Available online www.ijpras.com

International Journal of Pharmaceutical Research & Allied Sciences, 2019, 8(4):168-173

Research Article

ISSN : 2277-3657
CODEN(USA) : IJPRPM

Autism knowledge and Attitudes: A National survey among Saudi Pediatricians

Ahmed Almutairi[1], Muteb Alosaimi[1*], Rawan Naif Alharbi[2], Nourah Saud Alsubaie[2], Khalid Saad Alnashi[2], Israa Kadhem Aldawudi[2], Gadeer Abdulhadi Albannawi[2], Talal Hamad Alanazi[2], Yousef Saad Alanazi[2], Abdulhadi Hamdan Alomari[2], Ali Almukhtar Alshanqiti[2], Fahad Matar Alzahrani[2], Jawaher hesham jelaidan[3], Ashwaq Muhammad Alyazeedi[4]

[1]Faculty of Medicine, Department of Family Medicine, Al Imam Muhammad ibn Saud Islamic University, Riyadh, Saudi Arabia
[2]Faculty of Medicine, Department of Pediatrics Medicine, Jordan University of Science & Technology, Irbid, Jordan
[3]Faculty of Medicine, Department of Pediatrics Medicine, Batterjjee Medical College, Jeddah, Saudi Arabia

[4]Faculty of Medicine, Department of Pediatrics Medicine, Taibah University, Taif, Saudi Arabia

***Email:** dr.mealosaimi @ gmail.com*

ABSTRACT

Autism is a known developmental disorder that is prevalent across the world. Saudi Arabia has largely been disadvantaged with respect to evidence-based research on autism. The presence of limited research and studies on autism in Saudi Arabia has an impact on how pediatricians undertake their treatment interventions on children with autism. This study assesses the awareness levels of Saudi pediatricians with regards to knowledge and attitudes towards autism among children. The degree of knowledge and attitudes displayed by the respondents have a direct correlation with the level of care and treatment for autism. This study is thus a baseline case which can be used to inform future treatment interventions for autism. The study showed that male children were more likely to be in the risk of being affected by autism which according to the analysis obtained from the chi square gender was not a significance of likeliness of a child being affected by autism. Correlation was used to determine the strength of the relationship between lack of eye contact as a result of autism causing communication disorder, a correlation of -0.132 which implied a weak negative relationship between the two variables. From the chi-square, a p value of 0.808 was obtained which indicated that there was insufficient statistical significance to the claim that there was a difference between gender and long-life condition of autism.

Key words: *Autism, Pediatricians, Knowledge.*

INTRODUCTION

Autism spectrum disorder (ASD) is a long-term disorder in brain development that is characterized by behavioral and social communication challenges [1]. Some of the specific challenges include a breakdown in social skills, both verbal and nonverbal communication and repeated behaviors [1-3]. Autism does not refer to a single disorder but a combination of many disorders that differ in both severity and symptoms. In fact, the term autism is used to encompass other medical conditions that were initially treated as separate conditions. The Asperger's syndrome, for instance, has been characterized as a mild form of autism in many medical research journals [4]. The developmental phase of the ASD is initiated at early childhood after which the condition progresses to cause

functional problems in the life of a child [4]. A large population of children with autism are able to manifest their symptoms within the first year after birth [4]. In few instances, children with autism are able to undergo a normal phase of development within the first year. Afterwards, a regression period is observed between 18 and 24 months when the victims fully begin to develop symptoms of autism [5].

According to recent statistics, the prevalence in cases of autism is on the rise. A 2018, CDC report for Autism and Developmental Disabilities Monitoring (ADDM) mentioned that nearly 1 in every 59 children in the United States was diagnosed with autism [3]. This prevalence rate indicated a 14% increase in ASD prevalence rates in 2016 which averaged 1 case of autism in every 68 children [3, 5]. Discussions on autism prevalence can only be based on the most recent statistics. This is due to the fact that knowledge in this area of medical research has been dynamic [6]. The techniques for diagnosis and choice for inclusion of certain conditions such as the Asperger's syndrome as ASD have not been consistent over the last three decades.

The diagnosis and prevalence analysis of autism is also subject to knowledge distribution in the same field. In developed countries such as the United States, a lot of scientific research have been conducted to establish practical knowledge on ASD. On the contrary, little scientific studies exist on ASD in the Middle East region [7]. In Saudi Arabia, the prevalence of ASD has been estimated at 18/10000. Alharbi suggests that despite the absence of specific figures for prevalence rates of ASD in Saudi Arabia, there is a general belief that the condition is generally increasing at a higher rate when compared to other childhood conditions [7]. The treatment and management of autism have been associated with the creation of awareness on the condition and implementation of screening interventions. Despite the presence of limited research studies on autism in the Middle East countries, an epidemiological study conducted by Helmy in 2014 observed a poor case of knowledge and attitudes concerning autism among medical students from Taif College [8]. Given the fact that Taif College is a leading medical research institution that churns out a large number of medical practitioners throughout Saudi Arabia, there was a need for a survey of autism and knowledge attitudes among pediatricians in Saudi Arabia.

