



Assessment of Knowledge, attitude and Practices of Parents having Children with Autism

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Abstract

Autism Disorder is a developmental disorder usually noticed among children within the first two or three years of their lives which have a profound impairment in social communication and social interaction and restricted and repetitive behavior. **The study was aimed to:** Assess knowledge, attitude and practices of parents having children with autism **Design:** A descriptive research design was utilized. **Setting:** the study was carried out in outpatient clinic of autism at Al-Abbassia hospital for mental health and addiction and Helwan hospital for psychiatric and mental health. **Subjects:** the study sample was **60** parents of children of children diagnosed with autism from both sexes. **Tools:** data was collected by using four tools; **Tool (1)** socio-demographic questionnaire for the characteristic of the children and their parents, **Tool (2)** parent's knowledge scale regarding autism disorder and **Tool (3)** Attitude scale of parents toward their children with autism, **parents, Tool (4)** practices scale regarding caring of children with autism. **Results:** the study results showed that. Nearly more than three quarters of the parents had unsatisfactory knowledge regarding their children disorder. Slightly more than three quarters of the parents had incompetent practices regarding their children with autism. **Conclusion:** the present study concluded that, more than three quarters of the parent had unsatisfactory knowledge and in competent practices regarding caring of their children. Also, there was statistically significant difference between total knowledge score and the parent's socio demographic characteristics. In addition to, there was a highly statistically significant difference between total knowledge score and total practices score of having children with autism. **Recommendation:** Conducting a continuous practical training and health educational programs for all members of the families having children with autism.

Key words: Children with autism, Parents, knowledge, attitude, practices.



Introduction

Autism is a developmental disorder that affects a person's capacity to communicate with and relate to others, as well as how they perceive the environment **National Autistic Society [31]** Autism disorder is considered a complex developmental disability because in the first the children with autism have wide range of difficulties with social behavior and communication, have limited interests, and engage in repetitive and restricted behaviors. While the second cause are symptoms of AD occur to be lifelong for the majority of autistic children. Cause three these challenges with social communication, behavior, and social interaction often happen with other disorders such as Attention Deficit Hyperactivity Disorder (ADHD) , Intellectual Disorder, and Epilepsy, making it difficult for many individuals with autism to live in a way that is free from outside control or influence **Özerk, K., & Cardinal, D.,[33]**

So that, the Parents of children with autism 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 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 children with autism **Brown et al., [9]**

In addition to, families with an autistic child may face a variety of issues, such as reduced parenting efficacy, high stress rate, mental and physical health issues, severe financial problems, time constraints, sibling adjustment issues, reduced social support, and family conflict. As compared with many other disorders, autistic children may have a greater effect on the family. As a result, raising autistic children in both developing and developed countries can be challenging for parents and families. To provide professional interventions for the children with autism, many obstacles must be overcome **Wang et al., [38]**

The Centers for Disease Control and Prevention (CDC), 2020 report shows that the prevalence of children diagnosed with ASD by the age of eight is now 1 in 54. The earlier rate, in 2018, was 1 in 59. An increase in ASD prevalence is visible **CDC ., [12]** Care givers for autistic children were found to have a low level of knowledge about the disease. Because of the inadequate parents knowledge this have an impact of the parent practices and attitude toward their children with autism **Mousa et al., [27].**



Every member of the family has a dream child concept that influences their attitudes towards the unborn child. Parents and other family members want the newborn child to be perfect mentally and emotionally and physically sound and along with the child they want to enjoy a happy life. But everyone does not get what he/she wishes. So, if any autistic children are born in a family, its dreams are broken down, so that the parent of children with may have negative attitude toward their children regarding to the diagnosed children **Kausar et al., [19]**

The psychiatric Nurse Assistance to the children with autism and their parents is pointed out as crucial in the performance of the work process of nursing. Reveals the need for a careful look, devoid of preconceptions, attentive to the needs of others and their suffering, since most of the times there is the difficulty of oral expression on the part of the autistic, it is up to the nurse to listening and provision of holistic care **Sena et al., [35]**

Significance of the study:-

The Center for Disease Control and prevention (CDC) estimated that in 2014 autism prevalence was 16.8per 1.000(1 in 59) children 8years of age, the prevalence of autism was significantly higher in boys than in girls and the estimated autism prevalence for white children was 7% greater than that for black children. **Baio et al., [7]** In 2016 the National Survey of Children's Health (**NSCH**) estimated parent reported autism prevalence to be 1 in 40 (2.5 %) children aged 3-17 years **Kogan et al ., [21]**

