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Parents' knowledge and Attitude Regarding their Autistic Children

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Abstract:
Background: *Autism is neurodevelopmental impairments in communication, social interaction and social attainment, the improvement of parents awareness lead to best health care to Autistic children.* ***Aim:*** *The aim of this study to assess the parents' knowledge and attitude regarding their Autistic children.* ***Design:*** *A descriptive research design was used in this study.* ***Sample:*** *Purposive sample equal (120) parents who having children with autism.* ***Setting:*** *It was conducted at child psychiatry out-patient clinic in psychiatry center at Tanta university hospital, El-Gharbia governorate.* ***Tools:*** *Two tools used* ***1st:*** *Interview questionnaire sheet composed of* ***4 parts:*** *personal data of the parents and child, family and child past history, parents' knowledge about the autism, and the parents' reported practice about the autism.* ***2nd:*** *The attitude of the parents about the autism.* ***Results:*** *The study result revealed that, 50% of the studied sample had poor total knowledge. 55% of the studied sample had satisfactory total practice. 70% of the studied sample had positive attitude toward the autism.* ***Conclusion****: Most of the study sample had poor total knowledge about the autism. Most of them had satisfactory total practice. Majority of the studied sample had positive attitude about the autism. There are relation between parent socio-demographic data and their knowledge, practice, attitude regarding their children with autism.* ***Recommendations****: provide Parents by health education and Autism booklets which include the sign and symptoms of Autistic children.*

Key words: *Parents knowledge, Attitude, Autistic children*

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I. Introduction:

Children represent the future, and ensuring their physical, socio-emotional and language and cognitive development ought to be a priority for building societies. The early childhood, which spans the period between 0-8 years of age, is considered to be the most important developmental phase throughout the lifespan. During these years, a child's newly developing brain is highly plastic and responsive to change as billions of integrated neural circuits are established through the interaction of genetics, environment and experience **(Hyman et al., 2020) [(1)].**

Autism is a neurodevelopmental impairments in communication, social interaction and unusual ways of perceiving and processing information can seriously hinder the daily functioning of children with autism spectrum disorders and severely impede their educational and social attainments. While some children with autism and other developmental disorders have varying degrees of abilities that could potentially lead to independent and productive lives with varying levels of support, others are severely affected and require lifelong care and support **(Coury et al., 2020) [(2)].**

The term spectrum refers to the wide range of symptoms, skills, and levels of disability in functioning that can occur in children with autism. Some children with autism are fully able to do all activities of daily living while others need substantial support to perform basic activities. Early diagnosis and treatment is important to reducing the symptoms of autism and improving the quality of life for children with autism and their families. There is no medical test for autism. It is diagnosed based on observing how the child talks and acts in comparison to other children of the same age **(Wang et al., 2020) [(3)].**

The children with autism spectrum disorders should give appropriate recognition to the specific needs in policies and programmers, develop or update and implement relevant policies, legislation, and multi-sectorial plan as appropriate, public awareness and remove stigmatization, increase the capacity of health and social care systems, improve health information and surveillance systems that capture data on autism spectrum disorders and promote context-specific research on the public health and service delivery aspects of autism spectrum

disorders and other developmental disorders, strengthening international research collaboration to identify causes and treatments **(Smith , 2020)** [4]**.**

The global prevalence of autism spectrum disorders among children was more than 7.6 million disability-adjusted life years and 0.3% of the global burden of disease. Autism spectrum disorder (ASD) is estimated to affect up to 3% of children in the United States. It is rapidly growing problem and estimated that in 2018, 1 of 59 children were born with ASD in the USA. From Central Asia and Eastern Europe there 57 children diagnosed with ASD had multiple signs of infections, inflammation, immune system disruption, and folate deficiency (**Christensen et al., 2019; Alibek 2019)** [5], [6]**.**

Parents may be shocked and dismayed by the diagnosis, and they may struggle to understand their child's diagnosis and find appropriate care options. Parents of children with autism spectrum disorders face challenges both at home and in the community. Compared to parents of children without autism, they are at heightened risk of financial strain and poor physical and mental health; they are also likely to experience higher divorce rates. In the community, they might have to pay out of pocket for services or drive long distances to access treatment facilities. Consequently, some might need to relocate their family or make career changes to ensure they are able to cover the costs associated with services. Health care professionals need to be aware of such issues and how they might impact a parent's ability to care for her child with autism spectrum disorders **(Brown et al., 2020)** [7]**.**

