



Scientific Research
University of
Baghdad AL-Kindy
College of Medicine

Knowledge , attitude and practices of medical students regarding Autism spectrum disorder (ASD)

A project Submitted to AL-Kindy College of Medicine In partial Fulfillment of the requirement
of a project module/ 3rd stage

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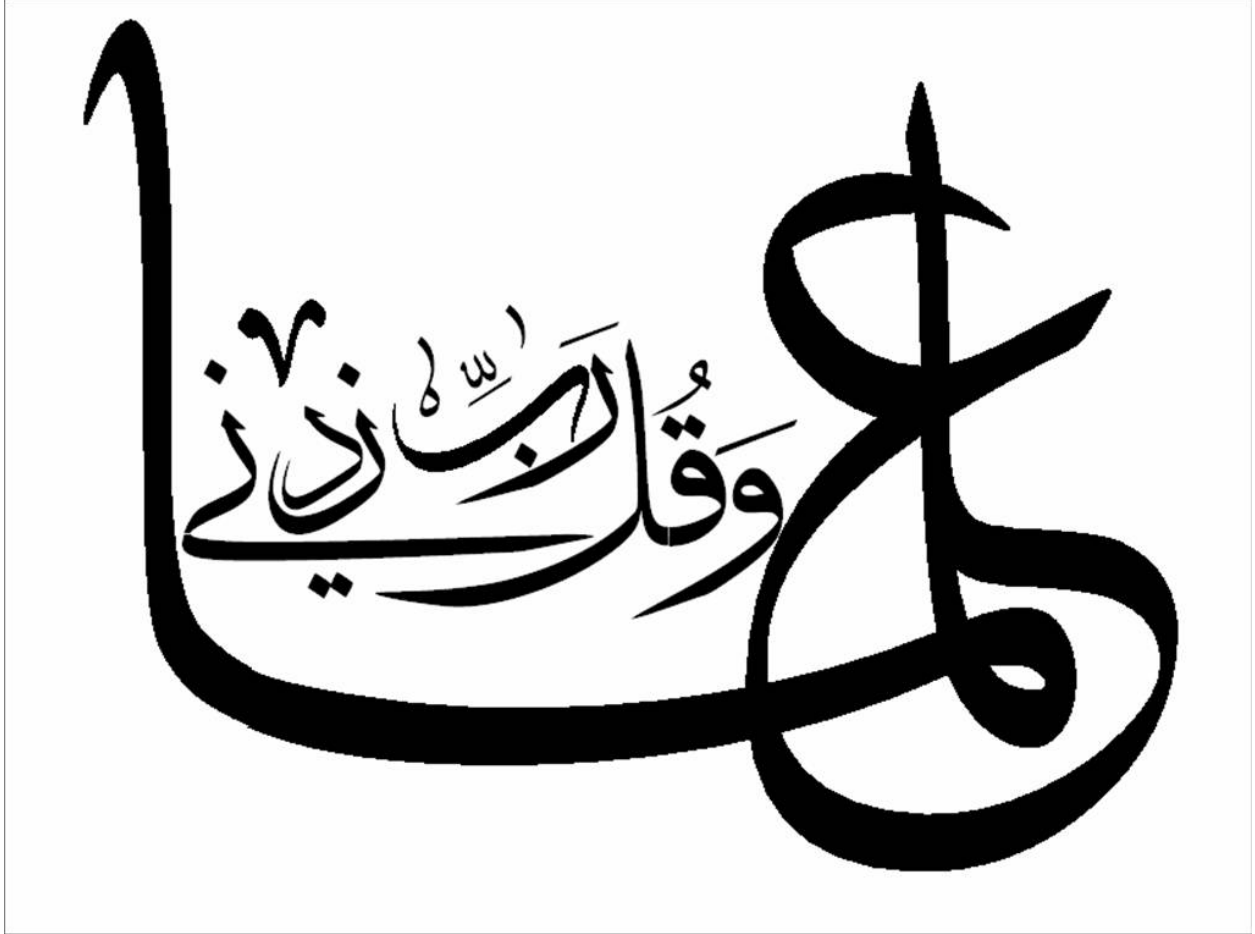
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بسم الله الرحمن الرحيم



صدق الله العظيم

ABSTRACT:

Background: To assess the knowledge about ASD among medical students in AL-kindly medical college.

