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Food Selectivity in Children with Autism Spectrum Disorder and Its Repercussions on Nutritional Status: Implications for Public Health: A Literature Review

Seletividade alimentar em crianças com Transtorno do Espectro Autista e suas repercussões no estado nutricional: implicações para a saúde coletiva: uma revisão de literatura

Selectividad Alimentaria en Niños con Trastorno del Espectro Autista y sus Repercusiones en el Estado Nutricional: Implicaciones para la Salud Pública: Una Revisión de la Literatura

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Abstract:
Introduction: Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by impairments in communication, social interaction, and restricted and repetitive behavioral patterns. Among the challenges frequently observed in this population, food selectivity stands out, characterized by food refusal, a limited food repertoire, and preference for specific characteristics such as texture, color, taste, or presentation. This behavior may reduce dietary diversity and contribute to nutritional inadequacies that negatively affect children's growth, development, and quality of life. Objective: To analyze the impacts of food selectivity on the nutritional status of children with Autism Spectrum Disorder during middle childhood and to discuss the role of nutritionists in managing this condition within the context of public health. Methodology: This study is an integrative literature review with a descriptive-exploratory approach. The bibliographic search was conducted in the PubMed, SciELO, and MDPI (Nutrients Journal) databases using the descriptors “autism,” “food selectivity,” and “public health,” combined with the Boolean operator AND. Primary studies published between 2022 and 2026 in Portuguese and English that addressed food selectivity in children with ASD and its relationship with nutritional status were included. The selection process involved the analysis of titles, abstracts, and full-text reading of eligible articles. Results and Discussion: The analyzed studies revealed a high prevalence of food selectivity among children with ASD, associated with low dietary variety, sensory alterations, and gastrointestinal symptoms. Findings demonstrated a relationship between this eating behavior and nutritional inadequacies, including vitamin and mineral deficiencies, as well as an increased risk of overweight and obesity. Food restriction was found to potentially compromise growth, child development, and quality of life. The results highlight the importance of early nutritional monitoring, continuous dietary surveillance, and multidisciplinary care with active family involvement. Methodological limitations were also identified, particularly regarding sample heterogeneity and the scarcity of studies focused on the role of nutritionists in public health settings. Conclusion: Food selectivity in children with ASD is frequently associated with significant nutritional alterations, requiring individualized nutritional follow-up and early interventions. There is a need to expand research and strengthen health promotion strategies aimed at improving nutritional status and quality of life in this population.

Keywords:
Autism Spectrum Disorder; Food Selectivity; Nutritional Status; Public Health; Child Nutrition.

Resumo:
Introdução: O Transtorno do Espectro Autista (TEA) é uma condição do neurodesenvolvimento caracterizada por alterações na comunicação, interação social e padrões comportamentais restritos e repetitivos. Entre os desafios frequentemente observados nessa população, destaca-

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se a seletividade alimentar, caracterizada pela recusa de alimentos, repertório alimentar limitado e preferência por características específicas, como textura, cor, sabor ou apresentação. Esse comportamento pode reduzir a diversidade da dieta e favorecer inadequações nutricionais que impactam o crescimento, o desenvolvimento e a qualidade de vida das crianças. Objetivo: Analisar os impactos da seletividade alimentar no estado nutricional de crianças com Transtorno do Espectro Autista na segunda infância e discutir a atuação do nutricionista no manejo dessa condição no contexto da saúde coletiva. Metodologia: Trata-se de uma revisão integrativa da literatura, de caráter descritivo-exploratório. A busca bibliográfica foi realizada nas bases de dados PubMed, SciELO e MDPI (Nutrients Journal), utilizando os descritores "autism", "food selectivity" e "public health", combinados pelo operador booleano AND. Foram incluídos estudos primários publicados entre 2022 e 2026, nos idiomas português e inglês, que abordassem a seletividade alimentar em crianças com TEA e sua relação com o estado nutricional. A seleção dos estudos ocorreu por meio da análise dos títulos, resumos e leitura completa dos artigos elegíveis. Resultados e Discussão: Os estudos analisados evidenciaram elevada prevalência de seletividade alimentar em crianças com TEA, associada à baixa variedade dietética, alterações sensoriais e sintomas gastrointestinais. Os achados demonstraram relação entre esse comportamento alimentar e inadequações nutricionais, incluindo deficiências de vitaminas e minerais, além de maior risco de sobrepeso e obesidade. Observou-se que a restrição alimentar pode comprometer o crescimento, o desenvolvimento infantil e a qualidade de vida. Os resultados reforçam a importância do acompanhamento nutricional precoce, da vigilância alimentar contínua e da atuação multiprofissional, com participação ativa da família. Também foram identificadas limitações metodológicas nos estudos, especialmente relacionadas à heterogeneidade das amostras e à escassez de pesquisas voltadas à atuação do nutricionista na saúde coletiva. Conclusão: A seletividade alimentar em crianças com TEA está frequentemente associada a alterações nutricionais relevantes, exigindo acompanhamento nutricional individualizado e intervenções precoces. Destaca-se a necessidade de ampliar as pesquisas e fortalecer estratégias de promoção da saúde que contribuam para a melhoria do estado nutricional e da qualidade de vida dessa população.

