

Assessment of the Knowledge regarding autism in the patient attending in the primary healthcare in Makkah City at Saudi Arabia 2022

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Abstract

Background

Autism Spectrum Disorder (ASD) is a pervasive developmental disorder characterized by two key features: a combination of impairments in social interaction and social communication, and restricted, repetitive, and stereotyped patterns of behavior, interests, and activities. Primary healthcare (PHC) are frequently a first point of contact for patients with ASD symptoms and play a crucial role in early diagnosis. Mention that early intervention is required to ensure that patients with ASD receive the proper education. ASD is a lifelong condition that affects patients. There are gaps in our understanding of how people with autism interact with healthcare professionals. Relevant studies have identified issues such as complexity that goes beyond the scope of the typical role, a lack of knowledge and resources, a lack of training or prior experience, communication and collaboration, the need for information and training, the need for care coordination and systemic changes, but no studies have looked at the knowledge levels of PHC patients in Saudi Arabia. **Aim of the study:** To Assessment of the Knowledge regarding autism in the patient attending in the primary healthcare in Makkah City at Saudi Arabia 2022. **Method:** A cross-sectional study was conducted, in October -November 2022, among 200 patients attending in the primary healthcare in Makkah City, a written questionnaire was developed based on a literature review. The questionnaire tool consists of questions that test respondents' understanding of the causes of autism spectrum disease, the characteristics of autistic patients, the needs and abilities of autistic people, and the needs and abilities of autistic people themselves. **Result:** In terms of marital status, the majority of participants were married (59.0%), in terms of education, the majority of participants had a secondary education (31.0%), in terms of occupation, the majority of participants worked for the government (35.0%), and in terms of primary health care, the majority of participants went to private practices (48.0%). The majority of the participants were in the age group of 25-35 years old, and the majority of the participants were females (51% versus 49%).

Conclusion: There is a lack of understanding about autism spectrum disease in Saudi Arabia. It is important to utilize social media platforms and healthcare facilities to run educational campaigns for patients and their parents. The goal of these efforts should be to help patients and their parents better understand the factors that contribute to autism.

Keywords: Assessment, Knowledge, autism, patient, attending, primary health care ,Makkah

Introduction

Autism spectrum disorders, sometimes known as ASDs, are a kind of neurodevelopmental condition that may continue throughout a person's whole life [1]. This disability causes functional and anatomical changes in the brain, which in turn reduces sociability and communication with other people. It also causes a repeated pattern of sensory and motor behavior in the affected individual. People who have autism spectrum disorder (ASD) often do not differ from others in any outward characteristics; nonetheless, they do need a special strategy to learn how to interact and communicate appropriately. [2]

Autism spectrum disorders, sometimes known as ASDs, are a kind of neurodevelopmental condition that may continue throughout a person's whole life [3]. This disability causes functional and anatomical changes in the brain, which in turn reduces sociability and communication with other people. It also causes a repeated pattern of sensory and motor behavior in the affected individual. People who have autism spectrum disorder (ASD) often do not differ from others in any outward characteristics; nonetheless, they do need a special strategy to learn how to interact and communicate appropriately. [4]

Autism spectrum disorders (ASDs) are being applied to a patient population that is more tolerant than it has ever been [5]. Two key characteristics of the pervasive developmental illness known as autism spectrum disorder (ASD) are limited, repetitive, and stereotyped patterns of behavior, interests, and activities. ASD is also defined by a mix of deficits in social interaction and social communication. ASD is a pervasive developmental disorder. It is not understood what causes autism, but experts agree that it is a neurological condition that has clear ties to a person's genes. [6]

While some ASD patients may have a moderate disease that only needs a little caregiver assistance, others may have a severe form that needs a lot of assistance [7]. Despite the fact that certain characteristics are shared by people with ASD or children who have them, autism may manifest differently in each individual. The incidence (number of new cases) has grown during the last 20 years. Boys are 4.2 times more likely than girls to have this disease, which affects one out of every 44 children between the ages of eight and sixteen [8,9]. One reason

for this growth is an increase in the public's awareness of the autism disorder; because of this knowledge, more parents are getting their kids screened for problems, which leads to a medical diagnosis being confirmed [10].

ASDs, a class of developmental difficulties that are commonly recognized in patients, are linked to a high frequency of co-occurring physical and mental health issues [11]. The incidence of ASD among patients has been rising over time, with the exception of a tiny percentage of patients who lose their diagnosis[12]. This suggests that the estimated 1% [13] prevalence in the adult population will similarly rise.