Methods: The cross sectional descriptive study was conducted among AL-kindly medical college students from November to December 2022. Data collection was done by knowledge about autism among one to sixth year medical student. Data was analyzed using SPSS 26 .

Results: AL-kindly medical students who completed the study 85(56.7%), and 36 (24%), 95(63.3%) children , 30(20%) adults , 108(72%) ” yes” about if they smart or not and “no” 12 (8%), 106 (70.6%) “yes” about going to school and 25 (16.7%) “no” , 110(73.3%) “yes” about effect of using the phone and 25 (16.7%) “no” .

Conclusion: This work tried to discuss in details the published on ASD in Iraq especially that focuses on its frequency, clinical aspects, etiologies, services presented, and outcomes.

Keywords: Autism ,Idiot syndrome, stereotyped behaviors, refrigerator mother .

INTRODUCTION:

Autism spectrum disorder (ASD) is a long-term disorder in brain development that is characterized by behavioral and social communication challenges[1].Autism was described for the first time by leo Kanner in 1943 as ‘autistic disturbance of affective contact’. This syndrome has variously been described as autistic disorder, pervasive developmental disorder, childhood autism, childhood psychosis and pseudo- defective psychosis [2].American Psychiatric Association defined Autism or autistic spectrum disorder (ASD) as a pervasive developmental disorder (PDD). Pervasive developmental disorder (PDD) refers to a group of conditions that include autistic disorder, Rett’s disorder, Asperger’s disorder (it is mild form of autism in many medical research journals .[3,4]. 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[4]. Today, the global epidemiological data indicate that 1–2% of the world which corresponds to about 50 million individuals with ‘population is affected by ASD ASD around the world[5].

Autism spectrum disorders (ASD) are disseminated, and lifelong neurodevelopmental disorder that has uncertain etiology[6].But the cause of infantile autism seems to be pre- dominantly biological. Earlier reports of cold, ‘refrigerator’ mothers causing autism in their children have not been substantiated and have unnecessarily lead to undue distress to parents of children with autism. The evidence for biological causation includes a higher than average history of perinatal CNS insult, EEG abnormalities, epilepsy, ventricular dilatation on brain imaging, increased serotonin (5-HT) levels in brain and/or neurophysiological abnormalities in some patients[2].

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 [7].This syndrome is more common (3-4 times) in males and has a prevalence rate of 0.4-0.5 per 1000 population. Although earlier it was thought to be commoner in upper socioeconomic classes, recent studies have failed to confirm this finding[2].

A critical issue concerning ASD is the problem of late diagnosis. In many parts of the world, children with ASD are only being detected after they are three to four years old[8].Late diagnosis causes delay in treatment, which subsequently leads to

increased long-term complications such as special education needs, continual living support, productivity loss, and the medical costs in adulthood. Early diagnosis and intervention are important as there is established evidence that intensive evidence-based early intervention is effective in bringing some positive changes to the communicative and behavioral deficits experienced by young children with ASD , and thus reducing the long-term complications[9]. Many cases are missed and not diagnosed until school age[10].

The characteristic features are:

1. Autism (marked impairment in reciprocal social and interpersonal interaction):

- i. Absent social smile.
- ii. Lack of eye-to-eye-contact.
- iii. Lack of awareness of others' existence or feelings; treats people as furniture .
- iv. Lack of attachment to parents and absence of separation anxiety.
- v. No or abnormal social play; prefers solitary games.
- vi. Marked impairment in making friends.
- vii. Lack of imitative behaviour.
- viii. Absence of fear in presence of danger.

2. Marked impairment in language and non-verbal communication

- i. Lack of verbal or facial response to sounds or voices; might be thought as deaf initially.
- ii. In infancy, absence of communicative sounds like babbling.
- iii. Absent or delayed speech (about half of autistic children never develop useful speech).
- iv. Abnormal speech patterns and content. Presence of echolalia, perseveration, poor articulation and pronominal reversal (I-You) is common.
- v. Rote memory is usually good.
- vi. Abstract thinking is impaired.

