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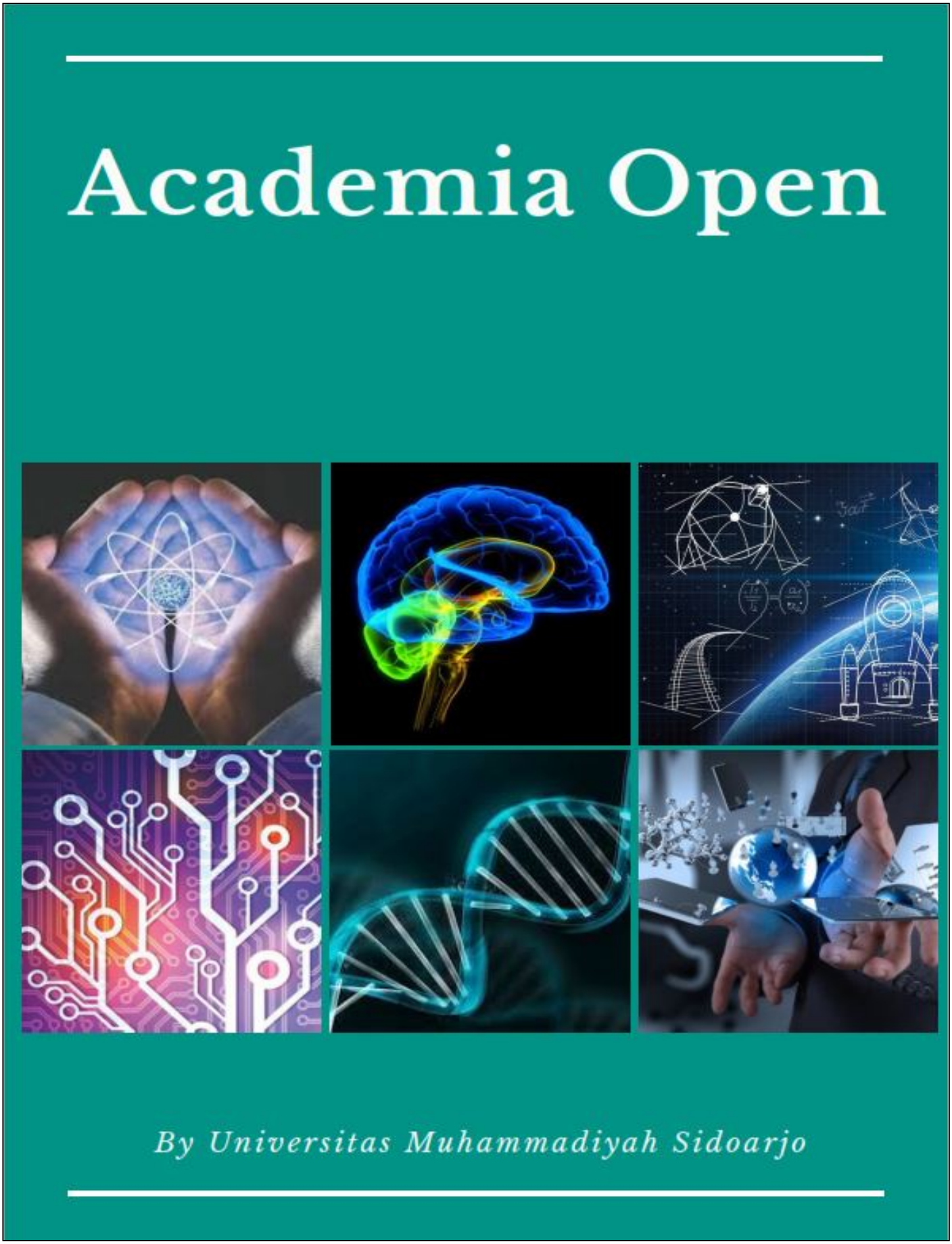

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Parental Knowledge and Awareness of Autism Symptoms and Management Strategies