Parents' knowledge about their autistic children increase after a child diagnosed correctly, they will be able to focus on their child's betterment, and as the demands and teaching strategy of autistic children is unique. Lack of awareness and insufficient knowledge about autism among parents, causes delayed identification and intervention, leading to unsatisfactory outcomes in patients. The level of parents' information affects the level of their practices. Improving the level of information and practices of parents improves the level of adaptation to the situation of children, reduces the level of anxiety and improves the care provided to children **(Rogge & Janssen, 2019)** [8]**.**

Parents' adjustment can be defined as the adaptive task of managing upsetting feelings aroused by the illness of the child and preserving a reasonable emotional balance, on the one hand parents' adjustment reflects the outcome of parents' ability to maintain a balance between the demands of stressful situations and the availability of personal and social resources (e.g. partner support), whereas on the other hand, parents' adjustment enhances the accomplishment of other general adaptive tasks, such as preserving a satisfactory self-image, keeping the family together, and preparing for an uncertain future, as well as the accomplishment of illness-related tasks, for example dealing with the symptoms of the illness, dealing with treatment related stressors, and establishing functional relationships with caregivers. Positive experiences in achieving such tasks will in turn enforce parents' emotional balance through so called positive-feedback loops **(Mohammadi et al., 2020)** [9]**.**

Community health nurses can play a role to get parents who have children with autism spectrum disorders on the way to receiving appropriate health and related services, enhance ability to access health insurance coverage. The plan focus is to provide increased access to health and social services in a cost efficient and highly efficacious manner. Nurses coordinate referrals and assist to facilitate enrollment in clinical trials. Assist parents to meet the many obstacles that face them and overcoming it to the prompt diagnosis and treatment of health problems, providing health education for the parents to face the child's special needs through the programs that tracks health information, creative community outreach strategies in partnership with schools in order to assist families of autism spectrum disorders. Community health nurses raise the awareness of the parents about the autism and teach the parents all practices that the children need it **(Mandal et al., 2020)** [10]**.**

Significance of the study:

In Egypt 2014, autism is one of the biggest problems that very often under diagnosed or more commonly, misdiagnosed, according to the latest demographic studies, there are more than 140,000 children in Egypt who suffer from autism, though an Arab Study involves two Northern African Countries (Tunisia & Egypt), they stated that prevalence of autism were 11.5% and 33.6% among children with developmental disabilities in Tunisia and in Egypt respectively **(AlFarsi and Al-Sharbati, 2014)** [11]**.**

The number of people with autism today in Egypt is estimated at 800,000, according to the Social Solidarity Ministry. One in every 160 children shows signs of having this mental condition and the rate among men is times that recorded in women. It is currently estimated that 3 to 6 children out of every 1,000 worldwide have ASD. Males are 4 times more likely to have ASD than females **(Wali, 2017; Gobrial et al., 2019)** [12], [13]**.**

Autism Spectrum disorder are complex lifelong neurodevelopment and behavioral disorders and about 50% of ASD children suffer some degree of intellectual disabilities and other developmental disorders as physical problems, psychological, sensory and behavioral problems. Children with ASD often require specialized services, which are very costly for the families. Parents have increased expenses with behavioral therapies, medical expenses, providing transpiration, and accommodations related to the services. Many parents

do not have insurance that covers therapy sessions, and it is up the family to arrange for supplemental services. Also, service providers may not be available to parents in certain area. Due to the increase in prevalence in ASD in recent years, treatment options have also been on the rise **(Wachob & Lorenzi, 2015; Mohammad, 2018)** [(14), (15)].

The community health nurses provide the parents with appropriate knowledge, practice, attitude and helps children with ASD at many stages of their healthcare journey. The nurses assist in early diagnosis, an awareness of attunement to behavior or reported parental concerns that may indicate ASD can help the primary care. Nurses identify children who may require further diagnostic assessment; early identification of ASD can help and improve the life chances of the children **(McKenzie, 2016)** [(16)].

AIM OF THE STUDY

The study aimed to assess the parents' knowledge and attitude regarding their Autistic children.

Research hypothesis

The parents' knowledge and attitude will increase regarding their Autistic children through the following objective**:**

- Assessment of parents' knowledge regarding Autism children.
- Detect parents' reported practice provided to their children who suffering from Autism.
- Evaluate parents' attitude toward their children suffering from Autism.

Subjects and Method

Research design:

A descriptive research design was utilize in this study

Research Setting:

This study was conducted at child psychiatry out-patient clinic in psychiatry center at Tanta university hospital, El-Gharbia governorate.

Sample:

Purposive sample consists of 120 parents according to certain criteria:

- The parents having Autistic newly diagnosed child.

Tool for data were collected by using the following tool:

Tool I: Structured interview questionnaire:

1st part: Socio-demographic data of the Studied Samples: It divided to two sub items:

A- Studied Sample Socio-demographic Characteristics:

It composed of ten items about studied sample socio-demographic data.