3. Abnormal behavioral characteristics

- i. Mannerisms.
- ii. Stereotyped behaviors such as head-banging, body-spinning, hand-flicking, lining-up objects, rocking, clapping, twirling, etc.
- iii. Ritualistic and compulsive behavior.
- iv. Resistance to even the slightest change in the environment.

- v. Attachment may develop to inanimate objects.
- vi. Hyperkinesis is commonly associated.

4. Mental retardation

Only about 25% of all children with autism have an IQ of more than 70. A large majority (more than 50%) of these children have moderate to profound mental retardation. There appears to be a The characteristic features are: correlation between severity of mental retardation , absence of speech and epilepsy in autism.

5. Other features

- i. many children with autism particularly enjoy music.
 - ii. In spite of the pervasive impairment of functions ,certain islets of precocity or splinter functions may remain (called as Idiot savant syndrome). Example of such splinter functions are prodigious rote memory or calculating ability ,and musical abilities.
 - iii. Epilepsy is common in children with an IQ of less than 50.
- The course of infantile autism is usually chronic and only 1-2% become near normal in marital, social and occupational functioning. A large majority (about 70%) lead dependent lives [2].

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 [11].Treatment
The treatment consists of three modes of intervention which are often used together.

1. Behavior Therapy

- i. Development of a regular routine with as few changes as possible.
- ii. Structured class room training, aiming at learning new material and maintenance of acquired learning.
- iii. Positive reinforcements to teach self-care skills.
- iv. Speech therapy and/or sign language teaching.
- v. Behavioral techniques to encourage interpersonal interactions.

2. Psychotherapy

Parental counselling and supportive psychotherapy can be very useful in allaying parental anxiety and guilt, and helping their active involvement in therapy.

However, overstimulation of child should be avoided during treatment.

3. Pharmacotherapy

Drug treatment can be used for treatment of autism as well as for treatment of co-morbid epilepsy.

i. Haloperidol decreases dopamine levels in brain. It is believed to decrease hyperactivity and behavioral symptoms. Risperidone, an atypical antipsychotic, is helpful in some patients and is licensed in some countries for treatment of autism in children aged 5 and above. Both haloperidol and risperidone can cause extra-pyramidal side-effects (EPSE), though usually more with haloperidol.

The starting dose for Risperidone is usually 0.25-0.5 mg (based on body weight), with a dose range of 0.02-0.06 mg/kg/day.

ii. Other drugs such as SSRIs, chlorpromazine, amphetamines, methysergide, imipramine, multi-vitamins and triiodothyronine have been tried with limited success and should be used only by the experts in the field.

iii. Anticonvulsant medication is used for the treatment of generalized or other seizures, if present[2].

The documented deficit of knowledge about ASD in between health care workers may be due to a flaw in the academic education system with the inadequacy of practical training and insufficient theoretical lectures provided in terms of pediatrics, psychiatry, and psychology [14,15]. For this reason, the level of knowledge on ASD among final year undergraduate medical, nursing, and psychology students should be well assessed. They will be future members of the multidisciplinary team responsible for taking care of autistic children [16_18].

AIMS OF THE STUDY:

1-This study was conducted to know medical college students knowledge about ASD.

2-Early diagnosis of ASD patients to improve prognosis and how to deal with it.

Materials and methods

- This cross-sectional study was conducted among AL-Kindy medical college students during the academic year 2022/2023 the data were collected during the period from 25th of November 2022 to the 10th of December 2022.
- The sample size consisted of 150 out of overall number of students in AL-Kindy college of medicine from first year to final years .
- The participation of students was voluntary. consent was taken from each student that the data will only be used for research purposes.
- The data collected from students privately and separately within a questionnaire that contain 20 questions.
- Our questionnaire divided into two groups which are t he personal data and the rest questions were about the etiology ,risk factors , symptoms, and the participants knowledge about this disorder.
- The Data were analyzed using the statistical package for social sciences (SPSS) version 26.0. We use Excel, SPSS and tables for numbering and make a percentage for description and use chi square test for analysis of data. Statistical significance was considered whenever the P- value was less than 0.05.