ASD knowledge gaps, diagnostic skills deficiencies, and a lack of self-perceived competency in treating patients with autism were all reported in previous surveys among different groups of healthcare providers[14]. Parents of autistic children also reported having little faith in and discontent with their children's physicians [15].

Even in high-risk groups, the patient-provider connection has been emphasized as essential to enhancing patient agency and confidence in self-managing health. Although there have been some positive experiences reported [16], Patients with autism who get healthcare services and their families commonly discuss issues with the patient-provider interaction in the healthcare system; these difficulties include communication barriers and perceived gaps in healthcare providers' knowledge and expertise regarding autism, and a lack of recognition of the parental and family role. [16,17]

Literature review

Al-Farsi et al.(2016) found in studs in conducted in Oman, identified a low level of awareness of, and thus restricted ability to identify, the signs and symptoms commonly observed in children with ASD [18].

According to the Centers for Disease Control and Prevention, one in 68 children in the United States of America and one in 100 adults worldwide have an ASD diagnosis. Although there is no known cause, treatment, or prevention for ASD, early intervention has been shown to positively impact a child's development who has been diagnosed. [19]

Recent studies have shown that young kids with ASD considerably benefit from earlier intervention in terms of their developmental outcomes. assert that early intervention has a greater effect than intervention that is initiated after age five. [20]

Unigwe, et al.(2017) reported that Furthermore, both of these studies surveyed PHC physicians including both GPs and FM doctors, and deficiencies (in awareness of early signs of ASD) were identified (the years of experience accumulated by the participants were either

found to have little impact or were not taken into account). On the contrary, a study in the UK, which included questions on early symptoms, found that GPs had a high basic knowledge of ASD's key characteristics [21]

According to a study by Alnemary, et al. (2017), comparatively to other participants, individuals with a Master's Degree and those who work in the healthcare sector were more likely to be educated about autism spectrum disorder. Participants were less likely to be educated about autism spectrum disorder than other participants if they are male and work in non-medical industries. These results conflict with those of an earlier study [22]. Which discovered that several educators, in addition to the general public, were ignorant about autism. The majority of participants in our study—80.4%—said they were already aware of ASD. Most of them had a moderate to high grasp of the traits and skills of autistic youngsters, but only a limited comprehension of the disease's origins. When compared to a previous study carried out in Saudi Arabia, which discovered that the level of comprehension was just 41% [23], these results demonstrate a high level of knowledge.

Furthermore, evidence suggests that providing healthcare professionals with five weekly training sessions, each lasting 3 hours, can increase the mean total knowledge scores relevant to ASD management [24]

Similar findings were made in two additional investigations, one in Africa and one in Australia; participants in each studies had a broad awareness of ASD but no knowledge of its etiology [25]. Most Australians were aware of ASD, but many thought the MMR vaccination was to blame. However, according to the WHO, there is no proof that any vaccination causes autism. 26]

A study in Pakistan has indicated an urgent need for GPs to be trained in ASD, and suggested that this be carried out through the development of ASD educational materials and their delivery/inclusion in medical school curriculums, alongside the provision of relevant medical education to practicing physicians [27]

As previously stated, a number of factors, some being genetic and others being environmental, contribute to the development of ASD, but participants in another study revealed a misunderstanding about the treatment, they believed that children with ASD are unable to attend public schools [18].

In contrast, it had been shown that instructors had superior knowledge [28] Most (71.2%) of primary school instructors, according to their surveys, showed some comprehension of autism and a greater understanding that the illness is connected to neurological and mental issues, with attendance to behavioral courses having a substantial impact on their knowledge

of ASD. Intriguingly, a research [29] found that social media significantly contributed to primary school teachers' greater understanding of autism. The study suggested that, despite the fact that social media plays an important role, instructors need rigorous training on the many aspects of autism so they can make an early diagnosis of the illness. Findings showed that about 55% of the teachers learned about autism from social media.

Rationale

According to Saudi Arabia's Ministry of Health, the worldwide incidence of ASD among children has reached 20 in every 10,000. However, too many children miss out on early diagnosis of their ASD, due to lack of Knowledge regarding autism in the patient patients, parent and healthcare professionals of the disorder's early signs and symptoms. It has been suggested that healthcare professionals diverge markedly in their attitudes toward the diagnosis, treatment, prognosis of ASD, misconceptions about ASD due to limited and in accurate understanding, and have been noted in professionals across disciplines and regarding and cognitive aspects of autism. Notably, general practitioners (GPs) appear to have suboptimal Knowledge regarding autism in the patients of the etiology, signs, symptoms, and other aspects of ASD .