B- **Child Demographic Data:**

It composed of 4 items as age, gender, child arrangement, classroom.

2nd part: Family and child past history: It divided to two sub items:

A- Family history: this part composed of four close end questions as: Family history of autism, residence, type of family, kinship between parents

B- Child medical history: this part composed of ten close end questions and was used to determine data related to Child medical history**.**

3rd part: Studied sample's knowledge about the Autism: it divided to two sub items:

A- Studied Sample's knowledge about the Autism:

This part composed of seven close end questions and it was used to determine knowledge of Parents about the autism.

B- Studied Sample's knowledge about the management of Autism: This part composed of eleven close end questions and it was used to determine the knowledge of Parents about the care of autistic children

4th part: The Reported practice of the Studied Samples about the autism:

A- The reported practice of the Studied Samples regarding general health promotion of the child: This part composed of Seventeen close end question and it was used to determine the practice of the parents regarding general health promotion of the child.

Tool II: The attitude of the parents about the autism according to (Shams Eldeen, 2016):

- **The attitude of the parents about the autism:** this part composed of fifty one items of the attitude of the parents about the autism.

Scoring system for the knowledge of the parents about the autism:

Each statement was assigned score according to parents response were:

Complete correct was scored 2 grades. Incomplete correct was scored 1 grade and incorrect or don't know was scored 0. Total score were 38 grades from 19 questions. The total score each item summed up and then converted into percent score.

As the following:

- Good knowledge (≥ 75%)
- Average knowledge (50 - < 75%).
- Poor knowledge (< 50 %) was considered poor.

Scoring system for the practice of the Studied Samples about the autism:

Each statement was assigned score according to parents response were "Done", "Not Done", and were scored 2 and1 (Done 2, Not Done 1) respectively. Total score were 34 grades for 17 items.

The scores of items summed up and then converted into percentage score

As the following:

- (≤ 60) was considered unsatisfactory.
- (> 60) was considered satisfactory.

Scoring system for the attitude of the parents about the autism:

Each statement was assigned score according to parents response were, "Always" " Sometimes" , "rarely" and were scored 3,2 and1 (Always 3, Sometimes 2, rarely 1) respectively. Total score were 153 grades for 51 items.

The Total score of each item summed up and then converted into percent score

As the following:

- Positive Perception equal (≥ 60)
- Negative Perception equal (< 60)

Tool reliability:

To assess reliability, the study tool was tested by the pilot subjects at first session and retested after one week as test- retest reliability for calculating cronbach's Alpha which was 0.894 for the studied sample knowledge about the autism, and 0.912 for the studied sample practice about autism.

Content validity:

The revision of the tools for clarity, relevance, comprehensiveness, understanding and applicability will be done by a panel of 5 experts from Faculty of Nursing (3 experts in the community health nursing and one expert psychiatric health nursing and one expert in pediatric nursing) to measure the content validity of the tools.

Ethical Considerations:

An official permission to conduct the purposed study obtained from the Scientific Research Ethics Committee. Participation in the study is voluntary and subjects given complete full information about the study and their role before signing the informed consent. The ethical consideration included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it not be accessed by any other party without taking permission of the participants.

Ethics, values, culture and beliefs respected.

Administrative Design:

Permission for data collection in psychiatric center in Tanta University was obtained from the director of psychiatric center in Tanta University. This was through submission of a formal letter from the Dean of Faculty of nursing, Helwan University. Meetings and discussion were held between the investigator and the participants to obtain the data necessary to conduct the study.

Statistical Design

Data collected from the parents was revised, coded and entered using personal computer (PC). Computerized data entry and statistically analysis using SPSS program (Statistical Package for Social Science) version 24. Data were presented using descriptive statistics in the form of frequencies, percentages. Chi-square test (X2) was used for comparisons between qualitative variables. Spearman correlation measures the strength and direction of association between two ranked variables.

Significance of the result:

Highly significant at p-value< 0.01.statistically significant was considered at p- value <0.05. Non -Significant at p- value >0.05.

II. Results:

- **Table (1):** Shows that, the mean age of mothers was 28.4 ± 8.1 years. Also, 50.0% of the mothers had secondary education. Moreover 74.2% of the mothers were working. Additionally, the mean age of fathers was 33.6 ± 9.7 years, 45.8% of the fathers had secondary education, and 93.4% of the fathers were working. Also, 63.4% of the family members ranged from 3:5 persons. Regarding to number of home rooms 50.0% were three rooms.
- **Table (2):** Shows that, the mean age of childs was 7.46 ± 7.9 years, 66.6% of the childs were male, 50.0% of the Child arrangement was first children and 93.8% of the child's classroom ranged from (1-3) primary school.