The objective of this study is to assess the current levels of knowledge and attitude of Saudi pediatricians regarding autism. Knowledge levels and attitudes of pediatricians are important in fully diagnosing and recommending the best form of treatment for children with autism [5]. Knowledge describes the wealth of information that pediatricians in Saudi Arabia have acquired on autism. Attitudes describe the general behavior and feelings that pediatricians have towards children with autism. A combination of adequate knowledge and positive attitudes towards children with autism are essential ingredients for accurate diagnosis and effective treatment of diagnosed cases [9]. While autism cannot be cured, the administration of treatment therapies at early stages of ASD can effectively limit the behavioral and communication challenges that are often observed among children with the condition [10].

This study contributes to the wealth of knowledge on autism within Saudi Arabia. Generally, the case for autism research in Saudi Arabia has been poor owing to the presence of limited studies in this field [11]. There is a good chance that the limited studies on autism within Saudi Arabia may impact the medical practice of pediatricians with regards to the ASD [12, 13]. Already, some of the limited existing research have highlighted valid arguments in line with the proposition [14, 15]. Two independent studies that have been carried out on knowledge and attitude levels on childhood autism among medical students have stressed the need for integration of more information on ASD in the medical school curriculum [5, 8]. In both studies, the medical students demonstrated average knowledge and attitudes on childhood ASD. An investigation of a similar case on pediatricians provides a platform for exploring knowledge and attitudes from a practical-based approach.

MATERIALS AND METHODS

Participants

The participants in the study were drawn from 4 regions and 12 cities and 27 hospitals of Saudi Arabia. In total, 105 pediatricians from across the 27 hospitals in Saudi Arabia were drawn into the study. The participants were Saudi pediatricians working in hospitals that offer residency training program. The participants were randomly recruited for the research survey from across the 27 hospitals that were marked for the survey. The study was purely limited to collecting data on pediatricians given the fact that they are the specialists who are directly concerned with handling cases of autism among children. The pediatricians who were involved in the study were generally considered to have had at least six months clinical experience, giving them the opportunity to respond to the survey questions from a practical point of view as opposed to the theoretical perceptions. The participants

were generally asked to their honest responses with respect to exploring the subject of the research. In the end, the recruitment and selection of study participants was regarded to be relevant with the purpose of the study.

Study Design

A cross-sectional design was adopted for the study. The collection of study samples was undertaken by means of convenience sampling method. The study relied on questionnaires as a form of data collection from the study participants. The pediatricians were issued with the study questionnaires that were printed in hard copy form. The participants were asked to respond to the questions in the questionnaires after the daily morning meetings. The choice of time for response to the study questions was informed by two main issues. During morning periods when the pediatricians are just from meetings, they usually spend some time in preparation for the work schedules ahead. This period could be convenient for them to respond to questions, given their tight daily schedules. In addition, during morning hours, pediatricians are still fresh in preparation of the work that lies ahead. The agility of the mind provided a convenient time to respond to questions before the doctors were consumed with other activities.

Materials

The questionnaires were used as the primary tools in this research. The design of the questionnaire was informed by one that had been used in a previous study [14]. The choice to adopt a questionnaire that had been used in a previous study was justified by the fact that the previous study had focused on the same research question but for different geographical location. Further, the questionnaire had provided valuable results in that previous study. Slight modifications were undertaken to suit the process of data collection within the context of Saudi hospitals. The questionnaire was designed such that it acted as a consent agreement from the participants at the same time. By agreeing to respond to the questions in the questionnaires, participants would demonstrate authority and consent of participation in the research. Given the fact that the survey was concerned with a collection of personal views from participants, anonymity was adopted when answering the questions. The details of the questionnaires required the respondents to indicate their level of education, area of specialty and duration of experience. The participants were then asked tick the appropriate interventions and views that deemed to be relevant in the treatment of autism.

RESULTS

This section involved the use of statistical analysis to make inference about the population of interest. SPSS software was used in the data analysis where a sample of 105 respondents was used. To make inference about the study, statistical tests such as descriptive statistics which indicated the summary of the data sets, correlation (between lack of eye contact and autism causing communication disorder) was used to determine the degree of relationship between the two variables and chi-square test was used to test the relationship between gender and autism being a long-life condition.

Descriptive statistics

According to [16], descriptive statistics is a measure that determines the summary of a dataset into measures of center and central tendency. In this study, the best measures of center that were applied were the mean and median; while, the measure of variation included the standard deviation.