RESULTS :

A total of 150 students participated in the study with 77 female (51.7%) and 72 male (48.3) .The main age of participants was 18-24.

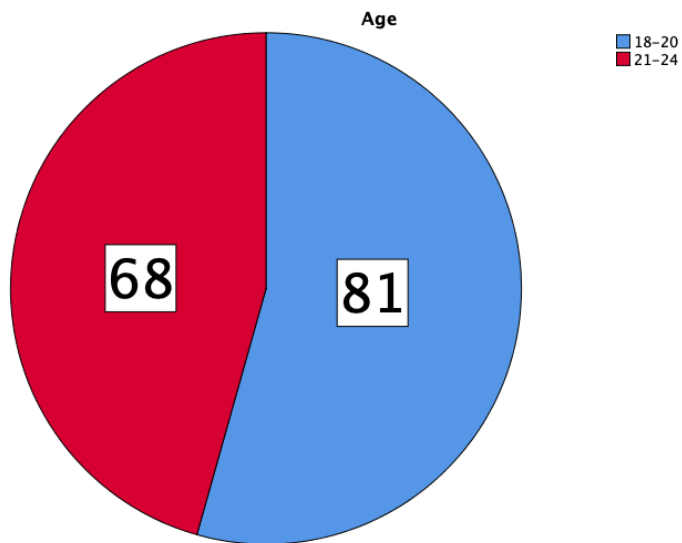


Figure 1 : Gender ratio of the participants

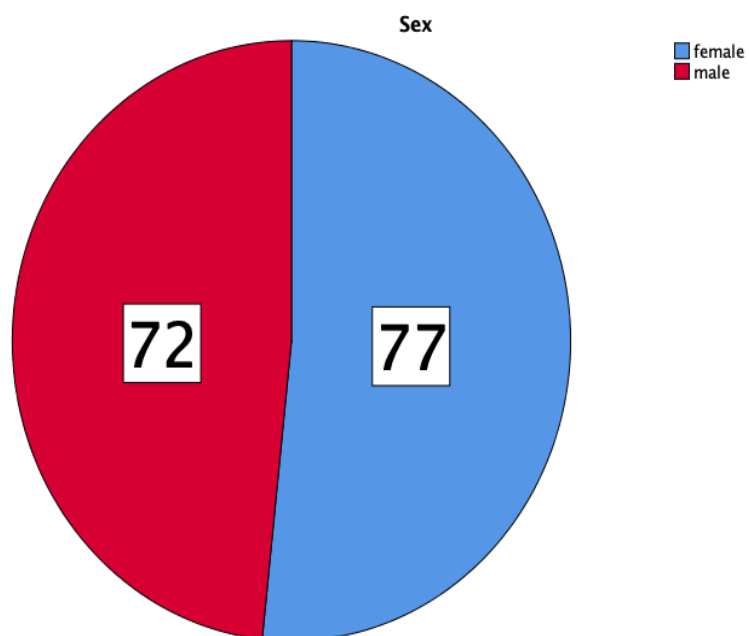


Figure 2 : Age ratio of the participants

Table 2 shows that overall 89.3% of students have heard about autism. Medical students responses were that male ASD patients are (56.7%) while female ASD patients are (24%) .Adult ASD (20%) while children with ASD are (63.3%). (34%) were aggressive .(72%) were smart .(74%) were emotional.

Table 2 : overall responses to questionnaire related to the knowledge of AL-kindly medical college students about ASD