Aim of the Study

To Assess the Knowledge regarding autism in the patient attending in the primary healthcare in Makkah City at Saudi Arabia 2022

Objectives:

To Assess the Knowledge regarding autism in the patient attending in the primary healthcare in Makkah City at Saudi Arabia 2022.

SUBJECTS AND METHODS

Study design:

A cross-sectional research was conducted in Makkah City, Saudi Arabia, in 2022 among patients receiving basic healthcare.

Study setting

The research was conducted on patients who attended primary health care clinics located in Al-Zahir in Makkah Al-mukarramh in the Kingdom of Saudi Arabia in 2022. Every Muslim on the planet reveres Makkah as their religion's holiest city. It is the most important location for travelers to visit in order to complete the rites of Umrah and Hajj. There is a continual effort being made to develop the infrastructure of Makkah for the benefit of both the residents of Makkah and the pilgrims that visit the city. Makkah is a modern metropolis. In addition to this, the Directorate of Health Affairs of Makkah Al-Mukarramah oversees the city's 85

primary health care facilities (PHCs). These facilities are broken up into seven different health care sectors, and each of those sectors has anywhere between ten and fourteen primary health care centers. There are three health care sectors located inside the city of Makkah Al-Mukarramah (urban), with a total of 37 primary health care facilities, and there are four health care sectors located outside of Makkah (rural), with a total of 48 primary health care centers. Al-Ka'akya, with 11 primary healthcare facilities, Al-Adl, with 12 primary healthcare centers, and Al-Zahir, with 14 primary healthcare centers, are the three healthcare sectors that can be found within Makkah Al-Mukarramah.

study area:

The investigation was carried out in 2022 at Al-Zahir PHC in Makkah, Saudi Arabia, under the direction of the Directorate of Health Affairs. Their surroundings and the vast number of patients that visit PHC set them apart.

Study population:

Patients who attended primary health care appointments at Al-Zahir primary health care clinics in Makkah city, Saudi Arabia, in 2022 and consented to fill out the questionnaire made up the research population.

Eligibility Criteria**a. Inclusion criteria:**

Saudi patients who were receiving primary health care at one of the Al-Zahir PHC clinics for the length of the research.

Exclusion criteria

Those in the healthcare industry who are unable to participate for the whole length of the research.

Study Sample :

EpiInfo provided a calculation for the sample size, which may be found at <http://www.raosoft.com/samplesize.html>. (The margin of error is 5%, the confidence level is 95%, and the response distribution of the prevalence counted for 50% for the absence of local research), therefore the sample size is (200) of patients attending at Al-Zahir PHC, with an additional 10 patients added to minimize the margin of error. Following the addition of an oversampling factor of 5%, the minimum computed sample for the overall population has been determined to be 200 patients. The participants in the research were selected using a method of simple random selection that was created by a computer.

Sampling technique:

The participants were picked at random via the use of a systematic sampling approach. This was accomplished by dividing the entire population by the sample size of 200, which was also set at random.

Data collection tools and instruments :

A questionnaire that has been pilot-tested was used in the gathering of the data. Everyone who agreed to take part in the research was given a packet including the questionnaires. The screening questionnaire and the rest of the package have both been written in English, and the questionnaire has included questions regarding socio-demographic characteristics. A survey of the relevant literature served as the basis for the creation of the questionnaire instrument. The diagnostic tool is a questionnaire with questions that test the user's understanding about autism spectrum disorder in terms of the condition's etiology, autistic patient traits, autistic patient abilities and needs, and autistic patient skills and needs. The overall score on each subscale was added together, and that number was used to determine the respondent's degree of knowledge on the topic. The total score on each subscale was added together, and that number was used to characterize the respondent's degree of knowledge on the topic being tested. total score that was equal to or higher than the mean score of the participants in the study) Disability Assessment questionnaire MIDAS

Data analysis :

The statistical software program known as SPSS 24.0 was used for both the data input and the statistical analysis. Control of quality is carried out at each level of the coding and data entering processes. For qualitative factors, the data were presented using descriptive statistics in the form of frequencies and percentages; for quantitative variables, the data were presented using means, standard deviations, and inert-quartile ranges. At the level of data analysis and association, we will be making use of the Chi-square test and the unpaired t test.

Ethical concern :

It has been shown that the necessary authorities and institutions have given their consent for the acquisition of research data. These data have been kept in strict confidence and are being used only for study.