- **Figure (1):** Shows that, 50% of the studied sample had poor knowledge about the autism. Also, 30% of the studied sample had average knowledge about the autism. While 20 % of the studied sample had good knowledge about the autism.

- **Figure (2):** Shows that, 45% of the studied sample had a satisfactory level in total parent practice .while 55% of the studied sample had unsatisfactory level in total parent practice.

- **Figure (3):** Shows that, 30% of the studied sample had negative total attitude about autistic children .While 70% of the studied sample had positive total attitude.

- **Table (3):** Shows that, there was highly statistically significant relation between studied sample socio-demographic data and their total knowledge in all items. Wherer, (P = < .0001).

- **Table (4):** Illustrate that, there was highly significant relation between total knowledge, and their total attitude, when P =, 0001.

- **Table (5):** Shows that, positive relation between total knowledge regarding to parents and their total practice .Moreover, there was highly statistically significance improvement in relation between parents' total knowledge and total practice.

Table (1): Frequency Distribution of the Studied Sample's Socio-demographic Characteristics (N=120)

Item	No.	%
Mothers age		
• Less than 25 years	22	18.3
• 25 - 35 years	79	65.8
• 35 - 45 years	18	15.0
• More than 45 years	1	0.9
Mean ± SD	**28.4 ± 8.1 years**	
Mothers' education levels		
• Not read and write	8	6.7
• Read and writes	12	10.0
• Basic education	35	29.2
• Secondary education	60	50.0
• University or more	5	4.1
Mothers' Job		
• Housewife	31	25.8
• Working	89	74.2
Fathers' age		
• Less than 25 years	2	1.6
• 25- 35 years -	88	73.3
• 35 - 45 years	22	18.4
• More than 45 years	8	6.7
Mean ± SD	**33.6 ± 9.7 years**	
Fathers' education levels		
• Not read and write	5	4.2
• Read and writes	18	15.0
• Basic education	34	28.4
• Secondary education	55	45.8
• University or more	8	6.6
Fathers' Job		
• Working	112	93.4
• Not working	8	6.6

Family monthly income		
• Not enough	70	58.3
• Sufficient for basic needs only	30	25.0
• Sufficient for basic needs and savings	20	16.6
Number of family members		
• 3:5	76	63.4
• 6:8	44	36,6
Number of home rooms		
• One room	22	18.3
• Two room	35	29.1
• Three room	60	50.0
• More than three rooms	3	2.6
Crowding index		
• Not crowded (≤1)	20	16.6
• Crowded (≥1)	77	64.2
• Overcrowded (≥ 1.5)	23	19.2

Table (2): Frequency Distribution of Child's Demographic Characteristics (N=120)

Item	No.	%
Child age		
• 6-8 years	80	66.6
• Less than 10 years	35	29.2
• 10-12 years	5	4.2
Mean ± SD	**7.46 ± 7.9 years**	
Gender		
• Male	80	66.6
• Females	40	33.4
Child arrangement		
• First	60	50.0
• Second	30	25.0
• Last	8	6.7
• Only	22	18.3
Classroom		
• (1-3) Primary	115	93.8
• (4-6) Primary	5	4.2

Figure (1): Percentage Distribution of the Studied Sample Regarding to Total knowledge of them (N= 120).

