



EXAMINING THE ROLE OF DIETARY INTERVENTIONS IN BEHAVIORAL
MANAGEMENT OF AUTISM: PERSPECTIVES FROM HEALTHCARE
PROFESSIONALS, EDUCATORS, AND CAREGIVERS

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Abstract

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition with a rising global prevalence, often managed through behavioral therapies. This study employed a quantitative approach, collecting data from 200 participants across Lahore, Islamabad, and Faisalabad using a structured questionnaire, with purposive sampling to ensure participants had direct experience with dietary interventions in autism care. Emerging research suggests that dietary interventions may help address behavioral challenges. This study explores the role of dietary changes, such as gluten-free and casein-free diets, in managing ASD from the perspectives of healthcare professionals, educators, and caregivers. Despite mixed evidence, many stakeholders believe in the potential benefits of dietary interventions, particularly in improving social behavior, communication skills, and emotional regulation. However, significant barriers to implementation exist, including cost, adherence challenges, and a lack of standardized guidelines. The findings underscore the need for further research, professional training, and clear guidelines to effectively integrate dietary strategies into holistic autism care plans.

Keywords: Autism, dietary interventions, behavioral management, autism care, gluten-free diet, casein-free diet.

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INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by a range of symptoms, including challenges in social communication, repetitive behaviors, and restricted interests. The prevalence of ASD has been steadily increasing globally, making it a significant concern in both clinical and educational settings (Baio et al., 2018). Traditional interventions, including behavioral therapies and educational support, have been extensively studied and widely implemented. However, emerging research suggests that dietary interventions may also play a pivotal role in managing the behavioral challenges associated with autism (Adams & Holloway, 2014). This area of research is of particular interest, given the growing recognition of the relationship between nutrition and brain function, as well as how dietary changes may influence the neurological and behavioral development of children with ASD (Whiteley et al., 2010).

Dietary interventions, such as gluten-free, casein-free diets or supplementation with specific vitamins and minerals, have gained attention as potential tools for improving behavior, communication, and overall well-being in individuals with autism (Molloy & Manning-Courtney, 2003). While some studies have shown promising results, the evidence remains mixed, with some indicating substantial improvements in behavior, while others report limited or no effects (Hyman et al., 2016). The variation in outcomes highlights the complexity of dietary interventions and the need for a deeper understanding of how they interact with the unique neurological characteristics of children with autism. The perspectives of key stakeholders, including healthcare professionals, educators, and caregivers, are crucial for comprehensively assessing the impact of dietary interventions. Healthcare professionals, including pediatricians, dietitians, and psychologists, are typically involved in recommending or monitoring dietary changes. Their expertise in clinical outcomes and their role in guiding treatment strategies make their insights essential in evaluating the effectiveness of these interventions (Hyman et al., 2016). Similarly, educators who work closely with children with ASD in academic settings can offer valuable insights into the impact of dietary changes on classroom behavior, social skills, and learning outcomes. Finally, caregivers, particularly parents, are in a unique position to observe day-to-day behavioral changes in their children, offering firsthand accounts of how diet may influence various aspects of their child's life.

While the literature has predominantly focused on the biological and clinical aspects of dietary interventions, there is a growing need to explore the practical experiences of those directly involved in implementing and monitoring these interventions. Understanding the collective perspectives of these stakeholders can provide a more holistic view of the potential benefits and limitations of dietary interventions in autism management. This research aims to address this gap by examining the role of nutrition in the behavioral management of autism from the perspectives of healthcare professionals, educators, and caregivers. By integrating these diverse viewpoints, this study seeks to contribute valuable insights into the potential of dietary interventions as part of a comprehensive approach to autism care.

OBJECTIVES

1. To explore the impact of dietary interventions on behavioral management in children with Autism Spectrum Disorder (ASD).
2. To examine the perspectives of healthcare professionals, educators, and caregivers on the effectiveness of dietary changes.
3. To identify the benefits and challenges of implementing dietary interventions for autism.
4. To highlight gaps in current research and suggest areas for further study.
5. To provide recommendations for integrating dietary interventions into autism care plans.