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Abstract

Background: Usually manifesting in early childhood, autism spectrum disorder (ASD) is a neurodevelopmental disorder that impacts social communication and behavior. **Objectives:** The present study aims to contribute to raising awareness about autism spectrum disorder (ASD) through my research on assessing parents' knowledge and awareness of its symptoms and management strategies. **Methods**: A cross-sectional study was conducted on a sample of 100 parents (both fathers and mothers) of children with autism spectrum disorder (ASD) to assess their knowledge of ASD symptoms, management strategies, and awareness levels. The sample was collected from the My Family Center for Autism in Basrah city. The questionnaire was distributed to the parents and collected approximately one week later. The collected data were then analyzed statistically, yielding the following results. **Results:** It was found that 80% of the parents had a moderate to good level of knowledge regarding ASD management strategies, while 20% had poor knowledge. For ASD symptoms, 75% showed moderate to good awareness, and 25% had poor understanding. The ratio of correct to incorrect answers per parent was approximately 3:1 for both parts of the questionnaire. **Conclusion:** Most parents demonstrated acceptable knowledge about ASD management strategies, and also most showed sufficient awareness of its symptoms. However, the remaining parents with lower knowledge levels require targeted educational programs to improve their understanding and support for children with autism spectrum disorder.

Highlights:

- High parental awareness of ASD symptoms and management was observed.
- 75–80% of parents had moderate to good knowledge levels.

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- Educational programs are needed for parents with low ASD awareness.

Keywords: Knowledge, Awareness, Parents, Children, Autism Spectrum Disorder

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Introduction

Autism spectrum disorder (ASD), a neurodevelopmental disorder characterized by limited, repetitive activities or interests and deficits in social communication, affects 2.2% of adults and 2.3% of 8-year-old children in the United States. The estimated frequency of ASD in the United States has been increasing, growing from 1.1% in 2008 to 2.3% in 2018. This increase is most likely the result of improved screening and diagnostic equipment performance, more public awareness, and changes in diagnostic standards. As of right now, there are no biomarkers specific to the diagnosis of ASD. During the first two years of life, a child's lack of imaginative play, limited or nonexistent use of gestures in communication, and failure to react to a name when called are all common early signs and symptoms of ASD. Depression (20% vs. 7%), anxiety (11% vs. 5%), sleep problems (13% vs. 5%), and seizures (21% with co-occurring intellectual disability vs. 0.8%) are all more common in those with ASD than in those without. Intense behavioral therapies, such as the Early Start Denver Model, help children under the age of five by enhancing their language, play, and social communication (small to medium impact size based on standardized mean difference) [1].

The severity of ASD is categorized based on limited, repetitive patterns of behavior, interests, or hobbies, as well as the degree of support required to address social communication and interaction difficulties. However, when there are diverse levels of impairment across cognitive, adaptive, and autism-related symptoms, there are concerns that conceptualizing severity based on support levels required could result in site-specific uses of ASD categories and discrepancies [2].

Autism is caused by a difference in the way your child's brain functions, which affects how they engage with their environment. They are born with this distinction; it is unrelated to your parenting style, the meals you feed them, the vaccines they receive, or everything else your child experiences after birth. Although we don't fully understand why some people are autistic and others aren't, we do know that autism is a spectrum disorder, neurodivergent, and frequently misinterpreted [3].

Autism spectrum disorders can cause changes in a person's demands and abilities over time. While some autistic people manage to live independently, others face major challenges and require lifelong care and support. Autism often affects educational and employment opportunities. Families that support and care for others may also be under a lot of pressure. Social attitudes and the level of support provided by local and federal authorities have a substantial impact on the quality of life for people with autism [4].

Researchers are unsure about the precise causation of autism. There are likely numerous causes of autism because the condition is so complicated, and no two individuals with autism are exactly alike [5]. The whole family is impacted when someone has ASD. Families who have to meet the complicated requirements of an individual with ASD may experience extreme emotional, financial, and occasionally even physical hardship [6].

Methods

Parents of children with autism spectrum disorder were the subjects of a descriptive cross-sectional study to assess their knowledge regarding the disorder's symptoms and how they deal with their children. The study began on 16 October 2024 to 30 March 2025.

The study included a sample of 100 male and female parents, collected from (My Family Center of autism and Enunciation in Al-Basrah city. The research data were collected by distributing a questionnaire to the parents of children. The questionnaire was accepted by the competent experts and created by scientific references about the research topic. The questionnaire consisted of 2 parts, the first part included questions about demographic information of parents and their children, while the second part contained 27 questions about the autism symptoms and dealing with autism children with autism. The results of the questionnaire questions, after being collected, were stored in tables in the Excel program for statistical analysis. The answer scores for the questions were [3] for the correct answer, [2] for the middle answer, and [1] for the wrong answer.