3.11 Budget : Self-funded**Results**

Table 1 . Distribution of Characteristics of the study participants and Knowledge of patients attending in the primary healthcare

| | N | % |
|--|---|---|
|--|---|---|

| Age | | |
|----------------------------|-----|----|
| <25 | 45 | 15 |
| 25-35 | 93 | 31 |
| 35-45 | 84 | 28 |
| >45 | 78 | 26 |
| Gender | | |
| Male | 147 | 49 |
| Female | 153 | 51 |
| Marital status | | |
| Unmarried | 57 | 19 |
| Married | 177 | 59 |
| Divorced | 48 | 16 |
| Widowed | 18 | 6 |
| Education | | |
| Illiterate | 78 | 26 |
| Less than secondary | 87 | 29 |
| Secondary | 93 | 31 |
| Collectors or higher | 42 | 14 |
| Occupation | | |
| Government employee | 105 | 35 |
| Private sector employee | 33 | 11 |
| Soldier | 69 | 23 |
| Free business | 45 | 15 |
| Retired | 48 | 16 |
| Primary health care | | |
| Governmental | 105 | 35 |
| Private | 144 | 48 |
| Military | 51 | 17 |

Table 1 reveals that the majority of participants (31%) were between the ages of 25 and 35, followed by those who were between the ages of 35 and 45 (28%); the proportion of female participants was higher than that of male participants (51.0% versus 49.0%); when it came to marital status, the majority of participants were married (59.0%), while the proportion of single participants was 19%; when it came to education, the majority of participants had a secondary education (31%) while the proportion of those with less than secondary practitioner were(29.0%), regarding occupation the majority of participant are government employee were(35.0%) while Soldier practitioner were(23.0%), regarding the Primary health care majority of participant Private were (48.0%) while governmental were (35.0%).

Table 2 . Distribution of the Knowledge about autism spectrum disorder .

| | N | % |
|---|-----|-------|
| I am familiar with autism spectrum condition from previous experience. | | |
| Yes | 75 | 25 |
| No | 225 | 75 |
| If yes, information Sources about Autism Spectrum Disorder: (more than one answer could be selected) | | |
| Social media channels | 21 | 28.00 |
| Books and scholarly works | 4 | 5.33 |
| Internet | 44 | 58.67 |
| relatives and friends | 6 | 8.00 |
| The degree to which the origins of autism condition are understood | | |
| How would you rate your understanding of the factors that lead to | | |
| Autism disorder | 84 | 28 |
| I have no knowledge. | 135 | 45 |
| I have a fair amount of knowledge | 48 | 16 |
| I am highly knowledgeable | 33 | 11 |
| understanding of the underlying causes of this condition | | |
| Do you know Knowledge about causes of autism | | |
| Yes | 111 | 37 |
| No | 189 | 63 |
| Do you know Knowledge about characteristics of patients | | |
| Yes | 102 | 34 |
| No | 198 | 66 |
| Do you know Knowledge about the abilities and needs of patients with autism | | |
| Yes | 126 | 42 |
| No | 174 | 58 |
| Do you know Knowledge about the abilities and needs of adolescents/young people with autism? | | |
| Yes | 123 | 41 |
| No | 177 | 59 |

Table 2 demonstrates that in response to the question of whether or not you had previous knowledge about autism spectrum disorder, the majority of participants (75%) answered no. If the answer was yes, the information The following are some sources about autism spectrum disorder: (there was more than one response that could be chosen) Internet users made up the largest proportion of participants (58.67%), followed by users of social media platforms (28.0%) .Regarding The degree of knowledge that leads to autism disorder show regarding How do you describe your level of knowledge of the causes of the majority of participants I don't know anything were(45.0%) followed by autism disorder were (28.0%), regarding the Do you know Knowledge about causes of autism most of participants answer No were(63.0%) while

answer Yes were(37.0%), concerning Are you aware Are you familiar with the features of patients? In response to the question "Do you know Knowledge about the skills and requirements of patients with autism?", the majority of participants answered "No" (66.0%), while just 3.0% of participants answered "Yes." The response of the vast majority of participants In response to the question "Do you know Knowledge about the skills and needs of adolescents/young adults with autism," the majority of participants' answers to the question "Do you know?" were "No," with 58.0% giving the correct answer, and 42.0% giving the correct answer "Yes."