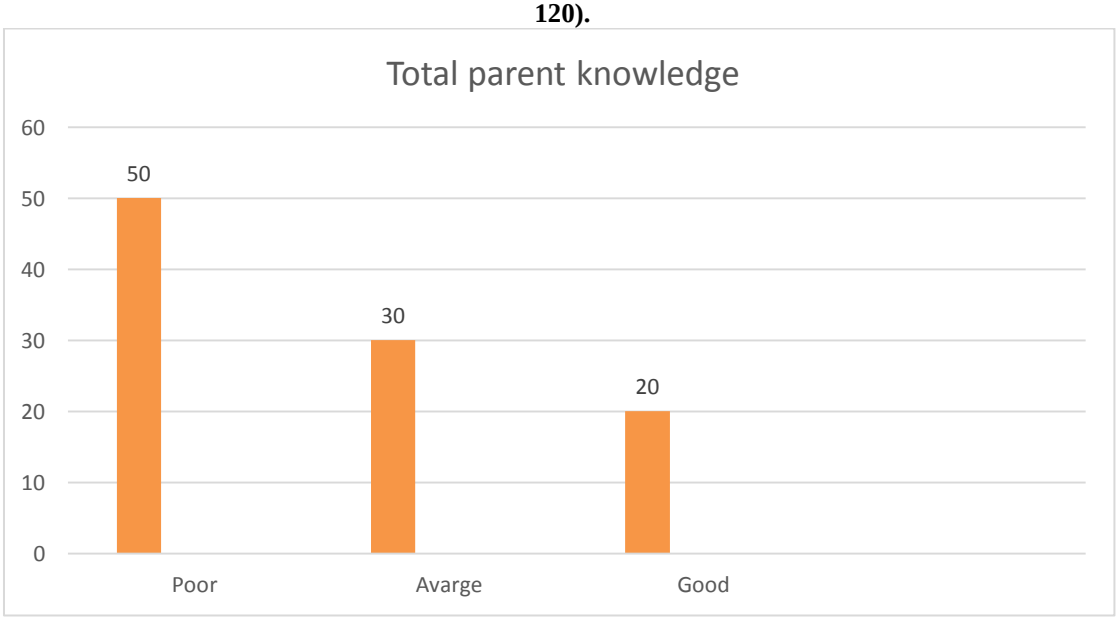

Figure (2): Percentage Distribution of the Studied Sample Regarding to Total Satisfactory Practice of them (N=120).

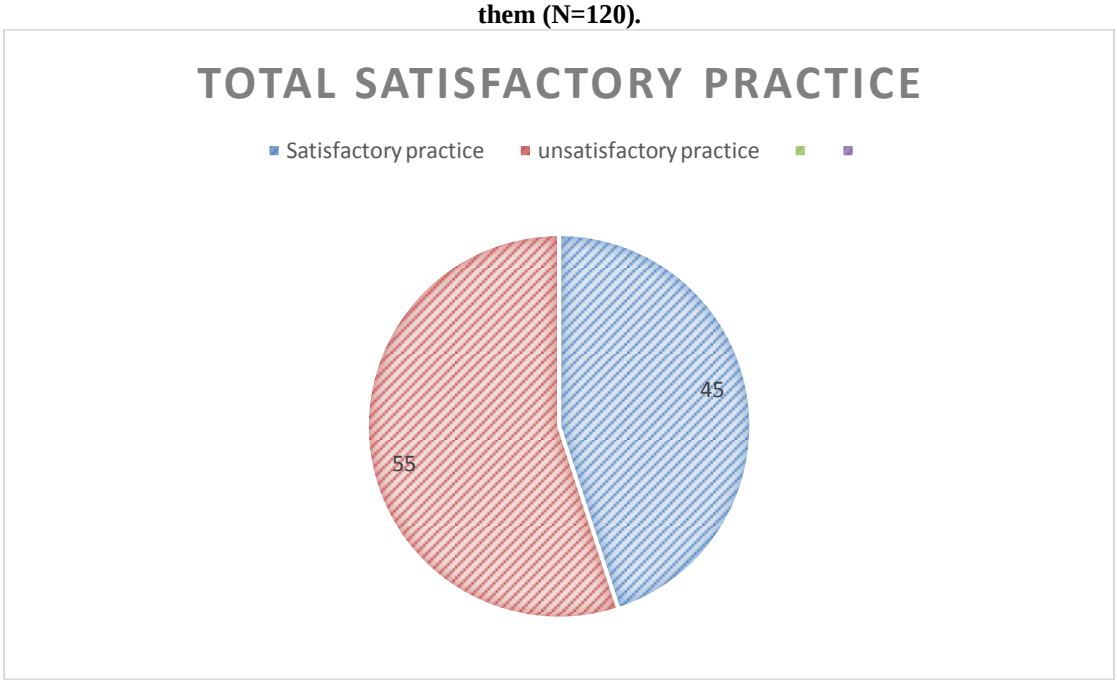

Figure (3): Percentage Distribution of the Studied Sample Regarding to Total attitude of them (N=120).