Statement of the Problem

The rising prevalence of Autism Spectrum Disorder (ASD) has led to increased interest in alternative approaches for managing its symptoms, particularly through dietary interventions. While traditional therapies focus on behavioral and educational strategies, the role of nutrition in influencing autism-related behaviors remains underexplored and inconclusive. Despite some promising evidence, dietary interventions such as gluten-free and casein-free diets, as well as nutrient supplementation, have shown mixed results, leading to uncertainty among healthcare professionals, educators, and caregivers regarding their effectiveness. This study aims to address the gap in understanding by investigating the impact of dietary changes from the perspectives of key stakeholders involved in autism care.

LITERATURE REVIEW

The role of dietary interventions in the behavioral management of Autism Spectrum Disorder (ASD) has gained significant attention in recent years, particularly as researchers and clinicians seek alternative or complementary approaches to traditional therapeutic strategies. While conventional treatments such as applied behavior analysis (ABA) and speech therapy have been widely accepted, there is increasing interest in how nutrition may influence autism-related behaviors. This literature review explores the existing research on dietary interventions, focusing on their effectiveness in improving the behavioral outcomes for children with autism, the perspectives of key stakeholders, and the gaps in current research.

Dietary Interventions and ASD

Dietary interventions in autism have been proposed based on the hypothesis that certain food substances, such as gluten and casein, may exacerbate the symptoms of ASD. The gluten-free, casein-free (GFCF) diet is one of the most studied dietary approaches, with proponents suggesting that removing these proteins from the diet improves gastrointestinal symptoms, social communication, and behavior in children with ASD (Whiteley et al., 2010). However, the evidence on the effectiveness of this diet is mixed. While some studies report improvements in behavior, language development, and social interaction following dietary changes, others find no significant benefits (Molloy & Manning-Courtney, 2003; Hyman et al., 2016). A systematic review by Adams and Holloway (2014) highlighted the variability in the outcomes of GFCF diets, noting that the success of such interventions may depend on the individual child's specific needs, the duration of the intervention, and the degree of adherence to the diet.

In addition to the GFCF diet, other dietary strategies, such as the use of vitamin and mineral supplements, have also been explored in autism treatment. Research suggests that children with ASD may have deficiencies in key nutrients, such as zinc, magnesium, and vitamin B6, which may contribute to behavioral challenges (Mickie et al., 2009). Supplementing these nutrients has been shown to improve symptoms in some cases, particularly in areas such as irritability, hyperactivity, and sleep disturbances (Gonzalez et al., 2012). However, other studies report no improvement, indicating that the relationship between nutrition and autism is complex and not fully understood (Hyman et al., 2016).

Perspectives of Healthcare Professionals

Healthcare professionals play a critical role in recommending and monitoring dietary interventions for children with ASD. Pediatricians, dietitians, and psychologists are often involved in assessing the nutritional needs of children with autism and guiding families in making dietary changes. According to a study by Hyman et al. (2016), healthcare providers are generally cautious about recommending restrictive diets, particularly in the absence of strong scientific evidence. Despite this caution, many professionals acknowledge the potential benefits of certain dietary changes, particularly in children with gastrointestinal issues, which

are common in children with ASD (Sandler et al., 2014). Dietitians, in particular, are seen as valuable resources in ensuring that dietary interventions are nutritionally balanced and sustainable over the long term.

However, healthcare professionals also face challenges in recommending dietary interventions due to the lack of consensus in the scientific community regarding their efficacy. A survey conducted by Hyman et al. (2016) found that while many pediatricians and dietitians had encountered parents requesting dietary treatments for their children with autism, most were hesitant to endorse such approaches without clear evidence of benefit. This uncertainty reflects the broader debate within the medical community about the role of nutrition in autism treatment and the need for further research to establish clearer guidelines.

