P. Food selectivity, nutritional inadequacies, and mealtime behavioral problems in children with autism spectrum disorder compared to neurotypical children. Int J Eat Disord. 2021;54(12):2155-66.
doi: 10.1002/eat.23631.
12. Sader M, Weston A, Buchan K, Kerr-Gaffney J, Gillespie-Smith K, Sharpe H, et al. The Co-Occurrence of Autism Spectrum Disorder and Avoidant/Restrictive Food Intake Disorder (ARFID): A Prevalence-Based Meta-Analysis. Int J Eat Disord. 2025;58(3):473-88.
doi: 10.1002/eat.24369.
13. Nygren G, Linnsand P, Hermansson J, Dinkler L, Johansson M, Gillberg C. Feeding problems including avoidant restrictive food intake disorder in young children with autism spectrum disorder in a multiethnic population. Front Pediatr. 2021;9:780680.
doi: 10.3389/fped.2021.780680.
14. Lázaro CPC, Pondé MP. Narratives of mothers of children with autism spectrum disorders: focus on eating behavior. Trends Psychiatry Psychother. 2017;39(1):4-11.
doi: 10.1590/2237-6089-2017-0004.
15. Harris HA, Bowling A, Santos S, Greaves-Lord K, Jansen PW. Child ADHD and autistic traits, eating behaviours and weight: A population-based study. Pediatr Obes. 2022;17(11):e12951.
doi: 10.1111/ijpo.12951.
16. García ML, et al. A scoping review of tools to assess diet in children and adolescents with autism spectrum disorder. Nutrients. 2023;15(17):3748.
doi: 10.3390/nu15173748.
17. Harris HA, Bowling A, Santos S, Greaves-Lord K, Jansen PW. Child ADHD and autistic traits, eating behaviours and weight: A population-based study. Pediatr Obes. 2022;17(11):e12951.
doi: 10.1111/ijpo.12951.
18. Amjad A, Ijaz A, Bader M, Arshad A, Shahzadi M, Amjad M, et al. Nutritional assessment of children suffering from Autism. Pure Appl Biol. 2021;10(4):1166-72. .doi.org/10.19045/bspab.2021.100123
19. de Souza AC, da Silva RCR, de Oliveira MA. Eating behavior and nutritional profile of children with autism spectrum disorder: A study in Belém, Pará, Brazil. Nutrients. 2023;16(3):452.
doi: 10.3390/nu16030452.

20. Nygren G, Linnsand P, Hermansson J, Dinkler L, Johansson M, Gillberg C. Feeding problems including avoidant restrictive food intake disorder in young children with autism spectrum disorder in a multiethnic population. Front Pediatr. 2021;9:780680.
doi: 10.3389/fped.2021.780680.

21. Sader M, Weston A, Buchan K, Kerr-Gaffney J, Gillespie-Smith K, Sharpe H, et al. The co-occurrence of autism and avoidant/restrictive food intake disorder (ARFID): A prevalence-based meta-analysis. Int J Eat Disord. 2025;58(3):473-88.
doi: 10.1002/eat.24369.

22. Lordan R, Storni C, De Benedictis CA. Autism spectrum disorders: diagnosis and treatment.

23. Amin M, Faiyaz SI, Butt MS, Javed A, Saleem J, Saeed A. Food preferences and eating behavior among children with autism spectrum disorder: A causal-comparative study in Lahore. Avicenna. 2022;2022(2):9.
doi: 10.5339/avi.2022.9.

24. García ML, et al. A scoping review of tools to assess diet in children and adolescents with autism spectrum disorder. Nutrients. 2023;15(17):3748.
doi: 10.3390/nu15173748.

25. Upadhyay-Dhungel K, Ghimire S. Food Selectivity, Mealtime behavior, Weight status and Dietary intake in Children and adolescent with Autism. Janaki Med Coll J Med Sci. 2019;7(2):48-65.
doi: 10.3126/jmcjms.v7i2.30694.

26. Willsey HR, State MW. Functional neurogenomics in autism spectrum disorders: A decade of progress. Curr Opin Neurobiol. 2024;79:102663.
doi: 10.1016/j.conb.2024.102858.

27. Ashinie C, Ramesh R. Dietary Challenges and Nutritional Awareness Among Parents of Children with Autism Spectrum Disorders: A Survey-Based Study. J Neonatal Surg. 2025;14(4s).
doi: 10.52783/jns.v14.1723.