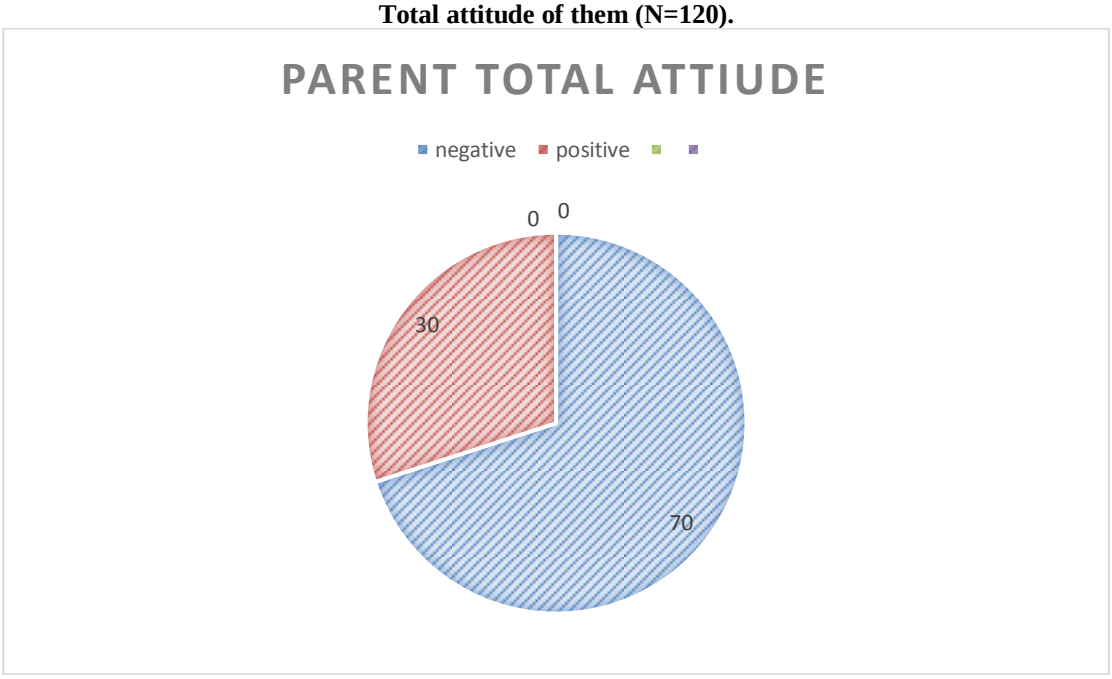

Table (3): Relation between Studied Sample's Socio-demographic Characteristics and their Total Knowledge (N=120)

Demographic characteristics	Poor (n= 60)		Average (n = 36)		Good (n= 24)		X^2	P – value
	No.	%	No.	%	No.	%		
Mothers Age / year								
• Less than 25 years	7	11.7	5	13.8	10	41.7	11.391	.030*
• 25 - <35 years	43	71.6	23	63.9	13	54.2		
• 35 - <45 years	9	15.0	8	22.3	1	4.1		
• ≥ 45 years	1	1.7	0	0.0	0	0.0		
Fathers age								
• Less than 25 years	1	1.6	1	2.8	0	0.0	19.558	.001**

• 25 - <35 years	45	75.0	30	83.4	13	54.2		
• 35- <45 years	14	23.4	5	13.8	3	12.5	11.957	.003**
• ≥ 45 years	0	0.0	0.0	0.0	8	33,3		
Mothers Educational level								
• Not read and write	5	8.3	3	8.3	0	0.0	24.239	.000**
• Read and write	8	13.4	4	11.2	0	0.0		
• Basic education	25	41.6	8	22.2	2	8.4		
• Secondary education	22	36.7	21	58.3	17	70.8		
• University and more	0	0.0	0	0.0	5	20,8		
Fathers educational levels								
• Not read and write	3	5.0	2	5.5	0	0.0	18.274	.000**
• Read and write	12	20.0	5	13.8	1	4.2		
• Basic education	22	36.7	10	27.8	2	8.3	23.197	.000**
• Secondary education	20	33.3	16	44.4	19	79.2		
• University and more	3	5.0	3	8.4	2	8.3		
Mothers occupation								
• Housewife	25	41.6	6	16.6	0	0.0	20.199	.000**
• Working	35	58.4	30	83,4	24	100.0		
Fathers occupation								
• Working	56	93.4	35	97.3	21	87.5	21.177	.000**
• Not working	4	6.6	1	2.7	3	12.5		

Table (4): Relation between Studied Sample's Total Knowledge and their Total attitude (N=120)

Variables	Total knowledge scores						χ^2	P
	Poor (n =60)		Average (n =36)		Good (n =24)			
	No.	%	No.	%	No.	%		
Total attitude scores :								
• **Negative (84)**	40	66.6	30	83.4	14	58.3	9.354	.001**
• **Positive (36)**	20	33.4	6	16.6	10	41.7		

*** Significant < 0.05 ** High significant P= < 0.01 r =Correlation Coefficient**
R= r.754 p .000**

Table (5): Relation between Studied Sample's total Knowledge, and their Total Practice (N=120)

Variables	Total knowledge scores						χ^2	P
	Poor (n =60)		Average (n =36)		Good (n =24)			
	No.	%	No.	%	No.	%		
Total reported practice:								
• **Satisfactory practice (54)**	4	6.6	30	83.4	20	83.4	12.447	.000**
• **Unsatisfactory practice (66)**	56	93.4	6	16.6	4	16.6		

*** Significant < 0.05 ** High significant P= < 0.01 r =Correlation Coefficient**
R= r.754 p .000**

III. Discussion:

Autism Spectrum Disorder (ASD) represents a group of neurodevelopmental disorders marked by impairments in communication/social interactions and special patterns of behaviors with onset during early stages of development. Although causes of ASD are not fully understood it has been the subject of intense inquiries. The genetic factors are an important possible source of causation. However, ASD might be prone to parents' ideas and beliefs on it's a etiology and causes because there is an absence of a justifying theory on the neurobiological mechanisms of this diagnosis **Fombonne et al., (2016)** [17].