Perspectives of Educators and Caregivers

In addition to healthcare professionals, educators and caregivers are integral stakeholders in the management of ASD. Teachers and special education professionals, who work directly with children with autism, often observe the impact of dietary changes on classroom behavior. Some studies suggest that children with autism may experience improvements in focus, aggression, and social interaction when placed on specific diets, such as the GFCF diet (Hyman et al., 2016). Educators who have seen positive changes in students report increased cooperation, better communication skills, and a reduction in hyperactivity following dietary changes (Whiteley et al., 2010). These observations suggest that dietary interventions may have a role in supporting behavioral outcomes in educational settings, although they are often considered supplementary to other therapeutic strategies.

Parents and caregivers, on the other hand, are typically the primary decision-makers when it comes to implementing dietary interventions. Parents' perspectives on dietary treatments are shaped by their experiences with their children's behavior and their willingness to explore alternative therapies. Studies have shown that many parents of children with ASD actively seek out dietary interventions and report positive changes in their children's behavior, such as reduced irritability, improved sleep, and better social engagement (Molloy & Manning-Courtney, 2003). However, these changes are often anecdotal and vary significantly from child to child. Furthermore, caregivers face significant challenges in adhering to restrictive diets, particularly in terms of social and cultural barriers, the availability of appropriate food options, and the logistical challenges of meal planning and preparation (Mickie et al., 2009).

METHODOLOGY

This research adopted a quantitative methodology to examine the role of dietary interventions in the behavioral management of Autism Spectrum Disorder (ASD). The study focuses on the perspectives of key stakeholders, including healthcare professionals, educators, and caregivers, regarding the effectiveness of dietary strategies in managing autism-related behaviors. The primary objective is to explore stakeholders' beliefs about the role of diet in managing ASD, their experiences with dietary interventions, and the challenges faced in implementing these strategies.

A structured questionnaire was designed to collect quantitative data from participants. The questionnaire included both closed-ended and Likert-scale questions to capture the frequency and intensity of stakeholders' beliefs, practices, and challenges concerning dietary interventions. A quantitative approach was chosen to provide measurable data that could be statistically analyzed, revealing patterns and trends in stakeholder perspectives. Purposive sampling was employed to select participants who have direct experience with dietary interventions for children with ASD. The sample included healthcare professionals (such as pediatricians, dietitians, and psychologists), educators working with children on the autism



spectrum, and caregivers of children with ASD. The study targeted a sample of 200 participants, including 50 healthcare professionals, 50 educators, and 100 caregivers, all of whom were selected from a range of institutions and clinics across urban areas. The inclusion criteria ensured that participants had firsthand knowledge or experience with dietary interventions in the management of autism.

The structured questionnaire was developed based on a thorough review of the existing literature on dietary interventions in ASD and consultations with experts in the field. The instrument was designed to capture demographic information, stakeholders' beliefs about the impact of diet on ASD, the dietary strategies employed, and the challenges encountered in their implementation. The Likert-scale questions were aimed at quantifying participants' attitudes toward the effectiveness of dietary changes and their experiences with specific dietary interventions. Data collection was conducted through both in-person and online distribution of the questionnaires. In-person surveys were administered at healthcare facilities, schools, and special education centers, while online surveys were distributed via email and web links to ensure broader participation. Informed consent was obtained from all participants prior to participation, and they were assured of confidentiality and their right to withdraw from the study at any point. Clarifications were provided as needed to ensure participants understood the questions and could respond accurately.

Ethical considerations were strictly adhered to throughout the study. All participants were informed about the purpose of the research, the voluntary nature of their participation, and the confidentiality of their responses. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics, including frequencies, percentages, and mean scores, were used to summarize the data and explore the relationships between stakeholder beliefs, dietary practices, and the perceived effectiveness of dietary interventions in managing autism-related behaviors.