Palavras-chave:
Transtorno do Espectro Autista; Seletividade Alimentar; Estado Nutricional; Saúde Coletiva; Nutrição Infantil.

Resumen:
Introducción: El Trastorno del Espectro Autista (TEA) es una condición del neurodesarrollo caracterizada por alteraciones en la comunicación, la interacción social y patrones conductuales restringidos y repetitivos. Entre los desafíos frecuentemente observados en esta población, destaca la selectividad alimentaria, caracterizada por el rechazo de alimentos, un repertorio alimentario limitado y la preferencia por características específicas como textura, color, sabor o presentación. Este comportamiento puede reducir la diversidad de la dieta y favorecer inadecuaciones nutricionales que afectan el crecimiento, el desarrollo y la calidad de vida de los niños. Objetivo: Analizar los impactos de la selectividad alimentaria en el estado nutricional de niños con Trastorno del Espectro Autista durante la segunda infancia y discutir la actuación del nutricionista en el manejo de esta condición en el contexto de la salud pública. Metodología: Se trata de una revisión integradora de la literatura, de carácter descriptivo-exploratorio. La búsqueda bibliográfica se realizó en las bases de datos PubMed, SciELO y MDPI (Nutrients Journal), utilizando los descriptores "autism", "food selectivity" y "public health", combinados mediante el operador booleano AND. Se incluyeron estudios primarios publicados entre 2022 y 2026, en portugués e inglés, que abordaran la selectividad alimentaria en niños con TEA y su

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relación con el estado nutricional. La selección de los estudios se llevó a cabo mediante el análisis de títulos, resúmenes y lectura completa de los artículos elegibles. Resultados y Discusión: Los estudios analizados evidenciaron una elevada prevalencia de selectividad alimentaria en niños con TEA, asociada a una baja variedad dietética, alteraciones sensoriales y síntomas gastrointestinales. Los hallazgos demostraron una relación entre este comportamiento alimentario e inadecuaciones nutricionales, incluidas deficiencias de vitaminas y minerales, además de un mayor riesgo de sobrepeso y obesidad. Se observó que la restricción alimentaria puede comprometer el crecimiento, el desarrollo infantil y la calidad de vida. Los resultados refuerzan la importancia del seguimiento nutricional temprano, la vigilancia alimentaria continua y la actuación multiprofesional, con participación activa de la familia. También se identificaron limitaciones metodológicas en los estudios, especialmente relacionadas con la heterogeneidad de las muestras y la escasez de investigaciones dirigidas a la actuación del nutricionista en la salud pública. Conclusión: La selectividad alimentaria en niños con TEA está frecuentemente asociada a alteraciones nutricionales relevantes, lo que exige seguimiento nutricional individualizado e intervenciones tempranas. Se destaca la necesidad de ampliar las investigaciones y fortalecer estrategias de promoción de la salud que contribuyan a mejorar el estado nutricional y la calidad de vida de esta población.