Table 3 Distribution of the assessment of patients' knowledge toward Autism Spectrum Disorder .

| | Yes | | No | | Chi-square | |
|---|-----|----|-----|----|----------------|---------|
| | N | % | N | % | X ² | P-value |
| Autism disorder can be diagnosed through behavioral observation | 75 | 25 | 225 | 75 | 75.000 | <0.001* |
| Marked impairment in initiating or sustaining a conversation | 102 | 34 | 198 | 66 | 30.720 | <0.001* |
| Repetition of phrases after hearing them | 99 | 33 | 201 | 67 | 34.680 | <0.001* |
| Repetitive hand flapping or twisting whole body movements | 93 | 31 | 207 | 69 | 43.320 | <0.001* |
| Use of electronic devices e.g. (smart phones, Ipad, T.V.) can cause autism | 75 | 25 | 225 | 75 | 75.000 | <0.001* |
| Resistance to change in daily routine | 78 | 26 | 222 | 74 | 69.120 | <0.001* |
| Medication can alleviate the core symptoms of autism disorder | 111 | 37 | 189 | 63 | 20.280 | <0.001* |
| Inability to attach to certain objects or people | 78 | 26 | 222 | 74 | 69.120 | <0.001* |
| Sensitivity to pain and temperature below expected norm | 201 | 67 | 99 | 33 | 34.680 | <0.001* |
| Autism could be associated with Epilepsy | 111 | 37 | 189 | 63 | 20.280 | <0.001* |
| Autism disorder is diagnosed by medical methods | 57 | 19 | 243 | 81 | 115.320 | <0.001* |
| Poor parenting practices can cause autism disorder | 234 | 78 | 66 | 22 | 94.080 | <0.001* |
| Genetic factors play an important role as a cause of autism disorder | 204 | 68 | 96 | 32 | 38.880 | <0.001* |
| Autism is a developmental disorder | 132 | 44 | 168 | 56 | 4.320 | 0.038* |

Regarding the ability to detect autism disease by behavioral observation, Table 3 demonstrates a substantial difference between P=0.000 and X² (75.000) the majority of participants (75.0%) respond negatively, while (25.0%) respond positively, addressing

significant impairment in starting or maintaining a discussion (30.720) considering the Repetition of sentences after hearing them have a significant differences connection, the majority of participants say No were (66.0%), while Yes were (34.0%), with $P=0.000$ and X^2 (34.680) discussing Repetitive hand flapping or twisting entire body motions have a significant differences connection, the majority of participants say No were (67.0%), while Yes were (33.0%), with $P=0.001$ and X^2 (43.320) the majority of participants answer No were(69.0%),while Yes were(31.0%), regarding use of electronic devices, such as (smart phones, Ipad, T.V.) can cause autism have a significant differences relation were $P=0.001$ and X^2 (75.000), the majority of participants answer No were(75.90%),while Yes were(26.0%), regarding Resistance to change in daily routine have a significant differences relation were $P=0.000$ and X^2 (69.120) (69.120) the majority of participants (74.0%), whereas only (26.0%), responded positively to the statement "Sensitivity to pain and temperature below predicted norm show a significant differences association" ($P=0.001$ and X^2) (34.680) the majority of respondents (67.0%) chose "yes," while just 33.0% chose "no," when asked if there was any evidence that epilepsy and autism could be related (20.280) Regarding whether the Autism disease is diagnosed by medical procedures, the majority of participants answered No were (63.0%), while Yes were (37.0%), with a significant differences related being $P=0.001$ and X^2 (115.320) the majority of participants (81.0%), whereas only 19.0%, responded in favor of the statement that "Poor parenting methods might cause autistic disorder" ($P=0.001$ and X^2 respectively) (94.080) the majority of participants answer Yes were (78.0%), while No were (22.0%), regarding Genetic factors play an important role as a cause of autism disorder having a significant differences relation were $P=0.001$ and X^2 (38.880). the majority of participants answer Yes were (68.0%), while No were(32.0%), regarding Autism is a developmental disorder having a significant differences relation were $P=0.038$ and X^2 (38.880) (4.320) the majority of participants (56.0%) choose No, while 44.0% choose Yes.

Table 4 Distribution of the knowledge toward Autism Spectrum Disorder .

| | Knowledge | | Score | |
|-------------------|-----------|-------|-------|-------------|
| | N | % | Range | Mesn±SD |
| Weak | 147 | 49 | 4-16. | 9.244±3.577 |
| Average | 96 | 32 | | |
| High | 57 | 19 | | |
| Total | 300 | 100 | | |
| Chi-square | X^2 | 40.74 | | |

| | | |
|--|----------------|---------|
| | P-value | <0.001* |
|--|----------------|---------|

Table 4 shows that the knowledge toward Autism Spectrum Disorder have a significant differences relation of were P-value= 0.001 while $X^2(40.74)$ the participants the mean \pm SD was (9.244 ± 3.577) while the data range (4-16) while the most of participants weak were (49.0%.) while average were (32.0%).