<i>ASD gender:</i>						
<i>Percentage</i>	<i>I don't Know</i>	<i>Percentage</i>	<i>Male</i>	<i>Percentage</i>	<i>Female</i>	<i>Total</i>
<i>19.3%</i>	<i>29</i>	<i>56.7%</i>	<i>85</i>	<i>24%</i>	<i>36</i>	<i>150</i>
<i>ASD age group:</i>						
<i>Percentage</i>	<i>I don't Know</i>	<i>Percentage</i>	<i>Child</i>	<i>Percentage</i>	<i>adult</i>	<i>Total</i>
<i>16.7%</i>	<i>25</i>	<i>63.3%</i>	<i>95</i>	<i>20%</i>	<i>30</i>	<i>150</i>
<i>Aggression:</i>						
<i>Percentage</i>	<i>I don't Know</i>	<i>Percentage</i>	<i>No</i>	<i>Percentage</i>	<i>Yes</i>	<i>Total</i>
<i>26.7%</i>	<i>40</i>	<i>39.3%</i>	<i>59</i>	<i>34%</i>	<i>51</i>	<i>150</i>
<i>Intelligence:</i>						
<i>Percentage</i>	<i>I don't Know</i>	<i>Percentage</i>	<i>No</i>	<i>Percentage</i>	<i>Yes</i>	<i>Total</i>
<i>20%</i>	<i>30</i>	<i>8%</i>	<i>12</i>	<i>72%</i>	<i>108</i>	<i>150</i>
<i>Emotion:</i>						
<i>Percentage</i>	<i>I don't Know</i>	<i>Percentage</i>	<i>No</i>	<i>Percentage</i>	<i>Yes</i>	<i>Total</i>
<i>11.3%</i>	<i>17</i>	<i>14.7%</i>	<i>22</i>	<i>74%</i>	<i>111</i>	<i>150</i>

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	162.613 ^a	4	.000
Likelihood Ratio	184.387	4	.000
Linear-by-Linear Association	92.671	1	.000
N of Valid Cases	149		

*the chi-square is significant at the .05 level.

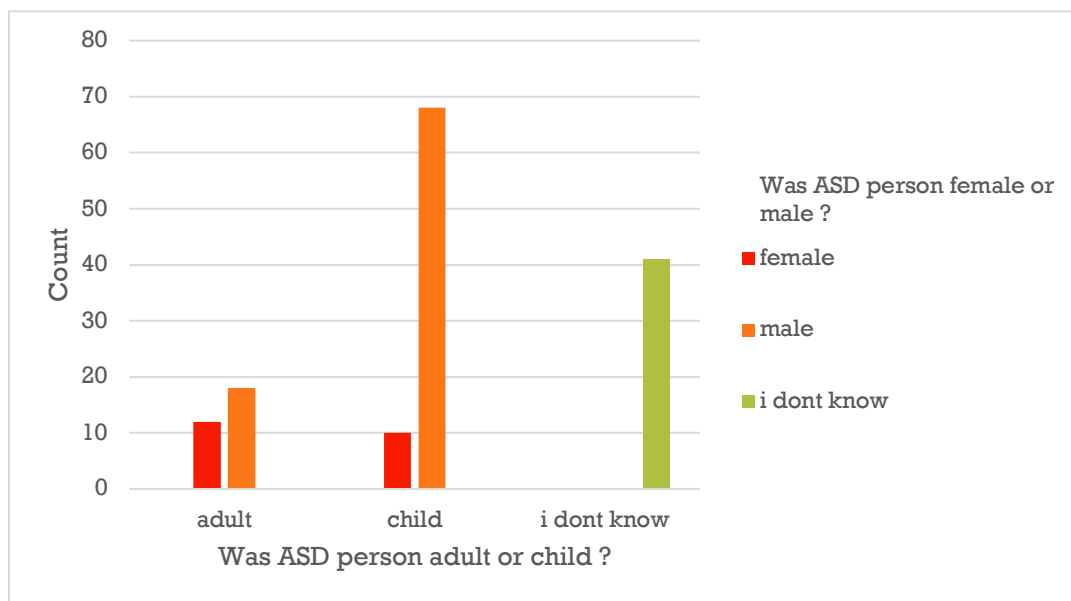


Figure 3: Shows the relation between age and gender of ASD patients. The result shows ALkindy medical college believe that most ASD patients are male children.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	162.613 ^a	4	.000
Likelihood Ratio	184.387	4	.000
Linear-by-Linear Association	92.671	1	.000
N of Valid Cases	149		

*the chi-square is significant at the .05 level.