Palabras clave:
Trastorno del Espectro Autista; Selectividad Alimentaria; Estado Nutricional; Salud Pública; Nutrición Infantil.

INTRODUCTION

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR, 2013), Autism Spectrum Disorder (ASD) is defined as a neurodevelopmental condition characterized by atypical and deficit development that affects performance in various areas of life. These difficulties are expressed in communication, language, repetitive and stereotyped behavior patterns, associated with behavioral rigidity, which may be evident from early childhood and impact the daily routine of these individuals (Casati , B. *et al.* , 2024).

This disorder can be specified according to the level of severity and the support needed, which describe the degree of impairment of the individual with ASD (American Psychiatric Association) . (Association , 2014). Furthermore, its signs and symptoms can be tracked by family and healthcare professionals from birth, during the child's early developmental period (American Psychiatric Association, 2014). Association , 2014). Although the origin of ASD is not yet fully understood, scientific evidence indicates a strong influence of genetic and environmental factors on its manifestation (Moraes, L. *et al* ., 2021).

The prevalence of ASD has increased significantly. In 2017, the estimate was 1 in 160 children diagnosed with ASD, according to data from the World Health Organization (WHO). In its most recent analysis, published in 2023, this number increased to 1 in 100 children (WORLD HEALTH ORGANIZATION, 2023). In Brazil, the 2022 Census identified 2.4

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million people diagnosed with ASD, which corresponds to 1.2% of the Brazilian population . Prevalence was higher among men (1.5%) than among women (0.9%) (IBGE, 2022). Among age groups, the one with the highest prevalence was 5 to 9 years (2.6%) (IBGE, 2022). However, the data are still very limited, since there was no obligation to collect information on autism in demographic censuses before 2019 (Alves, B. *et al* ., 2023).

Early childhood generally encompasses the age range between 2 and 10 years old, covering the preschool and school-age phases, a period marked by intense physical, cognitive, emotional, and social development of the child (Rossi; Poltroniere , 2024). During this stage of life, the consolidation of eating habits occurs, along with an increase in nutritional demands necessary for adequate growth and development (Raymond; Morrow , 2022). In children with Autism Spectrum Disorder, this phase deserves special attention, since sensory alterations, behavioral rigidity, and feeding difficulties tend to directly impact the formation of eating behavior and the nutritional status of these individuals, potentially affecting their health and quality of life throughout their development (Rodrigues, C. *et al.* , 2025).

A balanced and healthy diet, with all the essential nutrients and the right amount of energy, is indispensable for the healthy growth and development of a child. During this phase, significant growth occurs in the social, cognitive, and emotional areas, and deficiencies in specific nutrients can negatively affect the behavior and growth of these individuals (Raymond; Morrow , 2022). Within this context, in the development of a child with ASD, food selectivity is frequently observed, which can cause significant effects on their health, nutritional status, and quality of life (Santos, M. *et al* ., 2024).

Selective eating is structured around three distinct pillars: food refusal, restricted food repertoire, and specific food intake (Rodrigues, C. *et al.* , 2025). This triad is attributed to atypical behaviors during meals, mostly caused by discomfort in the sensory aspect, which leads to aversion or preference for certain flavors, textures, smells, colors, consistency, as well as other specific characteristics, such as the child's impressions, specific packaging or brand, and the way food is presented, all associated with resistance to the introduction of new foods (Rodrigues, C. *et al.* , 2025).

Thus, these factors directly influence the food choices of children with ASD, which reinforces and perpetuates this food selectivity, since resistance to the introduction of new foods, associated with sensory alterations and behavioral rigidity, contributes to a scarce dietary pattern (Moraes, L. *et al* ., 2021). In this context, selective eating in children with ASD leads to a series of problems that impact nutritional status, such as nutrient deficiencies due to low dietary variability, which contributes to delayed growth, as well as increasing the likelihood of

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childhood overweight and obesity, compared to neurotypical children (Metwally , A. *et al.* , 2024).