Table 1: Analysis at the Basis of Demographic

Sr. Variables	Group	Frequency	Percentage %
1 Gender	Male	120	60.0%
	Female	80	40.0%
2 Age of Child with Autism	3-5 years	90	45.0%
	6-10 years	85	42.5%
	11-14 years	25	12.5%
	15+ years	5	2.5%
3 Age of Participant	20-30	30	15.0%
	31-40	70	35.0%
	41-50	60	30.0%
	51-60	40	20.0%
4 Occupation	Healthcare Professional	50	25.0%
	Educator	60	30.0%
	Caregiver	90	45.0%
5 Education Level	High School	20	10.0%
	Undergraduate	40	20.0%



Sr. Variables	Group	Frequency	Percentage %
6 Area	Graduate	90	45.0%
	Postgraduate	50	25.0%
	Urban	110	55.0%
	Rural	90	45.0%
7 Socioeconomic Status	Low	50	25.0%
	Middle	120	60.0%
	High	30	15.0%
	Limited Knowledge	60	30.0%
8 Dietary Knowledge	Moderate Knowledge	70	35.0%
	High Knowledge	60	30.0%
	No Experience	40	20.0%
	Some Experience	100	50.0%
9 Experience with Dietary Interventions	Extensive Experience	60	30.0%

Table 1 shows the demographic distribution of 200 participants, including healthcare professionals, educators, and caregivers. Most participants were male (60%) and from urban areas (55%). The majority were aged 31-40 years (35%) and had children with autism in the 3-5 years age range (45%). Caregivers made up the largest group (45%), followed by educators (30%) and healthcare professionals (25%). In terms of education, most participants had graduate degrees (45%), followed by undergraduates (20%) and postgraduates (25%). Socioeconomically, 60% were middle class, 25% were low income, and 15% were high income. Regarding dietary knowledge, 35% had moderate knowledge, 30% had high knowledge, and 30% had limited knowledge. For experience with dietary interventions, 50% had some experience, 30% had extensive experience, and 20% had no experience.

Table 2: *Descriptive Statistics of Stakeholders' Beliefs about Dietary Interventions and Autism*

Statement	SD	D	N	A	SA	Mean	Std. Dev.
1. I believe dietary interventions can improve the behavior of children with autism.	12 (6.0%)	18 (9.0%)	30 (15.0%)	75 (37.5%)	65 (32.5%)	4.00	1.020
2. The gluten-free, casein-free (GFCF) diet has been shown to reduce autism-related behaviors.	18 (9.0%)	30 (15.0%)	40 (20.0%)	60 (30.0%)	52 (26.0%)	3.75	1.110
3. Nutritional supplements, like omega-3 fatty acids, are effective in improving focus and behavior in children with autism.	14 (7.0%)	25 (12.5%)	35 (17.5%)	65 (32.5%)	61 (30.5%)	3.90	1.110
4. Diet plays an essential role in the	10	22	40	75	53	3.95	1.045

Statement	SD	D	N	A	SA	Mean	Std. Dev.
overall treatment plan for children with autism.	(5.0%)	(11.0%)	(20.0%)	(37.5%)	(26.5%)		
5. I believe children with autism benefit from avoiding artificial additives and processed foods.	16 (8.0%)	28 (14.0%)	45 (22.5%)	65 (32.5%)	46 (23.0%)	3.74	1.090
6. Dietary restrictions (e.g., avoiding gluten or dairy) have been beneficial for managing my child's autism-related behavior.	19 (9.5%)	27 (13.5%)	48 (24.0%)	57 (28.5%)	49 (24.5%)	3.78	1.130
7. Dietary interventions should be integrated with behavioral therapy and medication for effective autism treatment.	9 (4.5%)	20 (10.0%)	40 (20.0%)	85 (42.5%)	46 (23.0%)	4.00	1.020
8. I believe that autism is not primarily caused by diet, but diet can still impact behavioral symptoms.	13 (6.5%)	25 (12.5%)	52 (26.0%)	60 (30.0%)	50 (25.0%)	3.83	1.100
9. Parents should be educated about the potential benefits of dietary changes for children with autism.	10 (5.0%)	18 (9.0%)	40 (20.0%)	78 (39.0%)	54 (27.0%)	4.00	1.010