Table 1: A summary of the results for demographic information of the respondents

	N	Mean	Median	Std. Deviation
Gender	105	1.4	1	0.492
Profession	105	1.98	2	0.92
Duration of Clinical Experience	105	1.9	2	0.759

Table 2: A summary of the behavior or characteristics of the autism diagnosis

	N	Mean	Median	Standard Deviation
Language Delays	105	1.96	2	0.876

Need for sameness, resistance to change in routine	105	1.86	2	0.882
Lack of eye contact	105	2.05	2	0.892
Peculiar speech characteristics	105	2.02	2	0.866
Lack of social responsiveness	105	2.04	2	0.876
Rigid or stereotyped play activities	105	2.13	2	0.809
Onset of symptoms before 36 months	105	1.87	2	0.889
Unusual mannerisms such as finger flicking	105	2.1	2	0.861
Preoccupation with objects	105	2.25	2	0.718

Table 3: A summary of the interventions for those who were diagnosed with autism

	N	Mean	Median	Std. Deviation
antipsychotics	105	1.46	1	0.501
antidepressant	105	1.28	1	0.449
Mood stabilizers	105	1.45	1	0.5
psychostimulants	105	1.44	1	0.499
hypnotic	105	1.43	1	0.497
Speech Therapy	105	1.42	1	0.496
Special Education	105	1.44	1	0.499
Referral to Psychiatrist	105	1.39	1	0.49
Referral to Psychologist	105	1.4	1	0.492

Table 4: The correlation between the lack of eye contact and autism causing communication disorder

		Lack of eye contact	Autism is a communication disorder
Lack of eye contact	Pearson Correlation	1	-.132
	Sig. (2-tailed)		.179
	N	105	105
Autism is a communication disorder	Pearson Correlation	-.132	1
	Sig. (2-tailed)	.179	
	N	105	105

Table 5: Chi-square test result to determine the relationship between gender and autism being a long-life condition

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.427[a]	2	.808
Likelihood Ratio	.426	2	.808
Linear-by-Linear Association	.321	1	.571
N of Valid Cases	105		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.60.			

DISCUSSION

Since the variables are qualitative in nature, median is the best measure of center to be used in this case. According to Table 1, it was observed that males [1] were the majority, the analysis also shows that majority of the

respondents indicated that they were residents [2]; while, the study showed that many of the respondents implied that their duration of clinical experience was between 1-5 years [2].

The results of Table 2 were used to indicate the behavior of the autism diagnosis. Language disorders, the need for sameness and resistance to change, as well as lack of eye contact are among the factors helpful for diagnosing that a person is affected by autism; but, are not enough. According to the results, a majority of the respondents indicated that when a person is diagnosed by autism, a peculiar speech characteristics, lack of social responsiveness, rigid or stereotyped play activities, and unusual mannerisms such as finger flicking are observed. Table 3 showed that for those who were diagnosed with autism, majority of the respondents implied that antipsychotics were the best medication to be used, it was also observed that antidepressants were very helpful. It was also advised that mood stabilization was so helpful in this regard. Referral to education, psychiatrist and psychologist were termed to be more helpful in case a person was diagnosed with autism since it would prolong the duration in which one would live. The results showed that majority of the respondents indicated that hypnotic was a key medication that was helpful to a person who was diagnosed with autism. It was also advisable that speech therapy was important to a person diagnosed since from the previous findings, it was observed that autism caused communication disorder.

According to [17], correlation is a statistical measure that determines the strength of relationship. From the results obtained in this study, the correlation between the lack of eye contact and autism as a communication disorder was -0.132, which was a weak negative correlation between the two variables. This implied that an increase in one variable will lead to a decrease in the other variable.

Chi-square is a statistical test that is used to test hypothesis and is used to determine whether there exists any significance difference between the expected variables and the observed variables [18].

Using a significance level of 0.05, the obtained results from the analysis showed that the p-value obtained from the chi-square was 0.808>0.05, this showed that there was not an evidence to claim that there was a significance difference between gender and autism.

P-value can be described as the probability that indicates the likeliness of obtaining a required result from a test hypothesis which determines whether to reject a null hypothesis or fail to reject the null hypothesis [19]. Thus, from the obtained results the p value indicated that we failed to reject the null hypothesis which was an implication of insufficient evidence from the chi square test.

From the previous findings researchers, it was observed that autism was more common among children leading to communication and mental disorder. It was advisable to visit psychologists and have a speech therapy which would prevent from such risk.

