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Nursing Students' Knowledge About Autism Among Children: A Cross-Sectional Study

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Abstract. Background: Based on their experience providing healthcare to children with autism, nursing professionals should be able to comprehend and offer therapeutic support to autistic children because they have a unique perspective on the world. Objectives: to evaluate nursing students' understanding of childhood autism. Methods: From October 18, 2023, until March 25, 2024, University of Basrah nursing students participated in this study. One hundred undergraduate students from the University of Basrah's College of Nursing make up the study sample. They were selected at random. There are sixty females and forty males. A questionnaire with thirty questions regarding autism served as the study's tool to gauge students' understanding of the condition. The statistical tool for social sciences, SPSS version 20, was used to examine the data, which is presented as frequency and percentage. The correlation was evaluated using the mean score and significance. among the various variables. Results: About (100) students participated in this study, and the most frequent The age group was from 21 to 23 years (48%), and this sample consisted of (40) male and (60) female students. (83) of the sample members were single. These results. This is consistent with the findings that most students (63%) have good knowledge About autism, (30%) of them have moderate knowledge, and (6%) of them have Weak knowledge. Conclusion: Most of the pupils were between the ages of 21 and 23. There are more females than males in the population. As a group of individuals situated between the general public and medical experts, nursing students may be thought of as having a quite high level of autism awareness.

Highlights:

1. Nursing students must understand autism for effective therapeutic support.
2. Random sample of 100 students; data analyzed using SPSS.
3. Majority aged 21–23; 63% demonstrated good autism knowledge.

Keywords: Nursing Students, Knowledge, Autism, Children.

Introduction

Leo Kanner, a child psychologist from the United States, initially described autism disorder (AD) in 1943. Eleven of the children he presented had distinct behaviors. Kanner thought that their regular social contact had been hindered by an innate characteristic. AD is also known as Kanner's autism, early infantile autism, or childhood autism [1]. Autism is a neurodevelopmental disorder that affects a person's capacity to relate to and

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communicate with others throughout their lives [2]. It seems to be one of the childhood disabilities with the quickest rate of growth [3].

The developmental disease known as autism spectrum disorder (ASD) is characterized by repetitive or limited behaviors, as well as challenges with social communication and engagement, Interests, and activities [4]. One of the main causes of disability in the world is psychiatric disorders. Some children may develop differently as they grow up, whether it's because they avoid eye contact or interact with their family or other people, have a particular fascination with something, or become aloof and socially inactive. In these cases, they may have infantile autism [5,6].

Since autism spectrum disorder is common and can be identified as early as 18 months of age, primary care continues to urge standardized screening for it at 18 and 24 months of age along with continued developmental surveillance, however, this may be done in different settings [7]. Although the exact etiology of autism is unknown, research points to several potential contributing variables. These elements consist of environment and genetics [8].

The condition cannot be directly linked to a particular gene malfunction or chromosome abnormalities; rather, genetics is a risk factor. Gender, parental age, family history, and the diagnosis of other diseases are additional risk factors [9]. Because research indicates that therapies to enhance functioning may be more successful in younger children and maximize long-term prognosis, early diagnosis of autism spectrum disorder (ASD) is crucial [3].

Some autistic children may be more intelligent than typical kids; not all of them are mentally challenged. However, children with autism frequently develop behavioral issues. Parents may face significant challenges due to some traits of children with autism. Research on public awareness of autistic children is crucial for reducing stigma and discrimination against them as well as for fostering a feeling of civic duty for autistic families and children [10].

Methods

One hundred students, both male and female, participated in a descriptive cross-sectional study design at Basrah University's College of Nursing. began on October 18, 2023, and ended on March 25, 2024, with the goal of examining students' understanding

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of autistic children. The second, third, and fourth phases of morning and evening study were used in the current study, which was carried out at Basrah University's College of Nursing. One hundred students made up the convenient sample.

Data was gathered via a questionnaire with closed-ended questions. The questionnaire is divided into five sections. The first section includes five questions about the students' sociodemographic traits, such as age, gender, stages, type of study, and marital status. The second section includes eight questions about general knowledge of autism. There are seven questions about autism risk factors in the third section and nine questions about autism symptoms in the fourth. Six questions about autism treatment make up the fifth section. The study used a standardized 3-point Likert scale with the options YES, NO, and I'm not sure. One hundred students were given the completed questionnaire form, which they read and completed. The researchers then gathered the completed forms, and each one was graded based on the correct usual response.