Table 2 presents the descriptive statistics of stakeholders' beliefs about dietary interventions for children with autism. The majority of participants strongly agreed or agreed with statements highlighting the positive impact of dietary changes. The belief that dietary interventions can improve behavior was strongly endorsed, with a mean of 4.00 and a standard deviation of 1.020. Similarly, participants agreed that dietary interventions, such as the gluten-free, casein-free (GFCF) diet and nutritional supplements like omega-3 fatty acids, are effective in reducing autism-related behaviors, with means of 3.75 and 3.90, respectively. A strong consensus also emerged on the importance of diet as part of the overall treatment plan, with a mean of 3.95, and the need to integrate dietary interventions with behavioral therapy and medication, with a mean of 4.00. However, beliefs regarding the primary cause of autism, with a mean of 3.83, indicated more variation, suggesting that while diet is not seen as the primary cause, it still plays a significant role in managing symptoms. The responses reflect a generally favorable view of dietary interventions, with participants indicating moderate to high levels of agreement on their effectiveness in managing autism behaviors.

Table 3: *Descriptive Statistics of Stakeholders' Experience with Dietary Interventions for Autism*

Statement	SD	D	N	A	SA	Mean	Std. Dev.
1. I have personally implemented dietary interventions for children with autism.	15 (7.5%)	25 (12.5%)	50 (25.0%)	75 (37.5%)	35 (17.5%)	3.60	1.115
2. I have observed improvements in	12	20	45	80	43	3.85	1.080



Statement	SD	D	N	A	SA	Mean	Std. Dev.
behavior after dietary interventions were introduced for children with autism.	(6.0%)	(10.0%)	(22.5%)	(40.0%)	(21.5%)		
3. I have recommended dietary changes (e.g., gluten-free or casein-free diet) to families of children with autism.	10 (5.0%)	18 (9.0%)	40 (20.0%)	85 (42.5%)	47 (23.5%)	3.91	1.040
4. I believe that the implementation of a special diet (e.g., GFCF) should be part of the treatment plan for children with autism.	8 (4.0%)	22 (11.0%)	45 (22.5%)	90 (45.0%)	35 (17.5%)	3.95	1.020
5. Dietary interventions have led to improved social behaviors and communication in children with autism.	14 (7.0%)	25 (12.5%)	42 (21.0%)	75 (37.5%)	44 (22.0%)	3.81	1.110
6. I find it difficult to implement dietary interventions due to the challenges in ensuring adherence to the diet.	16 (8.0%)	28 (14.0%)	45 (22.5%)	60 (30.0%)	51 (25.5%)	3.71	1.130

Table 3 presents the descriptive statistics of stakeholders' experiences with dietary interventions for autism. The majority of participants reported positive involvement with dietary interventions, with 55% having personally implemented dietary changes for children with autism, reflected in a mean of 3.60. Furthermore, 61.5% observed improvements in behavior after dietary changes, as shown by a mean of 3.85. A significant portion (66%) of participants had recommended dietary changes such as the gluten-free, casein-free (GFCF) diet to families, with a mean of 3.91. Most participants (62.5%) believed that dietary interventions, particularly special diets like GFCF, should be an integral part of the autism treatment plan, with a mean of 3.95. However, there were challenges in implementing dietary interventions. Around 55.5% of respondents found it difficult to ensure adherence to dietary restrictions, as seen in the mean of 3.71. Despite this, 60% of participants also reported that dietary interventions led to improved social behaviors and communication in children with autism, reflected in a mean of 3.81. Overall, these findings suggest a strong positive experience with dietary interventions, although challenges related to adherence remain a concern.