CONCLUSION

From the results, it was observed that the best way to prevent a person from getting into a risk of autism was to visit a doctor at an early stage. This was observed from the responses obtained from the research where majority of the respondents implied that visiting a psychologist and psychiatrist would prevent it at an early stage. The results showed that for a person diagnosed with autism, medications such as antipsychotics and antidepressant reduced the various effects caused by autism such as speech and communication disorder

The main aim of the study was to assess the awareness levels of Saudi pediatricians with regards to knowledge and attitudes towards autism among children. It can therefore be concluded that the best way to curb autism in Saudi is to frequently visit a doctor to have a medical checkup especially at early ages. And if happens, it is advisable to have the prescribed medication that would cause health effects.

REFERENCES

1. Chatkewitz M, Losonczy-Marshall M. Awareness of autism and perceptions of the disorder. Psychology and Social Behavior Research. 2014;2(2):46-52.
2. Chawarska K, Klin A, Paul R, Macari S, Volkmar F. A prospective study of toddlers with ASD: short-term diagnostic and cognitive outcomes. Journal of Child Psychology and Psychiatry. 2009 Oct;50(10):1235-45.
3. Baio J, Wiggins L, Christensen DL, Maenner MJ, Daniels J, Warren Z, Kurzius-Spencer M, Zahorodny W, Rosenberg CR, White T, Durkin MS. Prevalence of autism spectrum disorder among children aged 8 years—autism and developmental disabilities monitoring network, 11 sites, United States, 2014. MMWR Surveillance Summaries. 2018 Apr 27;67(6):1.

4. Griffith GM, Totsika V, Nash S, Hastings RP. 'I just don't fit anywhere': support experiences and future support needs of individuals with Asperger syndrome in middle adulthood. Autism. 2012 Sep;16(5):532-46.
5. Sharif SI, Bughaigis LM, Salah M, Kariem N, Mohamed A. Childhood autism: knowledge and perception among university students in United Arab Emirates. International Journal of Basic & Clinical Pharmacology. 2016 Jul;5(4):1499.
6. Warren Z, McPheeters ML, Sathe N, Foss-Feig JH, Glasser A, Veenstra-VanderWeele J. A systematic review of early intensive intervention for autism spectrum disorders. Pediatrics. 2011 May 1;127(5):e1303-11.
7. Alharbi AM. Knowledge and Attitude of Families and Health Care Providers towards Autism. of. 2018; 4:2.
8. Helmy FF. Knowledge and attitude concerning autism spectrum disorder (ASD) among Taif medical college students Kingdom of Saudi Arabia. Int J Contemp Pediatric. 2017 May; 4:679-84.
9. Liu Y, Li J, Zheng Q, Zaroff CM, Hall BJ, Li X, Hao Y. Knowledge, attitudes, and perceptions of autism spectrum disorder in a stratified sampling of preschool teachers in China. BMC psychiatry. 2016 Dec;16(1):142.
10. Cage E, Di Monaco J, Newell V. Understanding, attitudes and dehumanisation towards autistic people. Autism. 2018;0(0):1362361318811290. pmid:30463431
11. Al-Salehi SM, Al-Hifthy EH, Ghaziuddin M. Autism in Saudi Arabia: presentation, clinical correlates and comorbidity. Transcultural Psychiatry. 2009 Jun;46(2):340-7.
12. Shattuck PT, Durkin M, Maenner M, Newschaffer C, Mandell DS, Wiggins L, Lee LC, Rice C, Giarelli E, Kirby R, Baio J. Timing of identification among children with an autism spectrum disorder: findings from a population-based surveillance study. Journal of the American Academy of Child & Adolescent Psychiatry. 2009 May 1;48(5):474-83.
13. Salhia HO, Al-Nasser LA, Taher LS, Al-Khathaami AM, El-Metwally AA. Systemic review of the epidemiology of autism in Arab Gulf countries. Neurosciences. 2014 Oct;19(4):291.
14. Imran N, Chaudry MR, Azeem MW, Bhatti MR, Choudhary ZI, Cheema MA. A survey of Autism knowledge and attitudes among the healthcare professionals in Lahore, Pakistan. BMC pediatrics. 2011 Dec;11(1):107.
15. Gillespie-Lynch K, Brooks PJ, Someki F, Obeid R, Shane-Simpson C, Kapp SK, Daou N, Smith DS. Changing college students' conceptions of autism: An online training to increase knowledge and decrease stigma. Journal of Autism and Developmental Disorders. 2015 Aug 1;45(8):2553-66.
16. Trochim, William M. K. (2006). "Descriptive statistics". Research Methods Knowledge Base. Retrieved 14 March 2011.
17. Rodgers, J. L.; Nicewander, W. A. (2008). "Thirteen ways to look at the correlation coefficient". The American Statistician. 42 (1): 59–66.
18. Pearson, Karl (2013). "Contributions to the mathematical theory of evolution [abstract]". Proceedings of the Royal Society. 54: 329–333.
19. Kohne, K. (2007). "The behavior of the p-value when the alternative hypothesis is true". Biometrics (Submitted manuscript). 53 (1): 11–22.