Therefore, the restrictive dietary patterns observed can have repercussions on nutritional status, making this a relevant aspect to consider, since the Nutritional status is characterized as the physiological condition or state of an individual, resulting from the balance between nutrient intake and nutritional needs. specific to your body (Raymond; Morrow , 2022). This state is determined by factors such as the amount of nutrients present in the diet, bioavailability of these elements according to their source and the capacity of the digestive system in digesting and absorbing what is consumed (Raymond; Morrow , 2022).

This shows that selective eating in children with ASD represents a challenge for maintaining the nutritional status of these individuals, since it results in an imbalance in nutritional status due to the limitation of dietary diversity, such as a preference for specific food groups and a refusal of others that are sources of essential nutrients, leading to vitamin and mineral deficiencies that can negatively impact the child's healthy development (Rodrigues, C. *et al.* , 2025).

The potential problems faced by children with ASD, such as overweight, obesity, and nutritional deficiencies caused by selective and restricted diets, are issues that require significant attention within the context of Public Health. This is because Public Health is an interdisciplinary field that studies and addresses population health problems, considering biological, social, economic, cultural, and environmental factors (Brazil, 2018). In Brazil, it aims to propose strategies for health promotion and disease and injury prevention, focusing on reducing individual and collective risks and vulnerabilities, actions that support comprehensive care and respect the uniqueness of individuals (Brazil, 2018).

In the context of ASD, this perspective is essential given the complexity of the care required. Therefore, the nutritionist plays a vital role in managing food selectivity in children with ASD, being responsible for promoting positive changes in diet and developing healthy eating habits (Mendes A. *et al.,* 2024). This change occurs through an appropriate clinical diagnosis, the identification of restrictive eating patterns, and the implementation of strategies adapted to the child's needs, in conjunction with the family (Mendes, A. *et al.,* 2024).

However, despite the fact that appropriate intervention in selective eating in children with ASD is a relevant topic, there is a lack of studies that relate it to the agenda of Public Health, highlighting the importance of more studies on the problem in question (Metwally , A. *et al.* , 2024).

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Therefore, this study aims to analyze the impact of selective eating on the nutritional status of children with Autism Spectrum Disorder (ASD) in the preschool and school-age phases (Early Childhood), and to discuss the role of nutritionists in managing this condition within the context of public health, based on scientific literature.

METHODOLOGY

This work consists of an integrative literature review of a descriptive-exploratory nature. Its objective is to answer the following guiding question: "What is the relationship between food selectivity and the nutritional status of preschool and school-aged children (early childhood) with Autism Spectrum Disorder, and what are the implications for public health?"

The bibliographic search was conducted in the National Library of

Medicine (PubMed), Scientific Electronic Library Online (SciELO) and MDPI (Nutrients (Journal). English-language descriptors were used, defined according to the study's theme, namely " *autism* " , *"food selectivity* " , and *" public". The terms " health "* were combined using the Boolean operator AND, and applied to the databases with the aim of identifying studies related to food selectivity in Autism Spectrum Disorder in the context of public health.

Primary studies published between 2022 and 2026, available in Portuguese or English, that addressed selective eating in children and adolescents with Autism Spectrum Disorder, as well as its relationship with nutritional status and its implications in the context of public health, were included, provided they included individuals in the age range corresponding to early childhood, the focus of this research. Duplicate studies, monographs, literature reviews, editorials, opinions, dissertations, and conference abstracts were excluded , as well as those that did not present a relationship with the proposed theme, such as studies that did not involve the child population, that did not address Autism Spectrum Disorder, or that did not address aspects related to selective eating in the context of public health.

Data collection occurred through successive steps. Initially, studies were searched in specific databases using previously established descriptors. Subsequently, titles and abstracts were analyzed to select articles that met the inclusion criteria. After this screening stage, the full texts were read, allowing for the identification of key findings regarding food selectivity in children with Autism Spectrum Disorder, its relationship with nutritional status, and its implications for public health.