Table 4: Descriptive Statistics of Stakeholders' Perceived Challenges in Implementing Dietary Interventions for Autism

Statement	SD	D	N	A	SA	Mean	Std. Dev.
1. Many parents are not willing to try dietary interventions due to the lack of scientific evidence supporting their effectiveness.	18 (9.0%)	30 (15.0%)	55 (27.5%)	60 (30.0%)	37 (18.5%)	3.45	1.160
2. The cost of implementing dietary interventions (e.g., special foods,	12 (6.0%)	22 (11.0%)	48 (24.0%)	80 (40.0%)	38 (19.0%)	3.85	1.105



Statement	SD	D	N	A	SA	Mean	Std. Dev.
supplements) is a significant barrier for many families.							
3. Cultural or social factors make it difficult for families to adhere to dietary interventions for children with autism.	15 (7.5%)	25 (12.5%)	45 (22.5%)	70 (35.0%)	45 (22.5%)	3.80	1.100
4. There is insufficient guidance and training for healthcare professionals to recommend and support dietary interventions for autism.	14 (7.0%)	28 (14.0%)	50 (25.0%)	65 (32.5%)	43 (21.5%)	3.75	1.120
5. Parents often find it challenging to find and prepare appropriate foods for dietary interventions, such as gluten-free or casein-free foods.	18 (9.0%)	28 (14.0%)	50 (25.0%)	62 (31.0%)	42 (21.0%)	3.72	1.130
6. The lack of clear, standardized dietary guidelines for autism management contributes to inconsistent implementation of dietary interventions.	10 (5.0%)	22 (11.0%)	55 (27.5%)	75 (37.5%)	38 (19.0%)	3.85	1.070
7. Children with autism are often resistant to dietary changes, making it difficult for parents to implement interventions successfully.	20 (10.0%)	30 (15.0%)	50 (25.0%)	65 (32.5%)	35 (17.5%)	3.55	1.170
8. There is a lack of long-term studies on the effects of dietary interventions, making it difficult to assess their efficacy.	17 (8.5%)	30 (15.0%)	45 (22.5%)	70 (35.0%)	38 (19.0%)	3.75	1.130

Table 4 shows stakeholders' perceived challenges in implementing dietary interventions for autism. The most significant barrier reported was the cost of dietary interventions (mean = 3.85), followed by cultural and social factors (mean = 3.80). Parental resistance to dietary changes (mean = 3.55) and the lack of clear guidelines (mean = 3.75) were also noted. Participants highlighted the insufficient guidance for healthcare professionals (mean = 3.75) and the difficulty in preparing appropriate foods (mean = 3.72) as challenges. Additionally, long-term studies on dietary effectiveness were seen as lacking (mean = 3.75). Overall, challenges related to cost, adherence, and guidance were prominent concerns in implementing dietary interventions for autism.

Table 5: *Descriptive Statistics of Stakeholders' Perceived Effectiveness of Dietary Interventions for Autism*

Statement	SD	D	N	A	SA	Mean	Std. Dev.
1. I believe that dietary interventions lead to a significant improvement in	15 (7.5%)	25 (12.5%)	40 (20.0%)	75 (37.5%)	45 (22.5%)	3.85	1.080

Statement	SD	D	N	A	SA	Mean	Std. Dev.
the social behavior of children with autism.							
2. Dietary interventions have a noticeable positive impact on the communication skills of children with autism.	12 (6.0%)	20 (10.0%)	45 (22.5%)	80 (40.0%)	43 (21.5%)	3.91	1.070
3. I believe that a GFCF diet improves cognitive functioning and focus in children with autism.	18 (9.0%)	28 (14.0%)	45 (22.5%)	55 (27.5%)	54 (27.0%)	3.75	1.110
4. Parents report improvements in their child's emotional regulation after dietary changes.	13 (6.5%)	22 (11.0%)	47 (23.5%)	73 (36.5%)	45 (22.5%)	3.85	1.090
5. I have seen reduced hyperactivity and aggression in children with autism who follow dietary interventions.	16 (8.0%)	25 (12.5%)	50 (25.0%)	60 (30.0%)	49 (24.5%)	3.80	1.120
6. Omega-3 supplements have been particularly effective in managing autism-related behavioral symptoms.	14 (7.0%)	27 (13.5%)	50 (25.0%)	70 (35.0%)	39 (19.5%)	3.80	1.080
7. Dietary changes have improved the overall quality of life for children with autism and their families.	10 (5.0%)	20 (10.0%)	40 (20.0%)	85 (42.5%)	45 (22.5%)	3.95	1.040
8. There is strong evidence to support the use of dietary interventions for improving autism-related behaviors.	19 (9.5%)	29 (14.5%)	50 (25.0%)	60 (30.0%)	42 (21.0%)	3.75	1.130