Result and Discussion

Table 1: General characteristics of respondents

Variables	Category	F	%
Sex	Male	40	40.0%
	Female	60	60.0%
	Total	100	100%
Age	18-20	32	32.0%
	21-23	48	48.0%
	24 and above	20	20.0%
	Total	100	100%
Marital status	Married	17	17.0%
	Single	83	83.0%
	Total	100	100%
Stage	Stage 2	36	36.0%
	Stage 3	29	29.0%
	Stage 4	35	35.0%

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	Total	100	100%
Type of Study	Morning study	39	39.0%
	Evening study	61	61.0%
	Total	100	100.0%

The sociodemographic details of the research sample are displayed in this table. The most frequent age group was from 21 to 23 years (48%), about 60% of them were females, about 83% were single, the stages were nearly equal, and about 61% were from the evening study.

Table 2: The student's general knowledge about autism

N	Items	Correct answer		Not sure		Wrong answer		Ms	Eval.
		*F	*%	*F	*%	*F	*%		
1	Autism is a group of diverse disorders associated with brain development	67	67.0	22	22.0	11	11.0	2.45	G
2	Autism does not appear in the first three years of a child's life	38	38.0	25	25.0	37	37.0	1.97	M
3	Males suffer from autism more than females	39	39.0	43	43.0	18	18.0	2.14	M
4	There is no known cause for autism	66	66.0	20	20.0	14	14.0	2.43	G
5	There are no different types of autism	51	51.0	29	29.0	20	20.0	2.27	M
6	The incidence of autism does not increase among identical twins	21	21.0	43	43.0	36	36.0	1.86	M
7	The child is diagnosed based on an assessment of symptoms	82	82.0	11	11.0	7	7.0	2.65	G

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8	There is no specific way to prevent autism	68	68.0	17	17.0	15	15.0	2.42	G

Table (2): shows that information about the general knowledge study sample was presented medium level at items (Q2, Q3, Q5, Q6), while the remaining items presented as Good at items (Q1, Q4, Q7, Q8).

Table 3: The student's knowledge about risk factors of autism

N	Items	Correct answer		Not sure		Wrong answer		MS	Eval.
		*F	*%	*F	*%	*F	*%		
1	Genetic factors are related to autism	66	66.0	17	17.0	18	18.0	2.38	G
2	Parental child abuse is linked to autism	10	10.0	16	16.0	81	81.0	1.4	W
3	The use of smart devices is linked to autism	10	10.0	9	9.0	79	79.0	1.42	W
4	Vaccines given to children are related to autism	52	52.0	11	11.0	11	11.0	2.63	G
5	The risk of autism increases the older the father or mother is (over the age of 40 when giving birth).	37	37.0	37	37.0	26	26.0	2.11	M
6	Environmental pollution increases the risk of Autism	27	27.0	32	32.0	41	41.0	1.89	M
7	Premature birth increases the possibility of the child developing autism	28	28.0	35	35.0	37	37.0	1.89	M

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Table (3): shows that information about risk factors knowledge study sample was presented medium level at items (Q5, Q6, Q7), and shows poor knowledge at items (Q2, Q3) while the remaining items presented as Good at items (Q1, Q4).

Table 4: The student's knowledge about symptoms of autism

N	Items	Correct answer		Not sure		Wrong answer		MS	Eval.
		*F	*%	*F	*%	*F	*%		
1	The child responds when called	69	69.0	11	11.0	20	20	2.43	G
2	He has repetitive movements such as spinning and flapping his hands	87	87.0	11	11.0	2	2.0	2.73	G
3	Repeats words and phrases over and over	82	82.0	10	10.0	8	8.0	2.67	G
4	He shows facial expressions that reflect his feelings such as happiness, sadness and anger	28	28.0	12	12.0	60	60.0	1.78	M
5	He organizes his toys in a certain way and gets upset when the system is changed	89	89.0	9	9.0	2	2.0	2.77	G
6	Weak eye contact, as he never looks into the eyes of the person he is talking to	79	79.0	17	17.0	4	4.0	2.67	G
7	He stares at the ceiling for a long time	79	79.0	17	17.0	4	4.0	2.68	G
8	He suffers from hypersensitivity to sounds	80	80.0	16	16.0	4	4.0	2.68	G
9	He does not react to dangerous situations compared to his peers	78	78.0	16	16.0	6	6.0	2.59	G

Table (4): shows that information about symptoms knowledge study sample was presented medium level at item (Q4) only, while the remaining items were presented as good items.

