

Assessment of Nurses' Knowledge toward Alternative Communication Strategies for Children with Autism Spectrum Disorder at the Autism Centers in Dhi Qar Governorate

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ABSTRACT

Background: Alternative communication is a form of communication that can be offered to some people who do not have the ability to speak and helps in developing the child's verbal abilities and the ability to express their feelings, emotions and needs.

Objectives: This study aimed at assesses nurses' knowledge toward alternative communication strategies for children with autism spectrum disorder.

Methodology: A descriptive study is conducted for the periods of December 26th 2020 to June 1st 2021. The study is carried out at the Autism Centers in Dhi Qar Governorate. A non-probability purposive sample selected for (25) nurses working at the Autism

الخلاصة:

خلفية البحث: التواصل البديل هو شكل من اشكال التواصل الذي يمكن تقديمه لبعض الاشخاص الذين ليس لديهم القدرة على الكلام و يساعد في تطوير القدرات الكلامية لدى الطفل والقدرة على التعبير عن مشاعرهم وانفعالاتهم واحتياجاتهم.

الهدف: هذه الدراسة تهدف إلى تقييم معارف الممرضات تجاه استراتيجيات التواصل البديل للأطفال المصابين باضطراب طيف التوحد.

المنهجية: أجريت دراسة وصفية للفترة من 26 / ديسمبر / 2020 إلى 1 / يونيو / 2021. في مراكز التوحد بمحافظة ذي قار. من خلال عينة غرضية غير احتمالية لـ (25) ممرضاً يعملون في مراكز التوحد بمحافظة ذي قار. وتحقق الاعتماد على موثوقية الاستبانة من خلال دراسة تجريبية ومن ثم عرضها على خبراء لتثبيت مصداقيتها. جمعت البيانات من خلال تقنية الإدارة الذاتية، وحللت البيانات من خلال تطبيق التحليل الإحصائي الوصفي.

النتائج: اظهرت النتائج إلى أن الممرضات كانت معرفة غير مرضية تجاه مفهوم اضطراب طيف التوحد بمتوسط يساوي 1.64. تأتي هذه النتائج بسبب انخفاض التحصيل التعليمي. بالإضافة إلى ذلك، تشير النتائج إلى أن الممرضات كانوا على مستوى منخفض المعرفة تجاه استراتيجيات الاتصال البديلة لاضطراب طيف التوحد بمتوسط يساوي 1.67.

الاستنتاجات: تساعد سنوات الخبرة المتزايدة في مراكز التوحد وتدريب الموظفين من قبل المسؤولين المحليين في رفع مستوى الممرضات المتخصصين. توفير الموارد الصحية واستغلال الطاقات الشابة للممرضات مما يساعد بالفعل على تنمية معارفهم.

التوصيات: جلسة تدريبية للممرضين حول كيفية استخدام استراتيجيات التواصل البديل للأطفال المصابين باضطراب طيف التوحد في مراكز التوحد بمحافظة ذي قار.

الكلمات المفتاحية: التقييم، الممرضات، المعرفة، التوحد.

centers in Dhi Qar Governorate. A content validity was achieved through a panel of experts and reliability was achieved through a pilot study. The data collection process uses the self-administrating technique in which the nurse fills the questionnaire form by themselves. Through the descriptive statistic, data were analyzed.

Results: Findings indicate that nurses were unsatisfactory knowledge towards concept of autism spectrum disorder at mean equal 1.64. This results come because low level of nurses. As well as, findings indicate that nurses were poor knowledge

towards alternative communication strategies of autism spectrum disorder at mean equal 1.67.

Conclusion: More years of experience in autism centers and training the staff by local officials help raising professionals' nurses. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge.

INTRODUCTION

The acronym "autism spectrum disorder" (ASD) refers to a category of diverse brain growth disorders, "Autism" is derived from the Greek word "autos" which means "self" it applies to circumstances in which a person's "isolated self" is present, ASD is characterized by difficulties in social interaction, as well as verbal, nonverbal and repetitive motor interaction, It can also be followed by learning disability and physical health issues such as sleep and digestive problems ⁽¹⁾.

The World Health Organization has defined autism spectrum disorder (ASD) as a growing global public health issue that can pose some of the largest disease burden in children and adolescents ⁽²⁾.

Autism spectrum disorders (ASDs) which includes Autism, Asperger's syndrome, childhood disintegrative disorder, and pervasive developmental disorder ⁽³⁾.

Autism Spectrum Disorder (ASD) is a broad term for a disease that affects around one in every 68 school-aged children. It affects boys 4.5 times more often than girls ⁽⁴⁾.

Autism is an enigmatic condition, with no knowledge about its origins, the only statement that may be used to describe autism was "there is no idea" and we now know that there is no particular explanation for autism and that there are many forms of autism, and fortunately experts have recently begun to provide answers ⁽⁵⁾.