Due to a lack of detailed research on the role of nutritionists in managing selective eating in children with ASD, specifically in the context of public health, the scope of the investigation

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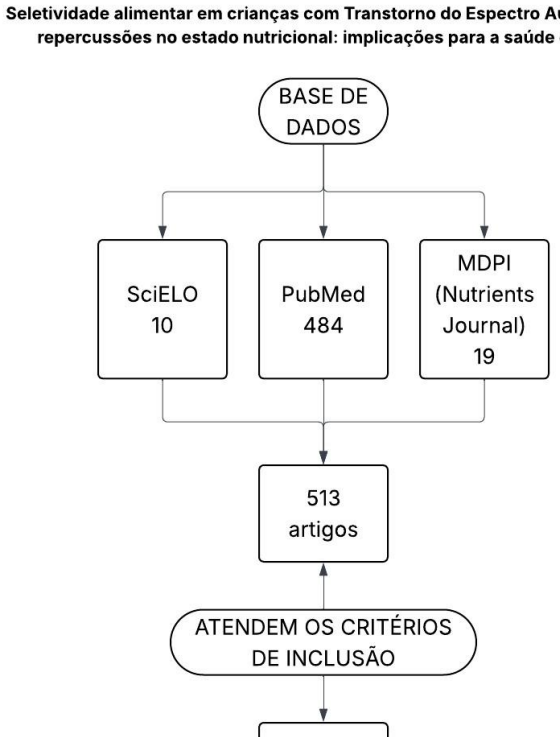
was broadened to include studies addressing other health professionals who work with individuals affected by these conditions, provided they contained aspects related to selective eating, nutritional status, or interdisciplinary collaboration in the care of these individuals. Articles conducted in public health settings, such as public schools, Primary Health Care (PHC) units, as well as public clinics, public health institutions, and social movements, were also considered.

Figure 1 – Flowchart of the selection of articles chosen for this research.



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Source: developed by the authors, 2026 .

Table 1, described below, summarizes the most significant results from each scientific article selected for the research, including authors, study type, year of publication, study location, sample, objectives, methodology, and results. The 8 articles are primary studies published in national and international journals, conducted in Brazil, Egypt, Turkey, Poland, Uruguay, the United States, and Italy, reflecting the geographical diversity of the scientific productions included in this article. Of the selected articles, seven were published in English and one in Portuguese.

Table 1. Summary of articles analyzed for review.

Articles	**Author, year of publication, study location**	**Design, type of study and N**	**Study objectives**	**Methodology**	**Key findings**

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1	Alves, B. *et al.* 2022 Macaé, Rio de Janeiro, Brazil	Observational, cross-sectional , and quantitative study. N = 92 children with ASD (age range: 2 to 9 years, 11 months and 29 days)	Investigate the relationship of profile sociodemo-graphic I stay and selective eating in children with ASD enrolled in a social movement in the municipality of Macaé, Rio de Janeiro.	Form A semi-structured questionnaire, in virtual format, administered via *Google Forms* , to identify the association. between selectivity feeding and profile sociodemographic characteristics of children.	Most children have selective eating habits. mainly for groups of cereals, Sensory processing difficulties can affect the perception of legumes and meats, and the texture of some foods. This behavior can trigger sensory processing difficulties. gastrointestinal symptoms, excess weight, and nutrient deficiencies that lead to healthy development of these individuals.
2	Şahinoğlu , Y.; Bakırhan , H. 2025 Türkiye	Observational, cross-sectional , and comparative study. N = 100 children (50 with ASD and 50 controls ; age range: 3 to 11 years old)	Examine the Nutritional status and quality of life of children with ASD using a holistic approach.	Questionnaire developed by the researchers and answered. by the parents, in which they were problems assessed gastrointestinal problems nutritional number of	The study revealed that children with ASD have a higher incidence of nutritional disorders and gastrointestinal, in addition to lower quality of life and inferior dietary standards when compared to children

				Bowel movements and stool consistency were assessed. In addition, diet quality was also evaluated.	neurotypical .
3	Mirizzi , P. *et al.* 2025 Italy	Cross-sectional, comparative study, based on a questionnaire. N = 408 children (33% with ASD and 67% with typical development ; age range: 3 to 12 years and 11 months).	To compare the subgroups of children at higher risk, based on an analysis. a combination of factors such as food selectivity, pattern to feed, BMI and sensory processing .	Based on a cross-sectional design, questionnaires were conducted. among the subjects, comparing children with ASD and children with typical development .	Feeding problems in children with ASD are multifactorial, and selective eating is a result of this. from the Sensory hypersensitivity, gastrointestinal symptoms , and inadequate parenting feeding practices. Therefore, a lack of variety in food consumption can increase the likelihood of nutritional deficiencies.