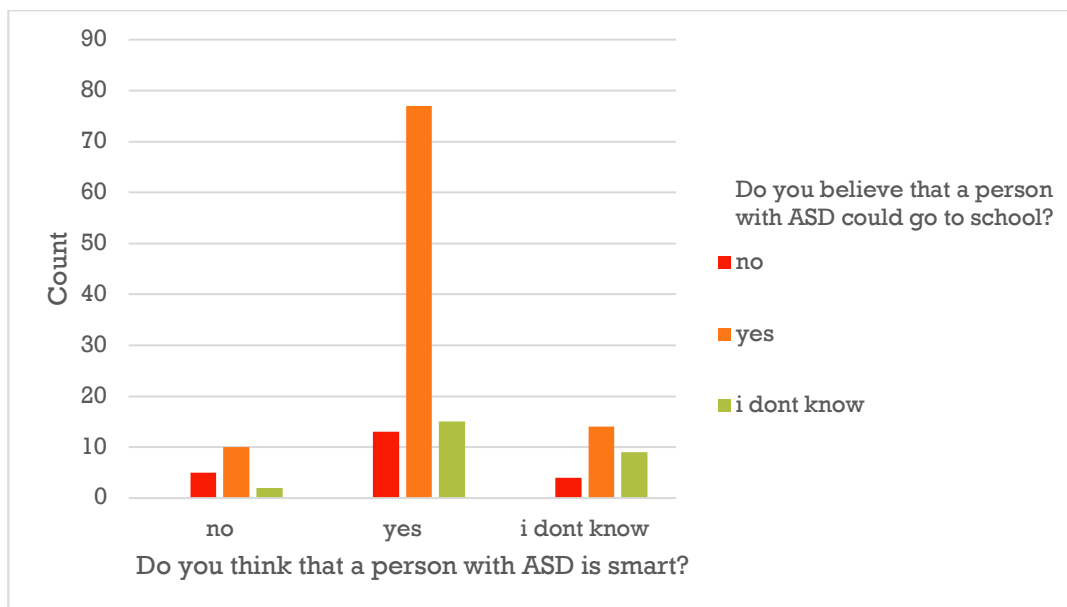


Figure 4: Shows the relation between going to school and if the ASD patients are smart or not .

The result shows ALKindy medical students believe that most ASD patients are smart and they have ability to go to school.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	162.613 ^a	4	.000
Likelihood Ratio	184.387	4	.000
Linear-by-Linear Association	92.671	1	.000
N of Valid Cases	149		

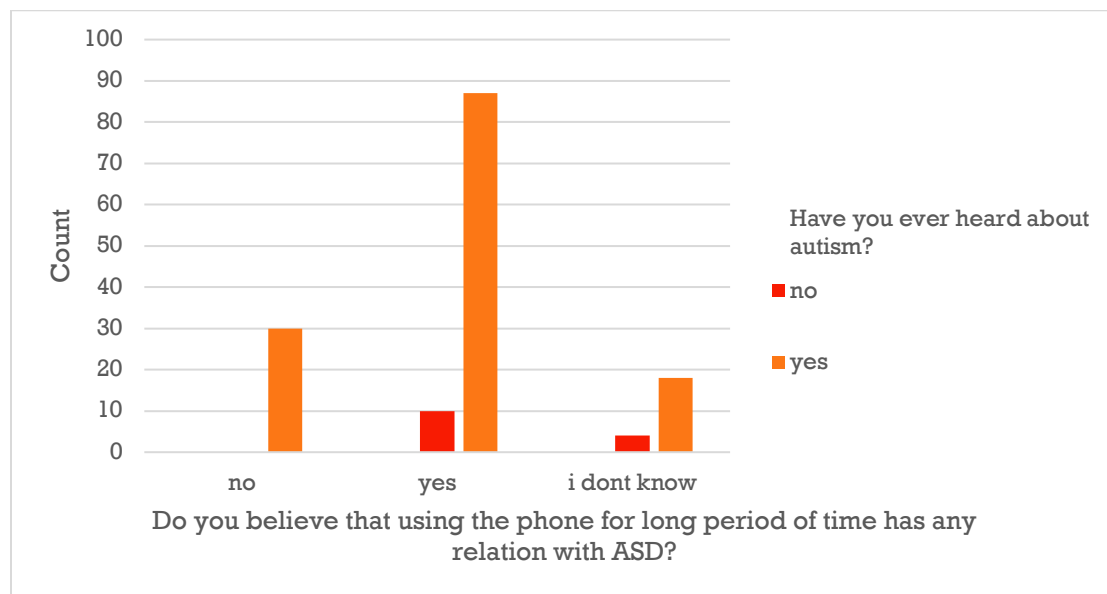


Figure 5; shows the medical students who believe that ASD is related to phone use.