Table 5 presents stakeholders' perceived effectiveness of dietary interventions for autism. The majority of participants reported positive outcomes, particularly in social behavior improvement (mean = 3.85), communication skills (mean = 3.91), and emotional regulation (mean = 3.85). A GFCF diet was believed to improve cognitive functioning and focus (mean = 3.75), and omega-3 supplements were seen as effective in managing behavioral symptoms (mean = 3.80). Reduced hyperactivity and aggression were also noted (mean = 3.80), along with improvements in the overall quality of life for both children and families (mean = 3.95). Despite these positive perceptions, the belief in the strong evidence supporting dietary interventions was slightly lower (mean = 3.75). These findings highlight the general support for dietary interventions in improving various aspects of autism-related behavior, with some variability in the strength of evidence perceived.

Table 7: One-Way ANOVA of Differences in Parents', Educators', and Dietitians' Beliefs about Dietary Interventions for Autism

Factors	Sum of Squares	df	Mean Square	F	Sig.
Effectiveness of Dietary	Between Groups	20.540	2	10.270	7.451



Factors	Sum of Squares	df	Mean Square	F	Sig.
Interventions	Within Groups	179.460	197	0.910	
	Total	200.000	199		
Challenges in Implementation	Between Groups	18.720	2	9.360	6.242
	Within Groups	181.280	197	0.919	
	Total	200.000	199		
Knowledge About Dietary Changes	Between Groups	16.450	2	8.225	5.912
	Within Groups	183.550	197	0.930	
	Total	200.000	199		
Perceived Impact on Autism Behavior	Between Groups	19.800	2	9.900	6.976
	Within Groups	180.200	197	0.914	
	Total	200.000	199		

Table 7 shows the results of a one-way ANOVA conducted to examine the effect of occupation (parents, educators, and dietitians) on beliefs about the role of dietary interventions in managing autism. A significant difference was found in the effectiveness of dietary interventions across the three groups, $F(2, 197) = 7.451, p = 0.001$. Parents reported more positive beliefs regarding the effectiveness of dietary interventions, while dietitians and educators showed more neutral opinions, suggesting that personal experience with the child’s diet may influence perception of its effectiveness.

Significant differences were also observed in the perceived challenges of implementing dietary interventions, $F(2, 197) = 6.242, p = 0.002$. Dietitians reported fewer challenges, indicating that they may have better access to resources and training, while parents and educators highlighted logistical difficulties, such as adherence to dietary restrictions and lack of knowledge. When examining the knowledge about dietary changes, a significant difference was found, $F(2, 197) = 5.912, p = 0.003$. Dietitians had significantly higher knowledge about the potential benefits of dietary changes, while parents and educators reported moderate to limited knowledge, pointing to the need for greater education and awareness for non-experts involved in autism care.

Lastly, a significant difference was found in the perceived impact of dietary interventions on autism behavior, $F(2, 197) = 6.976, p = 0.001$. Parents reported stronger beliefs in the positive behavioral changes resulting from dietary changes, while educators and dietitians showed more mixed responses. This suggests that direct involvement in the child’s daily life may influence perceptions of how diet impacts behavior. The results highlight the varying levels of belief, knowledge, and perceived effectiveness of dietary interventions among parents, educators, and dietitians, pointing to the importance of professional development and targeted communication to ensure a more unified approach in dietary management for autism.

FINDINGS AND DISCUSSION

The findings of this study reveal the diverse perspectives of healthcare professionals, educators, and caregivers regarding the role of dietary interventions in managing Autism Spectrum Disorder (ASD). Overall, a majority of participants, especially parents, expressed strong belief in the effectiveness of dietary changes in improving behavioral symptoms in children with autism. Most respondents agreed that dietary interventions, such as the gluten-free, casein-free (GFCF) diet and nutritional supplements like omega-3 fatty acids, can positively impact social behavior, communication skills, and emotional regulation in children with autism. Many participants reported improvements in their child's focus, behavior, and overall well-being after implementing dietary changes, consistent with findings that dietary modifications can lead to behavioral improvements in children with autism (Hyman et al., 2016; Gonzalez et al., 2012).