Despite worldwide reports of increasing prevalence of Autism Spectrum Disorder (ASD), there is no epidemiological data for autism in Egypt **Alnemaary., [4]**An earlier study suggested an estimated prevalence rate of 33.6% among children with developmental disabilities in Egypt **Gobrial. E., et al, [13]** While the Social Solidarity Ministry has estimated, there are 800,000 people with autism in Egypt **Al-Masry Al-Youm., [3]**

So, from the researcher point of view, due to a lack of awareness from the parents about the signs and symptoms of autism disorder and their attitude to deal with this problem, there is a high chance of misdiagnosis or late diagnosis, especially among parents since they are the first member who observe any unusual behavior compared to other children or siblings of the same age group. An early and accurate diagnosis plays a massive role in outcomes and improvement of behavior in the child. So it is important to deal with this phenomenon to help the parents to enhance their knowledge, attitude and practices.

Subjects and Methods

Aim of the study:

This study was aimed to assess knowledge, attitude and practices of parents having children with autism through the following:

- 1) Assess knowledge of parents having children with autism
- 2) Assess attitude of parents having children with autism
- 3) Assess practices of parents having children with autism.

**Research questions: -**

1. What is the level of knowledge, attitude and practice of parents having children with autism?
2. Are there a relation between knowledge, attitude and practice of parents having children with autism?

The subject and methods for this study have been portrayed under the four main items as follows:

- I- Technical item.
- II- Operational item.
- III- Administrative item.
- IV- Statistical item.

I- Technical design:

The technical design included research design, setting, subjects and tools of data collection.

Research Design:

A descriptive research design was utilized to achieve the aim of this study.

Research Setting:

This study was conducted at Al-Abbassia hospital for mental health and addiction outpatient clinic of autism, which is located after the outpatient of psychiatric and mental disorder it is consist of three floor, having waiting area for the family and their children.

The second place was the outpatient clinics in Helwan hospital for psychiatric and mental health. Which serve a large sector of the governorates of south Cairo-Giza and some Upper Egypt governorates.

Study Subjects:

A convenient sample of 60 mothers and their accompanying infants were attending the previously mentioned settings. According to the following inclusion criteria:

Inclusion criteria for children's parents: -

- Primary care giver for the child
- Both gender (male and female children)
- All available age groups.
- Free from any mental or physical problem

Inclusion criteria for children: -

- Both gender (male and female children)
- All available age group children
- Diagnosed with autism according to DSM and the children file.

Tools for data collection

Tools that will be used for data collection includes the following:

1st tool: - structured interviewing questionnaire for parents of children with autism. This questionnaire was designed by the researcher based on reviewing the current relevant literature. It will be written in simple Arabic language to suite parent's level of education. It will be includes two parts:

First part:-

Parents Socio-demographic data questionnaire: this questionnaire concerned with the parent's socio-demographic characteristics status related to variables such as age, sex, level of education, parents occupation, place of residence, and the family income. ...etc.

Second part:-

Children Socio-demographic data questionnaire: this questionnaire concerned with the children's socio-demographic characteristics status related to variables such as age, sex, level of education and child order in the family..... etc

2nd tool: - Parents knowledge scale regarding to autism. Mohamed., [26]& Husien., [17]

This scale was designed and used by Mohamed E., [26] & Husien A., [17].it was adapted and used to assess parent's knowledge regarding to autism through pre-post program, it consist of 5 questions which include sub items based on literature concerning with parent's knowledge about autism related to the meaning of autism, causes, signs and symptoms and treatment method of autism.

Scoring system: - Each item ranged from 0-1, which were classified as (No =0, Yes=1). The answers of every question converted to numerical data, the answer "No" equal 0 mark & the answer "Yes" equal 1 mark. These scores were converted into a percent score. The scores of the parent's total knowledge were categorized into two levels, either Unsatisfactory knowledge (<50%) or Satisfactory knowledge (≥50%).

<50%	Unsatisfactory knowledge
≥50%	Satisfactory knowledge

3rd tool: - Attitude scale of parents toward their children with autism: (the Parental Attitude Research Instrument-PARI Schaefer& Bell., 1958).