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4	Metwally , A. *et al.* 2024 Egypt	Study cross-sectional, comparative, nationally and institutionally based. N = 509 children (285 with ASD and 224 peers with typical development ; age range: 3 to 12 years).	Relating suitability nutritional and the standard of growth of children with ASD in comparison with their peers with development healthy .	The children Participants were selected from Maternal and Child Health (MCH) and Primary Health Care (PHC) units. Questionnaires, anthropometry, and symptom assessment were conducted.	The study showed that children with ASD consume more high-calorie-density foods and have selective eating habits regarding dairy, meat, fruits, and vegetables. These conditions imply a higher prevalence of nutritional deficiencies, worsening nutritional status and greater probability of developing overweight and obesity, compared to their peers.
5	Grot , M. *et al* . 2024 Poland	Study cross-sectional, quantitative and qualitative. N = 141 children and adolescents (105 with ASD and 36 with other disorders; age range: 1 to 17 years old)	To analyze the intake of specific food groups in children and adolescents with autism.	Personalized questionnaire, to collect data about the dietary pattern, in addition to assessing the quality of individuals' diets.	analysis of habits food showed the presence of food selectivity, aversion and alteration in Eating behavior, especially in individuals with ASD (Autism Spectrum Disorder), can directly affect health and... neurodevelopment This group's deficiencies lead to shortages of some essential nutrients.

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6	Cerchiari, A. *et al.* 2023 Italy	Interventional pilot study . N = 11 children with ASD (age range: 3 to 8 years)	Explore the effectiveness of Therapy Global Food Intensive (GIFT) in skills feeding and swallowing in children with Autism Spectrum Disorder (ASD), with the aim of encouraging desensitization. to the of food and expand the repertoire to feed.	An approach was carried out at a Health Institution. The public study was divided into 30 sessions over 2 weeks, three times a day, for 6 months. used to scale up in order to quantify the effectiveness of GIFT.	After implementing the Therapy method Global In Intensive Gifted Feeding (GIFT), it was observed improved food acceptance, proper chewing, and behavioral issues. in children with ASD, who presented selectivity feeding and chewing difficulties.

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7	Dubourdieu, P.; Guerendiain, M. 2022 Uruguay	Study descriptive, cross-sectional and comparative. N = 65 children (35 with ASD and 30 with typical development ; age range: 3 to 12 years)	Investigate food intake, nutritional status and profile Sensory impairment in children with and without ASD.	and food frequency surveys were applied .	The group with ASD showed greater sensitivity. sensory compared to the group of typical development, however, there was none. A significant difference was found in the nutritional status of the two groups. According to the article, the results obtained may be related to the causes of... nutritional deficiencies presented by individuals with ASD. However, the article highlighted the importance of conducting further research to investigate the relationship between food intake, nutritional status, and sensory sensitivity.
8	Wenzell , M. *et al.* 2024 United States	Cross-sectional study comparative, Based on interviews. N = 103 children with ASD (age range: 2 to 10 years)	Correlating selective eating (SE) with children with ASD treated in an outpatient clinic. general information for autism.	Performance of a multidisciplinary team (nutritionist, psychologist and nurse pediatric) to assess the medical, psychosocial and historical records	Selective eating in children with ASD has been linked to increased behavioral issues. Disruptive factors during eating, as well as hyperactivity, behaviors

					os hábitos alimentares de 103 crianças com TEA.	que afetam diretamente o padrão alimentar dessas crianças e aumentar a prevalência da alimentação seletiva nesse grupo.

Fonte: desenvolvido pelos autores, 2026.

RESULTS AND DISCUSSION

The studies analyzed presented a variety of methodological approaches, including Six cross-sectional and observational studies, one interventional pilot study , and a large national institutional-based survey provide diverse understandings of the relationship between food selectivity and its implications for the nutritional status of children with ASD within the context of public health.