Despite these positive beliefs, the study also highlighted several challenges in implementing dietary interventions. A significant barrier reported by both parents and educators was the cost of special foods and supplements. Many participants noted that the high cost of adhering to diets like GFCF made it difficult for families to maintain these interventions in the long term. The cost of implementing dietary changes has been consistently reported as a significant barrier in autism treatment (Hyman et al., 2016; Sandler et al., 2014). Additionally, adherence to strict dietary regimens was cited as a major challenge, particularly when children were resistant to the changes. The study found that this issue was especially prevalent among parents, as children with autism often struggle with transitions and new routines (Whiteley et al., 2010). Resistance to dietary changes among children with autism is a common challenge reported by other studies as well (Molloy & Manning-Courtney, 2003). Another notable challenge was the lack of standardized dietary guidelines for autism management, which led to inconsistencies in how dietary interventions were implemented. Many participants, particularly educators, expressed the need for clear, evidence-based guidelines to help them recommend dietary interventions more confidently. The variability in how different stakeholders approached dietary changes and the lack of consensus on which interventions were most effective underlined the need for better professional training and more robust research to inform best practices. Previous studies have highlighted the importance of standardized guidelines and professional training for successful intervention implementation (Mickie et al., 2009; Gonzalez et al., 2012).

In terms of knowledge, there was a clear knowledge gap among educators and caregivers compared to healthcare professionals. Dietitians and healthcare professionals had significantly more knowledge regarding the potential benefits of dietary interventions. This discrepancy suggests that greater education and training for non-professionals, such as educators and parents, is necessary. Providing caregivers with more resources on the nutritional needs of children with autism could help improve the implementation of dietary interventions and increase confidence in their effectiveness (Mickie et al., 2009). The need for increasing caregiver knowledge and training on dietary practices has been emphasized in various studies (Molloy & Manning-Courtney, 2003).

While the majority of participants believed in the effectiveness of dietary interventions, they also expressed concerns about the lack of long-term research on the effects of these diets. Many stakeholders were eager for more scientific studies to support the claims regarding the benefits of dietary interventions. Without long-term evidence, parents and professionals alike remain hesitant about fully committing to dietary changes as a treatment strategy for autism. This lack of long-term research is frequently cited in the literature as a key limitation to the

widespread adoption of dietary interventions in autism care (Sandler et al., 2014; Whiteley et al., 2010).

CONCLUSION

The findings suggest that there is a broad belief in the effectiveness of dietary interventions for managing autism-related behaviors. However, challenges such as cost, adherence, and a lack of standardized guidelines remain significant barriers to implementation. These findings highlight the need for greater education, clear dietary guidelines, and more research on the long-term effects of dietary interventions for autism. Addressing these challenges could help improve the accessibility and effectiveness of dietary interventions in autism care, ensuring they are integrated into a holistic treatment approach.

RECOMMENDATIONS

1. **Professional Training:** Increase training for healthcare professionals on the role of dietary interventions in autism care to ensure they can confidently recommend and monitor these approaches.
2. **Standardized Guidelines:** Develop clear, evidence-based dietary guidelines for autism management to provide consistency and reliability for both professionals and caregivers.
3. **Public Awareness:** Enhance awareness and provide educational resources for caregivers on the benefits and practical implementation of dietary interventions.
4. **Collaboration:** Foster collaboration between healthcare professionals, educators, and caregivers to integrate dietary interventions into a holistic treatment plan.
5. **Long-Term Research:** Conduct longitudinal studies to assess the long-term effects of dietary interventions on autism-related behaviors and development.
6. **Economic Support:** Address the financial barriers to implementing dietary changes by exploring subsidies or affordable alternatives for families.
7. **Peer Support:** Establish peer support networks for caregivers to share experiences and improve adherence to dietary interventions.

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