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Table 5: The student's knowledge about the treatment of autism

N	Items	Correct answer		Not sure		Wrong answer		MS	Eval.
		*F	*%	*F	*%	*F	*%		
1	A child can recover from autism completely	44	44.0	24	24.0	32	32.0	2.07	M
2	There is no drug treatment for autism	65	65.0	20	20.0	15	15.0	2.41	G
3	Autism is treated by treating its symptoms	72	72.0	17	17.0	11	11.0	2.55	G
4	Behavioral therapy is one of the methods used to treat autism	82	82.0	13	13.0	5	5.0	2.67	G
5	One of the ways to treat autism is to help develop or acquire language	87	87.0	11	11.0	2	2.0	2.74	G
6	One way to treat autism is to teach and develop social skills	90	90.0	9	9.0	1	1.0	2.75	G

Table (5): shows that information about the treatment knowledge study sample was presented medium level at item (Q1) only, while the remaining items were presented as good items.

Table 4.6: Results of the Obstacles evaluation for all students:

Evaluation	Interval	F	%
Weak	1-16.7	6.6	6.6%
Medium	1.67-2.34	30	30%
Good	2.34-3	63.3	63%
Total		100	100%

According to this table, the majority of the sample (63%) had good, (30%) had medium (6.6%) had weak knowledge about autism in children.

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Table 7: Questionnaire's domains and student's answers percentages

Nursing student's knowledge			
Domains of Questionnaire	**N**	**Mean of score**	**Assessment**
General knowledge	100	2.32	Medium
Risk factor knowledge	100	1.90	Medium
Symptom knowledge	100	2.59	Good
Treatment knowledge	100	2.62	Good
Total	100	2.35	Good

Table (7): displays the assessment of knowledge domain questionnaires of all domains, general knowledge and risk factors domains show medium (M) knowledge, while symptoms and treatment domains show good (G) knowledge.

Discussion

This study was carried out at the College of Nursing/Basrah University in the city of Basra, with a total sample size of 100 students. The findings of our investigation indicated that women made up the great majority of participants (60%) in our study. These findings are consistent with a study's findings [11], which showed that the majority of the sample was female.

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Also, the vast majority were between the ages of 21 to 23 years (48%). These results agree with the results of a study [12] which shows the majority of the nurses were between (21-23) years.

Additionally, our study's findings showed that 83% of the research participants were from a single state. These findings are consistent with a study [13] that found most nurses were unmarried.

The majority where the participants were second-year students (36%) and evening school students (61%). These results agree with the results of these two studies [14,15] which reveal that most of the students were evening school students.

One of the most prominent points that our study addressed and which none of the previous studies addressed was that the research sample was conducted on nursing students and their knowledge about autism, including (general knowledge, risk factors that lead to autism, symptoms, and signs, as well as treatments used to treat autism) and their knowledge was Ranging from medium to good.

The most prominent findings of our study were that the vast majority of students have good knowledge regarding autism (63%). These results are consistent with a study conducted at the Basra Center, but on a different group, which is the category of mothers and their knowledge of autism, and they also had good results regarding mothers' knowledge of autism patients [16]. While these results are not consistent with a study conducted in Dehradan, the most prominent results of their study, which was conducted on a different group as well, which is parents' knowledge of autistic children, and results were the majority (56%) of parents have average knowledge, with an average knowledge percentage of 50.33%. Also, the majority (52%) are parents who have a positive attitude toward the care of children with autism [17].

As nurses, we explain that the vast majority of nursing students have good knowledge regarding autism, and this is the main reason for attending seminars that talk about Autism, or the reason for this is from social media, medical journals, and medical websites since the students in our study were exclusively nursing students. Full knowledge of medical information is also considered part of their academic curricula and what is related to it.

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Also, one of the most prominent points in our study is that a Likert scale was used to collect data, and this is consistent with a study conducted in Dehradun, where the same Likert scale was used to collect data [17].

Finally, one of the most prominent findings of the results of our study is that there is a statistically significant relationship between the demographic information of student nurses and their knowledge of autism, but this is not consistent with a study conducted in the city of Basra, according to their study's findings, all other variables are not significant, whereas the association between mothers' education and knowledge is significant (at < 0.05) [18–21].

Conclusion

Most of the pupils were between the ages of 21 and 23. There are more females than males in the population. Nursing students may be viewed as a group of individuals situated between the general population and medical professionals, and their awareness of autism could be regarded as reasonably high. However, in light of the increasing incidence of autism, additional research might be conducted and autism could be incorporated into nursing students' extracurricular or curricular coursework to raise awareness of the condition.

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