ASD is a developmental disability that can cause significant social, communication, and behavioral challenges. The term "spectrum" refers to the wide range of symptoms, skills, and levels of impairment that people with ASD can have. ASD affects people in different ways and can range from mild to severe. People with ASD share some symptoms, such as difficulties with social interaction, but there are differences in when the symptoms start, how severe they are, the number of symptoms, and whether other problems are present. The symptoms and their severity can change over time **Kasari et al., (2020)** [18].

Regarding to socio- demographic characteristics of the parents. The present study findings that mean age of mothers was 28.4 ± 8.1 years. While the mean age of fathers was 33.46± 9.7 years. This result is similar to a study conducted by **Baird et al., (2016)** [19].who conducted a study in South Thames about "Prevalence of disorders of the autism spectrum in a population cohort of children in South Thames. They found that special needs and autism project" the mean age of mothers was 28 .18 ±4.95 years for the study group and mean age of fathers was 35 .22 ± 4.95 years. As well it is nearly consistent with **Klukowski, et al., (2017)**[20]. who conducted a study in USA about "Sleep and gastrointestinal disturbances in autism spectrum disorder in children, they represented that mean age of mothers was 27.17 ±10.8 years, and the mean age of fathers was 34 .77 ± 5.44 years. From the investigator point of view, the range of mothers' age was (22-45years).

Concerning the level of education of parent, the current study result revealed that, more than half of the mothers and fathers had secondary education, and the minority of them had university education or more. This result in the same line with **Arif, et al (2018)**[21]. who carried out a study conducted in Egypt about "Awareness of autism in primary school teachers", they found that 55.0% of fathers and mothers had secondary education level and 20.0% of parent had university education.

Regarding the parent occupation, the current study revealed that, nearly three quarters of mothers were working, and the majority of fathers were working. This finding was in accordance with **Johnson, et al., (2018)** [22]. who conducted a study in Pakistan about "Exploring sleep quality of young children with autism spectrum disorder and disruptive behaviors" they found that, the 73% of fathers and mothers were working. From the investigator point of view, the high standard of living and prices in Egypt leads to the need for the father and mother to work to provide the family's requirements.

Regarding the family size, the present study revealed that less than two thirds of them the family size 3:5 person. Regarding the numbers of room, more than half of them had three room in the house, regarding to the crowding index in the house nearly two third of them was ≥1 and less than two third of them had a kinship between the parents, This result agree with **Limon (2017)** [23]. who carried out a study in Italy to assess the " Importance of early detection in autism spectrum disorder", he found that, 66% of the children with autism had family size 3:5 person, also, a close kinship between their parents. The investigator point of view, rate of autistic children increased due to the kinship between parents especially who had previous family history.

Regarding the child age, the present study findings indicated that the mean age of child was 7.46 ± 7.9 years. This results agree with **Muhammad et al., (2018)**[24]. who conducted a study in Pakistan, studied about " Final report 29th Asia-Pacific international seminar on education for childs with special needs and they found that, the mean age of child with autism was 7.55 ± 9.7 years. From the investigator point of view, the most parents discover the illness of their children from 5 to 7 years through the symptoms that appear on them and begin the steps of treatment.

Regarding the child gender, the present study indicated that more than two third of them were male. These results agree with **Muhle et al.,(2014)** [25]. who conducted a study in Mexico, studied about "The genetics of autism", they found that, 70% of the study sample were male. The investigator point of view, the high percentage of child with autism was male.

Regarding the child rink and class room, the present study indicated that more than half of the children were first child, and majority of the children were from (1-3) primary classroom. This result agree with **Rosanoff, (2018)** [26]. who conducted a study in Iran, studied about " Behind the science: new 1 in 45 autism prevalence survey", he found that, 55% of the survey the autism children was first child in the family and 70% of children in primary classroom. From the investigator point, most of the children with autism were the first child of the family and most of them were in primary school age and that was because the discovery of autism appears in the young age.