Figure 1 Distribution of the knowledge toward Autism Spectrum Disorder

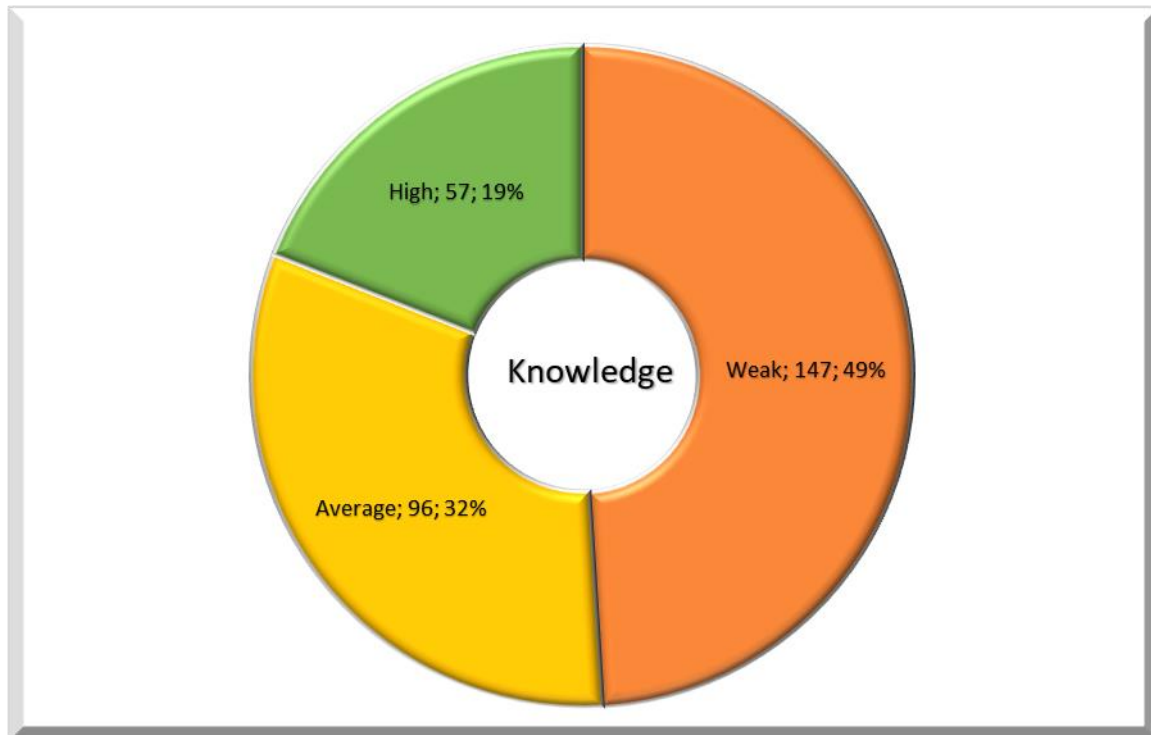


Table 5 Distribution of the relationship of the knowledge level toward Autism Spectrum Disorder and Socio-demographic characteristics .

| | | N | Knowledge | | F or T | ANOVA or T-test | |
|----------------|------------|-----|-----------|-------------|--------|-----------------|---------|
| | | | Mean | \pm SD | | Test value | P-value |
| Age | <25 | 45 | 5.756 | \pm 1.479 | F | 127.910 | <0.001* |
| | 25-35 | 93 | 7.763 | \pm 2.008 | | | |
| | 35-45 | 84 | 11.155 | \pm 2.731 | | | |
| | >45 | 78 | 12.141 | \pm 1.665 | | | |
| Gender | Male | 147 | 10.163 | \pm 2.609 | T | 3.352 | <0.001* |
| | Female | 153 | 8.961 | \pm 3.519 | | | |
| Marital status | Unmarried | 57 | 6.368 | \pm 1.819 | F | 46.607 | <0.001* |
| | Married | 178 | 9.966 | \pm 2.687 | | | |
| | Divorced | 47 | 10.191 | \pm 3.360 | | | |
| | Widowed | 18 | 13.833 | \pm 1.618 | | | |
| Education | Illiterate | 78 | 5.936 | \pm 1.638 | F | 217.967 | <0.001* |
| | Less than | 87 | 8.954 | \pm 1.210 | | | |