The data were collected, sorted, and subjected to statistical analysis using the program of SPSS version 26. Statistics included a T-test to calculate data rates, standard deviation, P-values, and significant differences.

Interval	Cut-off Point	Assessment
-11.66	0.66	Poor
1.67-2.33	0.66	Moderate
2.34-3	0.66	Good

Table 1. *Likert scale interval for evaluating the score of knowledge*

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Results and Discussion

A. Results

Demographic variables	Classes	F	%
Father work	Employee	61	61.0
	Military	7	7.0
	Free job	32	32.0
	Total	100	100.0
Study of the father	Primary	15	15.0
	Middle	17	17.0
	Second	13	13.0
	University	55	55.0
	Total	100	100.0
Mother work	Employee	34	34.0
	Housewife	66	66.0
	Total	100	100.0
Study mother	Primary	17	17.0
	Middle	21	21.0
	Secondary	13	13.0
	University	49	49.0
	Total	100	100.0
Address	Rural	14	14.0
	City center	86	86.0
	Total	100	100.0
Marital status	Married	92	92.0
	Single	8	8.0
	Total	100	100.0
Gender of the child	Male	74	74.0
	Female	26	26.0
	Total	100	100.0
Economic	High	3	3.0
	Mild	85	85.0
	Poor	12	12.0
	Total	100	100.0
Study of the child	Continuous	18	18.0
	Not continuous	82	82.0
	Total	100	100.0

Table 2. *Demographic information of parents who participated in the study*

This table shows the demographic characteristics of the parents who participated in the study project. The sample consisted of 100 fathers and mothers of children diagnosed with autism spectrum disorder (ASD). Among them, 61 were employed, 7 were in the military, and 32 were self-employed. Regarding education, 55 fathers and 49 mothers held university degrees. 92 participants were married, and 86 of the families resided in urban areas, while 14 were from rural regions. The majority of the children (74) were male, and 26 were female. Economically, 85 families were of a moderate level. Only 18 children were continuing their education, while 82 were not.

%	No. of Questions	Assessment
25%	5	Poor
50%	10	Moderate
25%	5	Good
100%	20	Total

Table 3. *Distribution of Parents' Awareness of ASD Symptoms*

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This table presents the levels of parents' awareness regarding the symptoms of autism spectrum disorder. The answers were categorized based on scoring into three levels: poor, moderate, and good. 25% of parents showed a good level of knowledge, 50% had moderate knowledge, and 25% had poor knowledge.

Mean Score				
Assessment	N	Mean score	Std. Deviation	Std. Error
Poor	20	1.50	0.108	0.024
Moderate	54	1.99	0.161	0.021
Good	26	2.73	0.224	0.043
Total	100	2.08	0.459	0.045

Table 4. *Mean Score and Standard Deviation for Symptoms part*

This table summarizes the statistical measures related to parents' answers in the symptoms section, showing the mean scores, standard deviation, and standard error for each category.

ANOVA test					
Significant					
Assessment	Frequency	Percent	F – value	P – value	Sig.
Poor	20	20 %	305.5	0.00	S
Moderate	54	54 %			
Good	26	26 %			
Total	100	100 %			

Table 5. *ANOVA Test – Awareness of ASD Symptoms*

This table presents the ANOVA test results, which show a statistically significant difference (P=0.00) among the parents' awareness levels of autism symptoms.

%	No. of Questions	Assessment
29%	2	Poor
29%	2	Moderate
43%	3	Good
100%	7	Total

Table 6. *Distribution of Parents' Knowledge of ASD Management Strategies*

This table displays parents' responses to the questionnaire regarding strategies for dealing with ASD. 43% of parents revealed good knowledge, 29% had moderate knowledge, and 29% had poor knowledge.

Mean Score				
Assessment	N	Mean	Std. Deviation	Std. Error
Poor	20	1.50	0.108	0.024
Moderate	54	1.99	0.161	0.021
Good	26	2.73	0.224	0.043
Total	100	2.08	0.459	0.045

Table 7. *Mean Score and Standard Deviation for the Management Part*

This table presents the statistical analysis of parents' knowledge and awareness regarding ASD management strategies, including the average scores and variation within each category.

ANOVA test					
Significant					
Assessment	Frequency	Percent	F - value	P – value	Sig.
Poor	30	30 %	1.18	0.00	S
Moderate	33	33 %			
Good	37	37 %			

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Total	100	100 %	

Table 8. *ANOVA Test – Knowledge of ASD Management Strategies*

This table presents the ANOVA test results, which show a statistically significant difference (P = 0.00) among the parents' knowledge and awareness levels of autism management strategies.