In general, studies indicate that selective eating is frequently associated with nutritional alterations in children with ASD. In addition to feeding-related difficulties, several authors have observed an association between selective eating, sensory alterations, gastrointestinal symptoms, and changes in growth and child development. It has also been observed that many cases involve a limited variety of food consumption, with the exclusion of important food groups and a higher intake of ultra-processed products, leading to childhood overweight and obesity.

The study by Alves *et al.* (2022), conducted with 92 children with ASD assisted by a social movement in Macaé (RJ), identified a prevalence of food selectivity in 59.8% of the sample, being more frequent among preschoolers (67.3%) when compared to school-aged children (32.7%), in addition to being influenced by socioeconomic conditions. The findings corroborate a study conducted by Dubourdieu and Guerendiain (2022) in Uruguay, as both affirm that food rigidity associated with sensory characteristics, especially related to food texture, combined with the influence of family eating habits, compromises the intake of essential food groups, increasing nutritional vulnerability.

Furthermore, in a similar way, Mirizzi 's study *et al.* (2025), conducted in southern Italy, broadened the understanding of food selectivity in children with ASD by identifying a high-risk subphenotype characterized by the association between sensory hypersensitivity and

frequent gastrointestinal symptoms. Children with ASD showed greater food refusal and less dietary variety compared to their typically developing peers. This limitation in dietary variety can favor both micronutrient deficiencies and overweight and obesity, which directly impacts the nutritional status of these individuals.

Furthermore, the study conducted by Grot *et al.* (2024) also showed a high prevalence of food selectivity in individuals with ASD, characterized mainly by the restriction of dairy products, fish, and whole grains, associated with the frequent consumption of refined carbohydrates and ultra-processed foods. Furthermore, low water intake and a preference for sugary drinks were identified as additional factors of nutritional and gastrointestinal vulnerability. Regarding dietary patterns, Metwally *et al.* (2024) shows that the group of children with ASD consume more high-calorie, high-sugar foods than their neurotypical peers . This consumption leads to consequences such as overweight and obesity in the group of children with ASD, as these foods have little variety of nutrients.

These findings align with Metwally 's study. *et al.* (2024), conducted in Egypt, revealed, through a national comparison based on health facilities such as Maternal and Child Health (MCH) and Primary Health Care (PHC) units, that Egyptian children with ASD have a high risk of malnutrition due to qualitative dietary deficiencies and a greater likelihood of obesity and overweight compared to neurotypical children . A comparative analysis of the anthropometry and dietary patterns of these 509 children (289 with ASD and 224 healthy relatives) found that children with ASD have severe deficiencies in vitamins C, D, B6, B12, folate, calcium, zinc, and iron. Therefore, the deficiency of these nutrients can significantly compromise the healthy growth and development of these children, since they play a crucial role in cognitive, neurological, and immunological development, as well as bone and body growth, and increase vulnerability to other diseases.

Similarly, the analysis of the Turkish pediatric population carried out by Sağlam Şahinoğlu and Bakırhan (2025) show that selective eating is a direct predictor of poor diet quality in ASD, significantly exceeding the patterns observed in healthy peers. The study highlights that, although BMI may remain within normal ranges, dietary rigidity and limited consumption of essential micronutrients (such as fat-soluble vitamins and calcium) predispose these children to subclinical deficiencies. Additionally, the high prevalence of gastrointestinal disorders and their correlation with low quality of life reinforce the need for multidisciplinary care in public health, integrating nutritional surveillance with routine monitoring of these children to mitigate risks to skeletal and systemic development.

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The study conducted by Wenzell *et al.* (2024), in an outpatient ASD clinic in Atlanta, identified a high prevalence of food selectivity, present in 45.6% of the children evaluated, mainly associated with disruptive behaviors during meals and hyperactivity. The results suggest that nutritional alterations related to selectivity may remain masked in early childhood, especially when assessed only by anthropometric parameters, and reinforce that nutritional assessment in ASD should go beyond these isolated anthropometric parameters, considering sensory, gastrointestinal, and family aspects for the development of multidisciplinary care strategies.