The autism spectrum disorders (ASD) are a category of neurodevelopmental abnormalities that

Recommendations: Nurse's training session on how to use alternative communication strategies for children with autism spectrum disorder in autism centers in Dhi Qar Governorate.

Keyword: Assessment, Nurses, Knowledge, Autism.

have long-term consequences. Autism is increasing at an alarming rate for unknown causes, whether it is due to an increase in the illnesses itself or to more advanced testing and classification methods. As the number of people diagnosed with ASD continues to rise, it is critical for nurses to be sufficiently equipped to fulfill the healthcare needs of this unique group ⁽⁶⁾.

According to estimates, a primary care physician (PCP) could see "as many as 11 children with an ASD for every 1,000 children in his or her practice," implying that a nurse would see at least this number, also, because most PCPs have an office nurse on staff, this does not apply to adults with ASD. These folks will be interacting with by nurses in a variety of nursing practice areas ⁽⁷⁾.

Nurses are responsible for educating children's with autism spectrum disorder on various aspects and keeping them up to date, various teaching strategies are used to enhance knowledge, such as teaching, demonstration, discussion and self-education, these methods of self-education have an advantage over others, as the learner can educate himself at his own pace and also stress the importance of rereading ⁽⁸⁾.

AIMS OF THE STUDY

This study aims to assess nurses' knowledge toward alternative communication strategies for children with autism spectrum disorder.

METHODOLOGY

Design of the study: To investigate the knowledge among nurses toward, this descriptive study is conducted for the periods of December 26th 2020 to June 1st 2021.

Setting of the Study: The study is carried out at the Autism Centers in Dhi Qar Governorate (Dhi Qar Autism Center-Autism Center in Shatrah). These Centers provide health care to children with autism spectrum disorder, attending to the Autism centers for receiving treatment, care, and doing full investigations. The services provides for the patient freely.

Sample of the Study: A non-probability purposive sample selected from nurses who were working at the Autism centers in Dhi Qar Governorate.

Study instruments: A questionnaire consists of the following parts including:

- **Part I** : Socio-demographic data of nurses includes gender, age, level of education, social status, years

of experience in general nurses and years of experience inside Autism Center, did you participate courses related to (ASD).

- **Part II** : Nurses' knowledge of the concept of (ASD): this composed of (20 items).
- **Part III**: Nurses' knowledge of alternative communication strategies: this composed of (21 items).

Validity and reliability of study questionnaire: A content validity was achieved through a (15) panel of experts and reliability were achieved through a pilot study. It conducted on (10) were selected among nurses concerning with Children Autism Centers in Dhi Qar. Cronbach's Alpha= 85 which indicate a pass questionnaire items.

Data collection: The data collection process uses the self-administrating technique in which the nurse fills the questionnaire form by themselves. Through the descriptive statistic, data were analyzed.

RESULTS

Table (1): Distribution of the Study by their demographic characteristics

Basic Information	Groups	Frequency	%
Age groups	20 - 25	1	4.0
	26 – 30	7	28.0
	31 – 35	9	36.0
	36 – 40	8	32.0
	41 and above	0	0.0
	$\bar{x} \mp S.D.$	29.6 \mp 0.889	
Gender	Male	8	32.0
	Female	17	68.0
Educational Level	High School Nursing	6	24.0
	Diploma(Nursing Institute)	12	48.0
	Bachelor (Faculty of Nursing)	6	24.0
	Postgraduate studies	1	4.0
Years of Service in Nursing Field	1 – 5	4	16.0
	6 -10	9	36.0
	11 – 15	4	16.0
	16 -20	8	32.0
	20 and above	0	0.0

The Number of Years of Service in the Autism Center	1 – 3	8	32.0
	4 -6	10	40.0
	7 – 9	7	28.0
	10-12	0	0.0
	13 years and more	0	0.0
Social status	Unmarried	8	32.0
	Married	17	68.0
	Absolute	0	0.00
	Widower	0	0.00
Participated in Courses or Workshops Related to Autism Spectrum Disorder?	Yes	16	64.0
	No	9	36.0
Number of Courses or Workshops Related to Autism Spectrum Disorder?	0	9	36.0
	1	15	60.0
	3	1	4.0

This table revealed that the majority 9 (36.0 %) of nurses are within the age group (31-35 years). Related to the gender the study sample were females and constituted 17 (68.0%) of nurses. Concerning to the educational level, majority of nurses were diploma (nursing institute) graduated 12 (48.0 %). In relation to the years of service in nursing, the most of nurses have (6 -10) years 9 (36.0%). Regarding to the number of years of service in the autism center, the most of nurses have (4-6) years 10 (40.0%). Regarding to social status, the most of nurses were married 17 (68.0 %). Regarding to participate in courses or workshops related to autism spectrum disorder, the most of nurses answer with (yes) 16 (64.0%). Regarding to the number of courses or workshops related to autism spectrum disorder, the most of nurses' answer with (1) courses 15 (60.0%).