The result shows ALkindy medical students believe that using phone for long period of time has relation with ASD while there are many other causes.

DISCUSSION :

Whereas there is increasing worldwide awareness and research on autism, after a thorough literature search we found only one study done in Duhok city assessing knowledge and attitude about ASD. targeting the primary health care physicians, junior doctors and medical college students. The study didn't focus on medical students.

Recent evidence that the prevalence of diagnosed ASD may be increasing and that early diagnosis and intervention are likely associated with better long-term outcomes has made it imperative that medical students should increase their fund of knowledge regarding the disorder.

According to table 2 results we found that the percentage of medical students awareness about ASD and how to deal with it is 46.7% which is really low and this correlate with[20].Also the responses show high percentage in nonverbal impairment such as eye to eye contact and body posture during social interaction which highly correlate with[19].

the first result of our study Depending on figure 3 Our study shows, AL-kindly medical students responses based on ASD patients that they have met ,most of the ASD patients were males more than female and most of them were children more than adults, so we made this relation between the gender and age to confirm that ASD occurs in young males.

*its approved that this syndrome is more common (3-4) times in male more than female [2].

While the second result depending on figure 4 Our study shows, AL-kindly medical students believe that most of ASD patients are smart and they have ability to go to school.

*This is not really true because there are different types of ASD and their mental behavior varies from one patient to another .[4]

And the last result depending on figure 5 Our study shows,AL-kindly medical students believe that phone use for long period of time is one of the causes that lead to increase the incidence of ASD.

*this is a mistaken belief because the etiology of ASD is still uncertain.[6]

CONCLUSIONS:

1. The result shows that the awareness about the etiology of ASD of AL-kindly medical students regarding the autism spectrum disorder is really low.
2. The awareness of AL-kindly medical students about the symptoms including the non-verbal impairment in social interaction with ASD patients is nearly good.
3. Dealing of AL-kindly medical students with ASD patients was not good enough.

RECOMMENDATIONS :

1. Increase awareness of medical students about ASD etiology , risk factors and symptoms by organize conferences, seminars and lectures
2. Shed light on the volume of these disorders in Iraq.
3. Focus on the researches conducted on this subject.
4. Discuss on the applied services for these patients with their families.

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QUESTIONNAIRE

Knowledge , attitude and practices of medical students regarding autism.
please answer the questions below :

1. Sex

-Female

-Male

2. Age

-18-20

-21-24

3. Do you believe in psychiatry?

-yes

-no

4. Have you ever heard about AUTISM?

-yes

-no

5. Have you ever met person with AUTISM?

-yes

-no

6. Was ASD person adult or child?

-adult

-child

7. Was ASD person female or male?

-female

-male

8. Did you face any difficulties dealing with him?

-yes

-no

-I don't know

9- Was that Person who has ASD aggressive?

-Yes

-No

-I don't know

10- Do you believe that using the phone for long period of time has any relation with ASD?

-Yes

-No

-I don't know

11- Do you believe that a person with ASD could go to school?

-Yes

-No
-I don't know

12-Do you have knowledge about how to deal with people how have ASD?

-yes
-No

13-Do you think a person with ASD avoid direct eye contact?

-Yes
-No
-I don't know

14-Do you expect a person with ASD to accept touch?

-Yes
-No
-I don't know

15-Do you think that you ready to have an ASD person as a friend?

-Yes
-No
-I don't know

16-Do you think that you need to learn how to deal with an ASD people?

-Yes
-No
-I don't know

17-Do you think that a person with ASD is smart?

-Yes
-No
-I don't know

18-Do you think that a person with ASD is emotional?

-Yes
-No
-I don't know

19-Do you think a person with ASD has the ability to get attached to someone?

-Yes
-No
-I don't know

20-Can you recognize a person with ASD?

-Yes
-No
-I don't know