This scale was developed by Schaefer& Bell., 1958 (the Parental Attitude Research Instrument-PARI) which were designed to provide information on parent's behavior, perceptions, reactions, values, feelings, etc. Used and modified by Hazarika ,[15]it has been adapted and translated into Arabic. This questionnaire was aimed to assess parental attitude toward their children with autism. The scale was consisting of 23 statements which are rated on a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree) to measure: -

- Love and acceptance
- Embarrassment

- Frustration
- Disappointment
- Overprotection.

Scoring system: The scale of the parent's attitude toward their children with autism contains 23 items. Each item ranged from 1-5, which were classified as (Strongly agree=5, Agree =4, Neutral =3, Disagree =2 and strongly disagree =1). The answers of every question converted to numerical data, the answer "Strongly agree "equal 5 mark & the answer" strongly disagree" equal 1 mark. These scores were converted into a percent score. The total score of the parent's attitude toward their children with autism scale was 23 points While the number of the negative statements were (14) and the positive were (9) statements.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
5	4	3	2	1

4th tool: - the parents practices scale regarding caring of children with autism (Mohamed, E.,[26] :-

This scale was designed and used by (Mohamed, E.,[26]. It was adapted and used to assess the parent's practices regarding caring of their children suffering from autism.

This scale was included five parts:

- ✓ Assess parent's practices regarding daily activities of their children suffering from autism, which include (self feeding, elimination, personal hygiene, wearing clothes and sleep).
- ✓ Assess parent's practices regarding **social interaction skills** of their children with autism.
- ✓ Assess parent's practices regarding **attention and concentration skills** of their children with autism.
- ✓ Assess parent's practices regarding **communication skills** of their children with autism.
- ✓ Assess parent's practices regarding **motor activity skills** for children with autism.

Scoring system:-The scale of the parent's practices regarding caring children with autism Scale contains 5 main items Each item ranged from (0-1-2), which were classified as (No =0, some time=1and Yes=2). The answers of every question converted to numerical data, the answer "No" equal 0 mark & the answer " some time " equal 1 mark and Yes equal 2 mark. The total score of the parent's practices regarding caring children with autism were categorized into two levels, either in competent (<50-75%) or competent (≥75%).

No	Some time	Yes
0	1	2

Content Validity and Reliability:

The used study tools were revised for clarity, relevance, comprehensiveness, understanding, and applicability by a panel of 3 nursing experts from the Faculty of Nursing, Helwan University, to assess the content validity of the study tools. Internal consistency and reliability were measured by using Cronbach's alpha- coefficient test.

Items	Alpha Cronbach	F	P-value
Knowledge	0.835	24.652	<0.001**
Total Practice	0.804	21.751	<0.001**
Total Attitude	0.795	19.274	<0.001**

Pilot Study: -

The pilot study was conducted on (6) parents of children with autism at Al-Abbassia hospital for mental health and addiction and Helwan psychiatric hospital in order to ensure the clarity of questions, applicability of the tools, the time needed to complete them and perform the required modifications according to the available resources. Subjects who shared in the pilot study were excluded from the main study sample.

Field Work: -

An administrative approval was obtained from the medical and nursing directors of each previously mentioned study setting to carry out the study. The actual field work was carried out in December (2020). Filling in the study tools was conducted at the waiting area of the previously mentioned settings. The researcher first met with the parent's and their accompanying infants attending the selected study settings. The researcher then introduced herself to the parents and simply explained the aim of the study to the parents who agreed to participate in the study, and then the parents were interviewed individually using the previously mentioned tools.

III- Administrative Design:

The administrative approval to carry out the study was obtained through an issued letter from the Dean of Faculty of Nursing, Helwan University, to the administrators, and medical and nursing directors of the study settings, explaining the aim of the study to obtain their official permission and cooperation.

Ethical Considerations

Prior to study conduction, an ethical approval was obtained from the Scientific Research Ethical Committee of the Faculty of Nursing, Helwan University. Moreover, the researcher clarified the aim of the study to the parents included in the study. The parents' oral and written approval was a prerequisite to recruit them and their infants in the study. The studied parents were assured that all the gathered data were used for research purpose only and that the study was harmless. Also, the studied parents were informed they could withdraw from the study at any time without giving any reason. Furthermore, the confidentiality of the gathered data and results was ensured.

Statistical Design:

Data collected from the studied sample were revised, coded, and entered using PC. Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 20 to estimate the statistically significant differences between the variables of the study. Data were presented using descriptive statistics in the form of frequencies and percentages. Quantitative data were presented in the form of $\bar{x} \pm SD$. Qualitative variables were compared using chi-square test (X^2). Statistically significant differences were considered at p-value <0.05. Highly statistically significant differences were considered at p-value < 0.001.