In summary, it was found that most of the reviewed studies (Alves *et al.,* 2022; Grot *et al.,* 2024; Metwally *et al.,* 2024; Dubourdieu and Guerendiain , 2022; Mirizzi *et al.,* 2025; Sağlam Şahinoğlu and Bakırhan (2025) particularly highlight the need for broader and more individualized nutritional assessments in children with ASD, considering not only anthropometric parameters but also sensory, gastrointestinal, behavioral, and family aspects. Furthermore, the pilot study developed by Cerchiari *et al.* (2023) reinforces the importance of active parental participation in the therapeutic process and highlights the need for multidisciplinary approaches integrating nutrition, speech therapy, and family support in managing food selectivity in children with ASD, in addition to early nutritional monitoring in the prevention of dietary inadequacies and nutritional deficiencies.

Thus, according to Alves (2024), selective eating is a challenge for Food and Nutritional Security (FNS), especially in low-income families, where difficulty accessing quality food can mask or worsen nutritional deficiencies. To mitigate these problems, Metwally *et al.* (2024) suggest that routine anthropometry in children with ASD in Primary Health Care (PHC) units is essential to assess the need for referral to a specialized nutritionist for possible intervention. This shows the importance of the nutritionist's role in managing food selectivity affecting children with ASD, both to assess anthropometric and nutritional issues, in order to prevent nutrient deficiencies and overweight and obesity. The findings reinforce the need for individualized nutritional monitoring and food desensitization strategies aimed at increasing dietary diversity and preventing nutritional deficiencies in children with ASD.

Despite the consistency of the findings, it is important to consider some limitations present in the analyzed studies. Most research used parental reports and subjective questionnaires to assess eating behavior, which can generate memory and interpretation biases. Important methodological differences were also observed between the studies, including small sample sizes, clinical heterogeneity of ASD, and cultural differences in the dietary patterns assessed, factors that hinder direct comparisons between the results.

Therefore, the findings of this review demonstrate that selective eating in children with ASD represents a significant public health challenge, being associated with inadequate diet quality, gastrointestinal symptoms, risk of nutritional deficiencies, and potential repercussions on child growth and development. The results reinforce the need for individualized nutritional monitoring, early dietary surveillance, and multidisciplinary strategies aimed at expanding dietary diversity and promoting the health of this population.

CONCLUSION

This integrative review revealed that studies frequently indicate an association between selective eating and nutritional alterations in children with Autism Spectrum Disorder (ASD). Several authors observed an association between selective eating, sensory alterations, gastrointestinal symptoms, including qualitative inadequacies in the diet, risk of micronutrient deficiencies, and increased vulnerability to overweight and obesity. The analyzed studies demonstrated that food restriction, frequently related to sensory and behavioral alterations, contributes to a reduction in dietary variety and compromises the adequate consumption of nutrients essential for child growth and development.

It was observed that the nutritional assessment of these children should go beyond isolated anthropometric parameters, encompassing sensory, gastrointestinal, family, and behavioral aspects. In this context, the findings reinforce the importance of individualized nutritional monitoring, early dietary surveillance, and a multidisciplinary approach to managing food selectivity, aiming to increase dietary diversity and prevent nutritional deficiencies.

Although the studies analyzed demonstrate relevant impacts of food selectivity on nutritional status, there is still a limited number of studies addressing this topic. Limitations in the literature were also identified, such as the predominance of studies based on parental reports and subjective questionnaires, as well as methodological differences related to sample size, the clinical heterogeneity of ASD, and the cultural particularities of the dietary patterns evaluated. These factors hinder direct comparison between studies and highlight the need for greater standardization in future research. Furthermore, it is necessary to expand scientific production on the subject, aiming to deepen the understanding of the nutritional impacts of food selectivity. Therefore, it is concluded that food selectivity represents a significant challenge for public health and for the health promotion of children with ASD.

Finally, it is important to highlight the need for further research that deepens the understanding of the nutritional impacts of selective eating and evaluates intervention strategies

capable of contributing to the improvement of diet quality, nutritional status, and quality of life of this population.

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