B. Discussion

Raising awareness about autism spectrum disorder (ASD) plays a crucial role in early diagnosis, intervention, and long-term management of the condition. When parents are well-informed about the symptoms of autism and support strategies, the overall quality of life and outcomes for children with autism significantly improve [7].

Our study, which is based on a sample of 100 participants, showed that 20% of parents had poor awareness of autism symptoms, 54% had moderate awareness, and only 26% were strongly aware. This result aligns with a study conducted in Saudi Arabia, where many parents were able to recognize some symptoms but lacked comprehensive knowledge about the disorder [8].

Some of the main symptoms of autism include a lack of eye contact, delayed speech, repetitive behaviors, and unusual sensory responses [9]. Early recognition of these symptoms is crucial, as studies have shown that early diagnosis and intervention can improve cognitive and behavioral outcomes for children with autism [10].

However, the moderate awareness among parents in our sample highlights the need for organized educational programs to increase knowledge about autism [11].

Our results showed variation in parents' knowledge of autism management strategies: 30% had poor knowledge, 33% had moderate knowledge, and 37% had strong knowledge of strategies such as Applied Behavior Analysis (ABA) and speech therapy. This is consistent with previous literature emphasizing the importance of parent training and increased awareness to ensure effective intervention in autism cases [12].

Applied Behavior Analysis (ABA) is a widely recognized treatment that uses structured reinforcement to encourage positive behaviors in children with autism [13]. In addition to ABA, other effective treatments include speech therapy and occupational therapy, which help improve communication and daily functioning [14]. Research also shows that creating structured environments at home promotes adaptability and reduces anxiety in children with autism [15].

In the Iraqi context, as in many cultures, misconceptions and social stigma affect how autism is perceived. Some common misconceptions among parents include the belief that vaccines cause autism or that individuals with autism cannot lead an independent life. These misconceptions are not unique to Iraq; global studies point to similar cultural beliefs that hinder early diagnosis and intervention [16].

These misconceptions require nationwide awareness campaigns and culturally sensitive educational programs to dispel myths and encourage early treatment [17]. Parents in our study frequently mentioned feelings of stress, anxiety, and emotional burden. These results support global research indicating that families often face high psychological pressure and social isolation [18].

The financial challenge is also a major issue due to the cost of treatment and specialized care. This is reflected in our participants' responses, where many highlighted the need for support from governments or NGOs. Studies show that providing psychological counseling and support groups for parents can significantly reduce these burdens [19]. Our results are consistent with global literature. A comparative study in Europe showed that most parents lack detailed knowledge about autism, especially regarding management techniques [20].

These global challenges reflect those present in our Iraqi sample and emphasize the need for comprehensive and locally tailored solutions that align with cultural and social dynamics [21]. Improving awareness among parents and management strategies is crucial for early detection of autism and better outcomes for affected children. Based on our study and global evidence, we recommend:

Implementing community-level awareness campaigns for parents [17].

Providing training programs on evidence-based interventions such as ABA. Combating misconceptions through culturally sensitive public health strategies [22]. Offering psychological and financial support to families with children with autism [18].

The study concludes that a knowledge gap exists, necessitating enhanced awareness efforts, especially among individuals with limited education and access to resources.

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Conclusion

Out of 100 participating parents, the majority of mothers were housewives, and more than half of all participants held a university degree. Parents' knowledge of ASD symptoms varied: one-quarter demonstrated good knowledge, half of the parents had a moderate level, and one-quarter showed poor understanding. In terms of management strategies, one-quarter had good knowledge, half of the parents had moderate knowledge, and one-quarter of the parents had poor knowledge.

Recommendations

Enhancing Parental Awareness – Raise parents' awareness of autism spectrum disorder (ASD) and emphasize the importance of early intervention through educational programs and media campaigns. Improving Understanding and Interaction – Provide training sessions on effective communication techniques and behavioral strategies to better support children with ASD. Promoting Awareness Programs – Launch community-based awareness campaigns aimed at reducing stigma and promoting the social inclusion of children with autism. Providing Reliable Resources – Ensure parents have access to accurate, evidence-based information through specialized centers and educational platforms. Encouraging Research and Studies – Support ongoing research focused on advanced diagnostic methods and innovative intervention strategies to improve the quality of autism care.

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