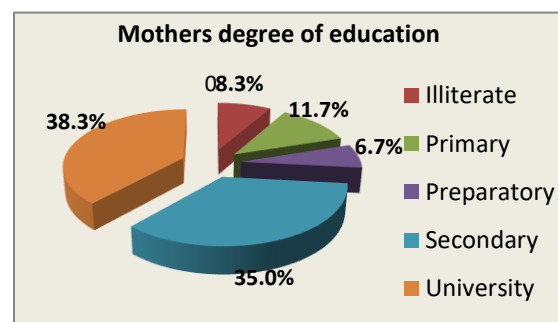
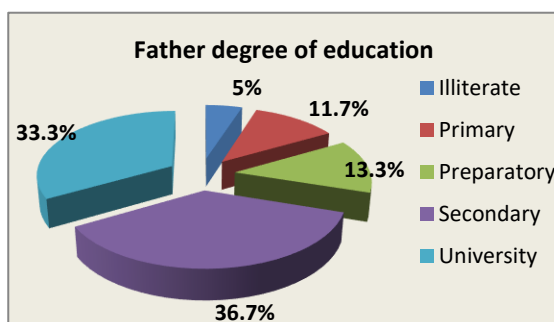
Results:-

Table (1): Socio- Demographic Characteristics of the parents having Children with Autism. n= (60)

Items	N	%
Age (years)		
<30	14	23.3
30- <35	22	36.7
35- <40	15	25
40 or more	9	15
Mean±SD	33.23±4.95	
Gender		
Father	23	38.3
Mother	37	61.7
Residence		
Rural	8	13.3
Urban	52	86.7
Family Income		
Not sufficient for the family's needs	8	13.3
Exactly enough	52	86.7
Number of family members		
2- 3	10	16.7
4- 5	42	70
6 or more	8	13.3
the family history of mental illness		
Yes	6	10.0
No	54	90.0
Parental consanguinity		
Yes	1	1.7
No	59	98.3
Attendance of educational courses		
Yes	13	21.7
No	47	78.3

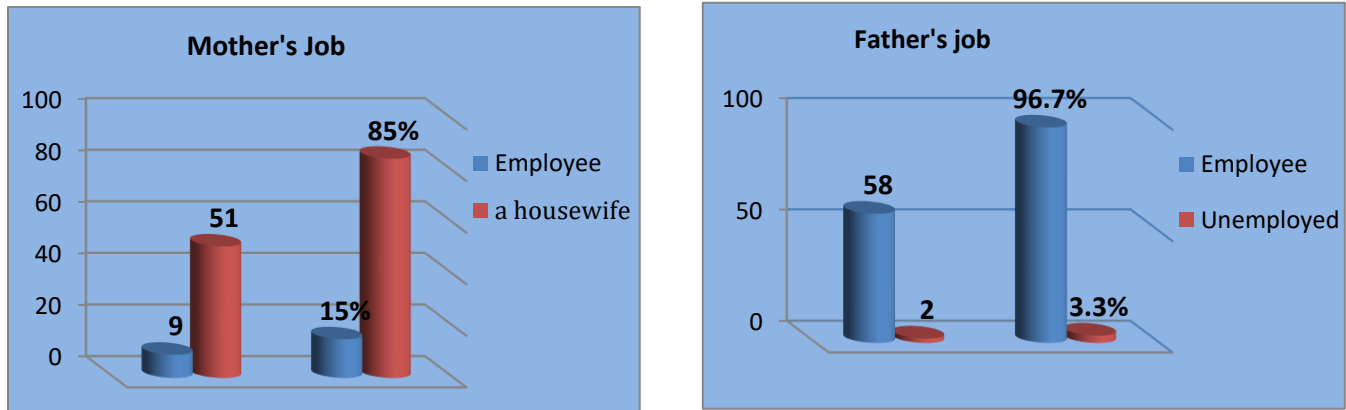
This table shows that, the mean and standard deviation values for the parent's age were (33.23±4.95). About (61.7%) of the studied sample were mothers. (86.7%) of the parents were from Urban. (86.7%) of the parents see that their income is exactly enough to the family needs. (70%) of family member ranged from 4 to 5. (90%) of the parents haven't a history of mental illness in the family. About (98.3%) there weren't a Parental consanguinity between the mother and father, (78.3%) of parents haven't attended any educational courses.