Table (2): Nurses Knowledge related to knowledge of the concept of (ASD)

No.	Items Related to Nurses' knowledge	M.S.	S.D.	Ass.
1	Autism spectrum disorder combines physical and behavioral disease.	1.80	0.707	M
2	Autism is defined as impeding the development of social skills, verbal and nonverbal communication, and imaginative and creative play.	1.56	0.651	L
3	Among the behaviors and symptoms of children with autism spectrum strikes, a deficiency or an absence of the ability to communicate.	1.48	0.653	L
4	In a child with the autism spectrum, the brain grows without proper and healthy brain tissue damage.	1.92	0.812	M
5	Genetics is one of the reasons that explain autism spectrum disorder.	1.72	0.792	M
6	The inability of children with autism spectrum disorders to digest the protein found in wheat and barley and their derivatives.	1.64	0.757	L
7	Childish breakdown disorder is one of the different forms of autism spectrum disorder.	1.68	0.852	M
8	Problems related to social interaction, communication, and behavior can lead to social isolation.	1.80	0.645	M
9	Autistic disorder leads to disruption of social communication in addition to behavioral problems.	1.68	0.748	M
10	Delay in spoken language without accompanying compensation through other means of communication, such as signs and gestures, is one of the symptoms through which the autism spectrum disorder is diagnosed.	1.56	0.651	L

11	Early education and intervention is considered one of the most useful and important measures taken for an autistic child.	1.60	0.707	L
12	Psychotherapy for a child with autism spectrum disorder depends on the causes of this disorder.	1.72	0.843	M
13	To reduce the behavioral manifestations of children with autism spectrum, medications and prescription drugs should be used.	1.44	0.821	L
14	Magnesium and calcium are two of the most important minerals that increase sensory responses in children with autism spectrum disorder.	1.48	0.770	L
15	Socializing with peers of the same age helps a child On recovery with autism spectrum disorder.	1.96	0.935	M
16	Educational procedures should include an emphasis on the spoken language aspects of the child.	1.68	0.852	M
17	There are effective programs to guide parents who have a child with autism disorder in order to contribute to alleviating the suffering and stressors imposed on the child and family.	1.44	0.651	L
18	Sensory integration therapy is used for children with autism spectrum disorder due to the inability of their brains to integrate environmental stimuli through their senses.	1.60	0.645	L
19	Treatment using auditory integration assumes that some autistic people have auditory sensitivity towards some auditory stimuli that leads to the emergence of autism spectrum disorder behaviors.	1.64	0.700	L
20	The routine that the child loves must be recognized and followed because the autistic child is by nature routine.	1.44	0.651	L
Mean \pm S.D.		1.6420	\pm 0.1121	M

This table take into account statistical of mean of score, findings indicate that the nurses were low level responses at all items of the scale except, the items number (1, 4, 5, 8, 9, 12, 15, and 16) the responses were moderate.

Table (3): Nurses Knowledge related to alternative communication strategies

No	Items Related to Nurses' knowledge	M.S.	S.D.	Ass.
1	Communication is the process of producing, transmitting and exchanging information, feelings, ideas and opinions from one person.	1.84	0.850	M
2	It categorizes communication into verbal communication and nonverbal communication	2.36	0.810	H
3	Nonverbal communication is a group of nonverbal methods or mediums of signs, symbols, images, gestures, facial expressions, and body movements	1.72	0.891	M
4	Without non-verbal communication skills, the child faces difficulties in social interaction with those around him, which helps him to form his behavior and build his personality	1.92	0.812	M
5	The importance of developing the skill of visual communication for children with autism spectrum disorder	1.92	0.909	M
6	Language learning takes place during interactions of shared attention between the child and others	1.56	0.768	L
7	Using sign with children on the autism spectrum as an alternative system in the event that speech and speech fail to grow and develop, and it is a system to help the development of language and speech	1.76	0.831	M