Current study results revealed that, the most of parents had wrong answer or don't know about the meaning of autism, causes of autism, types of autism, sign and symptoms of autism and diagnosis of autism. This study finding

agreement with a study by **Shaukat et al., (2018)** [27]**.** who conducted a study in Karachi about "Assessment of knowledge about childhood autism among medical students from private and public universities in Karachi. " they found that, the majority of parents had wrong answer or don't know about the, meaning of autism, causes of autism, time of child complain of autism, types of autism, sign and symptoms of autism and diagnosis of autism. From the investigator point of view, the high percentage of parents had diploma education, This low level of education would certainly influence parent' knowledge and practices regarding child with autism, with high level of education have better knowledge and practice regarding diseases, more aware of suspected complications and have more flexibility to improve their health for children.

Regarding parents' total knowledge, the current study revealed that, the half of them had poor knowledge. Also, Slightly less than one quarter had good knowledge and more then one quarter of them had average knowledge, this result agree with **Van de Belt et al .,(2017)** [28]**.** who conducted a study in Dutch about "Internet and social media for health-related information and communication in health care preferences of the Dutch general population", they found that, the parents had poor total knowledge. Also, 50% had good knowledge and 30% of them had average knowledge. From the investigator point of view, the parents' don't receive continuous training program about autism to improving their knowledge of parent.

Current study results revealed that, more than half of parents' total practice had unsatisfactory practice and less than half of them had satisfactory practice regarding child with autism. This finding was supported by **Hutton, (2018)** [29]**.** who conducted a study in New Zealand about autism spectrum disorders and diet in children, he found that 65% of parent had unsatisfactory practice before health training program improved to satisfactory practice after health training program. From the investigator point of view, the training program is very important for improving parents' practice about child with autism.

Regarding total parents' attitude about child with autism, more than two thirds of them had positive attitude for child with autism and more than one quarter of them negative attitude for child with autism. This finding was supported by **Marcus, & Schopler, (2019)**[30]**.** who conducted a study in New York about "Parents as co therapists with autistic children**",** they found that 72% of parents had positive attitude for child with autism and 28% of them negative attitude for child with autism. From the investigator point of view, this result reflected the important of parents training program to improve the attitude regarding child with autism.

The current study observed that highly statistical significant differences between total score of parents' knowledge and their socio demographic characteristics such as age, level of education, and parents' occupation .This results agree with **Howlin, (2017)** [31]**.** who conducted a study in New York about " Help for the family, Diagnosis and treatment of autism", he found that, highly statistical significant differences between total score of parents' knowledge and socio demographic characteristics such as age, level of education, and parents' occupation. From the investigator point of view, the high level of education and type of work affects the high level of gaining the knowledge of parents towards their autistic children.

The current study revealed a statistical significant positive relation between mothers and fathers' age, educational levels, occupation and their total satisfactory done practice scores .This finding agree with the study done by **Ortony, A**, **(2019)**[32]**.** who conducted a study in China about "The cognitive structure of emotions in child with autism", he found that, a statistical significant relation between parents' age, level of education, occupation, and their total knowledge scores.

The current study revealed a highly statistical significant differences between total knowledge and total attitude among parents.This results on the same line with **Sivberg,(2018)** [33]**.** who conduced a study in U.S.A about " Literature review of autism, families and coping strategies", he found that a highly statistical significant differences between total scores knowledge and total parents' attitude. From the investigator point of view, the majority of studies concluded that, improved total knowledge of parents lead to improve parents' attitude.

The current study revealed that, highly statistical significant differences between total knowledge and total practice among parents. This results on the same line with **Freeman et al., (2017)** [34]**.** who conduced a study in U.S.A about "Child behaviors as stressors, Replicating and extending the use of the CARS as a measure of stress", they found that a highly statistical significant differences between total scores knowledge and total parents' practice. From the investigator point of view, the majority of studies concluded that, improved total knowledge of parents lead to parents' practice improvement.

IV. Conclusion

The result of the study supported the hypothesis of the study: shows that,

On the light of the current Study, it could be concluded that:

Most of the studied sample had poor total knowledge and minority of them had average total knowledge about the autism. Most of the studied sample had satisfactory total practice and Minority of them had unsatisfactory total practice for the care provided to their autistic children. Majority of the studied sample had positive attitude

and minority of them had negative attitude about the autism. There was statistically significant relation between parents' socio-demographic data and their knowledge, practice and attitude regarding their children with autism.

V. Recommendation

Based on the finding of the present study recommend that:

- Continuous health education program for parents and booklets of the autism which include the sign and symptoms of the Autism, side effects of neglect the autistic child and how to support the child.
- Developing health educational programs that would help Parents to improve ' knowledge and Attitude regarding their Autistic Children.
- Encourage parents to make group discussion regarding the autism to exchange information about the disease under observation from community health nurse.

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