"Fig .1": percentage distribution of the mother's and father's degree of education



This figure clarified that, (36.7) of the mothers their degree of education was university degree and (38.3) of fathers were secondary degree of education.

"Fig .2" Numbers and percentage distribution of the father's job and mother's degree of education.



This figure illustrated that, (96.7%) of the fathers were employee and (85%) of the mothers were housewives.

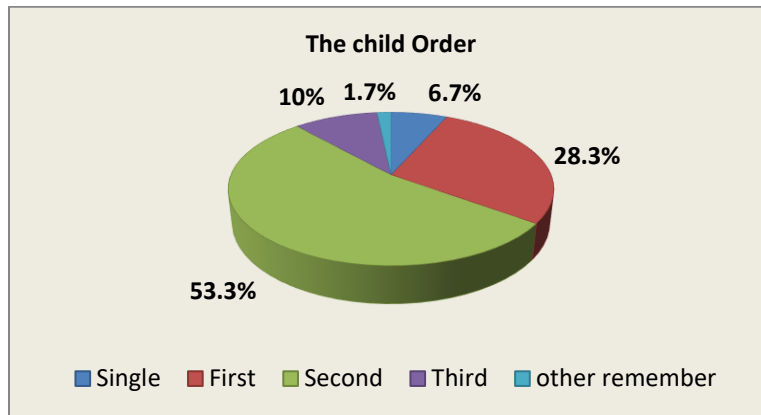
Table (2): Socio-Demographic Characteristics of the Children having Autism. n= (60).

Items	N	%
Age (years)		
<5	13	21.7
5- <10	31	51.7
10 or more	16	26.7
Mean±SD	7.45±2.7	
Gender		
Boys	58	96.7
Girls	2	3.3
The growth rate of the child compared to his peers		
Normal	39	65.0
Abnormal	21	35.0
The degree of autism:- (from the child's record)		
Simple	11	18.3
Moderate	46	76.7
Severe	3	5.0
Does the child suffer from any mental illness besides autism		
Yes	5	8.3
No	55	91.7
When was the child suspected of being abnormal	2.34±0.92	
When was a child diagnosed with autism	3.07±1.17	

This table represents that the age of the children in the study ranges from 5- <10 was (51.7%) with a Mean±SD of 7.45±2.7. (96.7%) of the children in the study were male. (65.0%) of the children were normal growth rate compared to their peers. (76.7%) of the children Moderate degree of autism. (91.7%) of the children not suffered from any mental illness besides autism. The mean and standard deviation values for age of the child suspected of

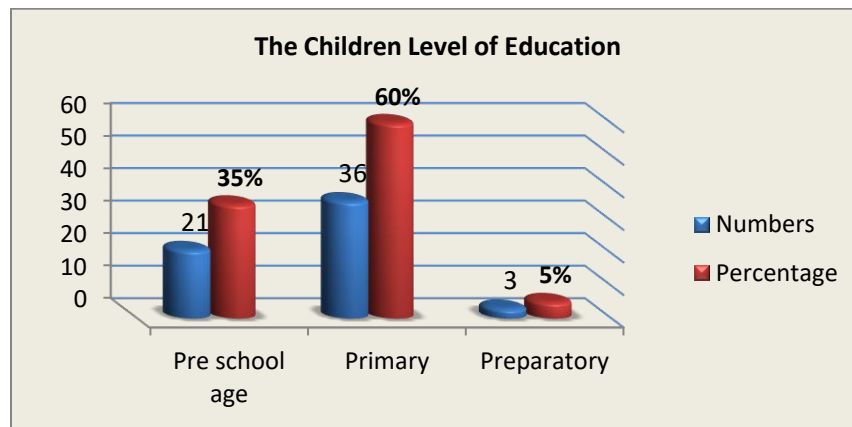
being abnormal were 2.34 ± 0.92 , while the mean and standard deviation values for age of the child diagnosed with autism were 3.07 ± 1.17 .

"Fig .3" percentage distribution of the child order within the family.



This figure illustrated that, (53.3%) of the children were the second child with I the family.

"Fig .4" number and percentage distribution of The Children Level of Education.



This figure illustrated that, (60%) of the children were at the primary school.