8	The importance of developing the skill of nodding in children with autism to compensate for the deficiency in their language development	1.48	0.714	L
9	Children with autism rarely respond when they are called by their name or exchange a smile or a similar greeting	1.44	0.651	L
10	Alternative communication is a form of communication that can be offered to some people who are unable to speak.	1.84	0.800	M
11	Starting alternative communication for children with autism spectrum as soon as possible helps in developing the ability to express their feelings, emotions and needs more	1.68	0.852	M
12	There are a number of factors that must be taken into account when determining alternative communication for children with autism	1.56	0.712	L
13	The method of alternative communication used should be easy and understood by everyone in the home	1.88	0.833	M
14	Pictorial and written tables are one of the alternative methods of communication with children with autism spectrum disorders	1.52	0.714	L
15	This whiteboard contains pictures, symbols, words or short sentences depending on what the child can better understand and meet their basic need	1.64	0.810	L
16	The Communication Book contains a set of symbols that provide an alternative method of communication for a child who has the ability to use hand pointing and turning pages	1.64	0.700	L
17	Treasure Hunt is a game used to help children with autism develop vocabulary	1.32	0.627	L
18	The nurse must display the words clearly to the child, because pictures are his first language and words are his second language	1.56	0.768	L
19	It is essential and helpful to use clear and simple visual methods to teach a child on the autism spectrum	1.52	0.714	L
20	Some children with autism respond better and have better communication if the teacher communicates with them while they are playing	1.52	0.714	L
21	The sense of touch for many children with autism is the most effective senses, and therefore letters can be taught to them by accustoming them to touching letters made of plastic	1.56	0.712	L
Mean ±S.D.		1.678±0.6913		L

"Level of assessment: (1-1.67) = Low ;(1.68-2.33) = Moderate; (2.34-3.00) = High, M = Moderate, H= High"

In the light of statistical mean of score, findings indicate that the nurses were low level responses at all items of the scale except, the items number (1, 3, 4, 5, 7, 10, 11 and 13) the responses were moderate.

DISCUSSION

Part I: Discussion of Nurses' Socio-Demographic Characteristics.

The sample included (50) nurses who accepted to participate in the study (25 in the study and 25 in the control group). Nurses' ages ranged from (20) to (41) years and above, (40%) of them aged between (31) to (35) years. This result is in line

with study who stated that their sample included (25) nurse⁽⁹⁾. Also, other findings confirmed that the mean age of nurses in their sample was (33) years old⁽¹⁰⁾.

Regarding nurses' gender and educational level, (66%) of them were females and (50%) of them were having a diploma degree as academic achievement. This result similar findings indicate that

the sample included (117) (92.9 %), female nurses (11). Also, findings mentioned that nearly (60%) of nurses in their sample were having a diploma degree as academic achievement (12).

Concerning years of services in the nursing field and the autism center, nearly (35%) of nurses having (6) to (10) years of services in the nursing field and (44%) of them were having (4) to (6) years of services in the autism center. This result close to that indicate who stated that (77%) of nurses having experience dealing with autistic children (13).

Apropos of nurses' marital status, (68%) of them were married and only (32%) percent of them were single. This result similar to that stated that nearly (70%) of nurses in their sample were married (14).

Respecting the participation and number of previous courses of autism for nurses, (66%) of them participated in courses/workshops and (62%) of them had previously participated in one course/workshop. This result agrees with findings stated that (50%) of nurses in their sample have participated in previous courses/ workshops regarding autism (15).

Part II: Discussion the Nurses Knowledge related to alternative communication strategies

Findings indicate that nurses were poor knowledge towards concept of (ASD) at mean equal 1.64. This results come because low level of nurses. As well as, findings indicate that nurses were poor knowledge towards alternative communication strategies of (ASD) at mean equal 1.67, due to nurses were limitation of attending training sessions. The current gap has been highlighted as nurses' lack of knowledge on autism spectrum disorders. Nurses must be equipped with the information and resources necessary to be informed of and confident in their abilities to communicate with people who have ASD. A minimal amount of ASD information is taught within the program for a Bachelor of Science in nursing curriculum, according to Giarelli et al. (2012), despite

the usefulness of giving such content to nurses within their study field (16).

It observed comparable outcomes in their study, indicating the necessity for ASD information for nurses to be included. Nurses must be knowledgeable about ASD since they are frequently the ones who begin referrals to specialists (17).

In the light of poor knowledge, it is emphasized the need of nurses, along with doctors, being members of multidisciplinary teams when working with people with ASD. This emphasizes the fact that all nurses, regardless of their practice setting, must be educated about ASD (13).

Nurses who are appropriately equipped with knowledge about ASD and how to deal with people with ASD will feeling more at ease, which will improve their capacity to interact with and care for people with ASD. Nurses require greater training and experience in this area, as well as health resources in the workplace to improve their knowledge and capacity to deal with ASD (18).

CONCLUSION

The nurses were unsatisfactory knowledge. More years of experience in Autism Centers and training the by local officials help raising professionals' nurses. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge.

RECOMMENDATIONS

Nurse's training session on how to use alternative communication strategies for children with autism spectrum disorder in autism centers in Dhi Qar Governorate.

- **Ethical Clearance:** All experimental protocol was approved under the College of Nursing, University of Bagdad, Iraq and all experiments were carried out in accordance with approved guidelines.

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