| | | | | | | |
|----------------------------|--------------------------------|-----|--------|---------|---|--------|
| | secondary | | | | | |
| | Secondary | 93 | 11.247 | ± 2.263 | | |
| | Collectors or higher | 42 | 13.738 | ± 1.754 | | |
| Occupation | Government employee | 105 | 10.410 | ± 3.192 | F | 6.433 |
| | Private sector employee | 33 | 9.061 | ± 2.397 | | |
| | Soldier | 69 | 9.203 | ± 2.097 | | |
| | Free business | 45 | 7.844 | ± 1.278 | | |
| | Retired | 48 | 10.104 | ± 4.904 | | |
| Primary health care | Governmental | 105 | 10.371 | ± 3.577 | F | 12.401 |
| | Private | 144 | 8.639 | ± 2.719 | | |
| | Military | 51 | 10.431 | ± 2.707 | | |

The results presented in Table 5 indicate that there is a statistically significant connection between knowledge and demographic data about the age rise in >45 years were (Mean± SD 12.141±1.665), follow by 35-45 age in Knowledge were (Mean± SD, 11.155±2.731) P-value=0.001, F= 127.910. Concerning the gender, there is a substantial association between gender and the amount of knowledge that has increased in males were (Mean± SD 10.163±2.609), follow male were (Mean± SD, 70.654±6.393) also P-value=0.001, T= 3.352. With regard to the marital status, there is a considerable association between knowledge and the marital state of those who are widowed were (Mean±SD 13.833±1.618), also P-value=0.001, F=46.607. Regarding the Educational level a significant relation between Knowledge and Educational level increase in collectors or higher were (Mean± SD 13.738±1.754), also P-value=0.001, F= 217.967. Regarding the Occupation is a significant relation between Knowledge and occupation increase in government employee were (Mean± SD 10.410 ±3.192), also P-value=0.001, F= 12.401.

Discussion

The purpose of this research, which was a cross-sectional investigation, was to evaluate the level of autism-related knowledge possessed by patients who were receiving primary healthcare in Makkah City in Saudi Arabia in the year 2022. The most important findings from our research are that the majority of participants (31.0%) were in the age group (25-35) years, followed by the age group (35-45) were (28.0%), that the majority of them were females rather than males (51.0% and 49.0%), that the majority of participants were married (59.0%) while the majority of participants who were unmarried were (19.0%), that the majority of participants had a secondary education, while the majority of participants with less than a (See table 1)

The majority of participants said that they did not (75.0%) have previous awareness of autism spectrum disorder when asked whether they knew of any reliable sources of information on the condition. The majority of participants utilized the internet to get their answers (more than one response might be chosen) (58.67). How would you define your degree of knowledge when it comes to the causes of autism disorder? this question pertains to the majority of participants and their level of knowledge when it comes to the causes of autism disease. The majority of individuals' responses on the question "Do you know Knowledge about causes of autism?" were variations of "I don't know anything" (45.0%). Regarding whether or not you are aware of the patients' characteristics, 63.0% of respondents said no. The response of the vast majority of participants Regarding whether or not you have knowledge about the capabilities and requirements of autistic patients, 66.0% of you said you did not. The response of the vast majority of participants The majority of participants' responses to the question "do you know Knowledge about the skills and needs of adolescents/young people with autism" were "No were" (59.0%), which indicates that they do not have this information. (See table 2,3)

In contrast to the results of a previous research [30], which revealed that the general community and certain health care workers and educators, were not familiar with autism, our data show that the majority of people are aware of autism. The overwhelming majority of participants in our research (80.4%) said that they were familiar with autism spectrum disorder (ASD). Most of them had a moderate to high knowledge of the features and talents of autistic youngsters, but only a rudimentary comprehension of the origins of the disorder. When compared to the results of a previous study that was carried out in Saudi Arabia, which revealed that the degree of comprehension was only 41% [31], these findings demonstrate a high level of knowledge and indicate that there is a high level of understanding. A research conducted in Australia and another one conducted in Africa both came to similar conclusions as ours [25]. Participants in both sets of studies had a broad grasp of ASD but a very limited understanding of the factors that contribute to the development of the condition. The vast majority of people in Australia were aware of autism spectrum disorder (ASD), but many thought it was brought on by the MMR vaccination. However, according to the World Health Organization (WHO), there is no evidence associating any vaccination to autism [32]. [32] Another study found a misunderstanding regarding the therapy, with participants assuming that children with ASD are unable to attend public school [26]. This was one of the misconceptions that the researchers discovered. As was said before, this condition is due to a

variety of different factors, some of which are hereditary in origin, while others are environmental in nature [22].

The participants in our survey had a range of expertise when it came to autism spectrum disorder (ASD). The score for knowledge was determined for questions pertaining to familiarity with the capabilities and requirements associated with autistic disorder. However, there was a lack of understanding about the factors that contributed to the development of this condition. The results of this study indicate that the participants' knowledge regarding autism spectrum disorder has significant differences in relation to the P-value of 0.001 and the X2 value of 40.74. The participants' mean \pm SD was (9.244 \pm 3.577), and the data range was between (4-16). The majority of participants had a low score (49.0%), while the average score was 32.0%. (See Table 4) Autism spectrum disorder (ASD) is brought on by a confluence of hereditary and environmental factors. It is essential to get an understanding of the ASD risk factors in order to lower the probability of having children who have the disorder [26].

There are several movies that may be used in the classroom as well as for entertainment. The majority of people get their information about disorders such as autism from movies and television programs [32]. One study, for instance, examined the effects of 23 different autism spectrum disorder (ASD). Hollywood movies have a positive impact on medical education and public awareness, according to research done on the general public, medical students, and psychiatric trainees [30].

In a separate piece of research, the authors evaluated autistic characters from 15 different films using an evaluation instrument similar to the CARS2 and compared the symptoms shown by these characters to the typical distribution of autistic symptoms [33]. Many people learn about autism via watching movies and episodes on television [31]. Similarly, there is a rising worry that these social media channels are also spreading health information that is erroneous or misleading [34].

As a consequence of this, it ought not to be relied upon as the only source of information about matters pertaining to health. In the course of our research, we discovered a considerable connection between one's level of knowledge and demographic information about changes in age in >45 years were (Mean \pm SD 12.141 \pm 1.665), P-value=0.001, F= 127.910. Regarding the gender is a significant relation between Knowledge and gender increase in male were (Mean \pm SD 10.163 \pm 2.609), also P-value=0.001, T= 3.352. Regarding the Marital status is a significant relation between knowledge and Marital status increase in widowed were (Mean \pm SD 13.833 \pm 1.618), also P-value=0.001, F=46.607. Regarding the Educational level a

significant relation between Knowledge and Educational level increase in collectors or higher were (Mean± SD 13.738±1.754), also P-value=0.001, F= 217.967 .Regarding the Occupation is a significant relation between Knowledge and occupation increase in government employee were (Mean± SD 10.410 ,3.192±also P-value=0.001, F= 12.401.(See table 5). Another research found that men and professionals working in fields other than the medical field had the least comprehension of autism spectrum disorder (ASD), which confirmed the results of other studies [25]. One research found that male participants felt that autism spectrum disorder (ASD) is not an illness that lasts a lifetime and that it may be healed. These thoughts make parents of autistic children feel as if they have failed their kid in some way, and as a result, they begin to reject their child [30]. A different research found that women had a much more positive attitude regarding ASD than men did, by a difference of 6% [34]. Another research indicated that women had a more favorable attitude toward autism spectrum disease (ASD), as well as schizophrenia and bipolar disorder [29]. In addition to this, having previous experience with persons who have ASD was another significant factor that positively affected one's perspective [35]. If the illness is identified at an early stage, better results may be achieved [30]. The linguistic, cognitive, and adaptive behavior of a kid may undergo significant changes as a result of this condition [23]. Early intervention will also enhance the kid's social behavior and everyday abilities before the youngster is four [43]. However, it's important to remember that early detection doesn't always include a straightforward procedure that verifies the diagnosis [24]. This is due to the fact that it is greatly reliant on the HCP's degree of knowledge and the application of ASD standards [23]. It may take up to two years between the first observation of a child's behavior and the confirmation of a diagnosis, according to prior studies [34]. Families of children with autism spectrum disorder will experience higher levels of stress as a result of the delay in diagnosis and treatment [35]. The whole parent's family is significantly impacted when a child is diagnosed with autism spectrum disorder (ASD) [33].

Conclusion

According to this survey, the Saudi community has a Weak to average level of knowledge regarding autism spectrum disorder . The public's understanding of the disorder's causes is limited. There is a need for an educational campaign that uses a variety of social media platforms. Healthcare practitioners are also requested to emphasize the importance of improving parents' capacities and knowledge of autism spectrum disorder causes and symptoms..

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