"Table 3 a" Number and percentage distributions of knowledge of the parents have children with Autism. n= (60)

The parent's knowledge regarding autism disorder	Parent's knowledge N=60			
	Satisfactory		Unsatisfactory	
	N	%	N	%
What is the concept of autism :-				
autism is a term given to one of the degrees of mental retardation	12	20.0	48	80.0
autism is a developmental disorder characterized by an impairment or cessation in sensory perception, language, ability to	15	25.0	45	75.0

communicate, and cognitive and social development				
autism is a disorder in the social development of the child	13	21.7	47	78.3
What are the types of autism :-				
Autism Spectrum Disorder	24	40.0	36	60.0
Autistic disorder	23	38.3	37	61.7
Asperger's disorder	21	35.0	39	65.0
Childhood disintegrative disorder	18	30.0	42	70.0
Ret disorder	17	28.3	43	71.7
Pervasive developmental disorder not otherwise specified	23	38.3	37	61.7
Don't know	20	33.3	40	66.7
What are the causes of autism :-				
Genetics	25	41.7	35	58.3
Parental behavior (social upbringing)	24	40.0	36	60.0
Chemical agents	26	43.3	34	56.7
Unfavorable circumstances during the first six months of pregnancy	27	45.0	33	55.0

This table illustrated the majority of the parents had unsatisfactory knowledge about the concept of autism. Also slightly more than three quarter of the parent had unsatisfactory knowledge about the types of the autism disorder. In addition to more than half of the parents had unsatisfactory knowledge about the causes of autism disorder.

"Table 3 b" Number and percentage distribution of knowledge of the parent's having children with Autism. n= (60)

The parent's knowledge regarding autism disorder	Parent's knowledge N=60			
	Satisfactory		Unsatisfactory	
	N	%	N	%
What are the signs of autism				
Language slowly developed	15	25.0	45	75.0
The lack of development of the language and its standing at a certain limit	17	28.3	43	71.7
Spend less time with family members	15	25.0	45	75.0
Lack of interest in forming relationship with others	18	30.0	42	70.0
Increased tension if someone touches him	20	33.3	40	66.7
Desensitization to pain	19	31.7	41	68.3
Imitating the movements of others	15	25.0	45	75.0
Lack of imaginative play	14	23.3	46	76.7
Appears as if not hearing	19	31.7	41	68.3
Refusal to hug from others	16	26.7	44	73.3
Not being able to look into the eyes of the person speaking to him.	17	28.3	43	71.7
Repeating the words of others	20	33.3	40	66.7
Resistance to change in the usual system	24	40.0	36	60.0
Having repetitive movements	12	20.0	48	80.0
Fear of danger	19	31.7	41	68.3

What are the treatment methods for a child with autism				
Medications	19	31.7	41	68.3
Cognitive therapy	21	35.0	39	65.0
Behavioral therapy	23	38.3	37	61.7
Cognitive Behavioral Therapy	24	40.0	36	60.0
speech therapy	16	26.7	44	73.3
Family counseling	19	31.7	41	68.3

This table illustrated that (75.0%) of the parents had unsatisfactory knowledge about Language development of their children, (66.7%) of the parents had unsatisfactory knowledge about Increased tension if someone touches him symptoms of autism. also, (76.7%) Lack of imaginative play, (68.3%) Appears as if not hearing, (80.0%) having repetitive movements. In addition to (68.3%) of the parents had unsatisfactory knowledge about Medications and Family counseling and (73.3%) about speech therapy.

Table 4" Total Attitude of parent's having children with autism (n =60)"

Total attitude of parents having children with autism	Parent's attitude N=60	
	N	%
Positive	40	66.7
Negative	20	33.3
Mean±SD	81.22±9.67	

This table illustrated that more than three quarters of the parents (**66.7%**) have a positive attitude toward their children with autism.

"Table 5"Total knowledge of parent's having children with autism (n =60)

Total knowledge of parents having children with autism	Parent's knowledge N=60	
	N	%
Satisfactory	19	31.7
Unsatisfactory	41	68.3
Mean±SD	15.1±4.36	

This table illustrated that more than three quarters of the parents (**68.3%**) had unsatisfactory knowledge about autism disorder while the total knowledge of the parents having children with autism Mean ± SD were **15.1±4.36**.

Part (IV):

"Table6a" Number and percentage distributions of daily living activities practices of the parent's having children with autism (n= (60)

Daily living activities of children with autism	Parent's practices N=60					
	Yes		Some times		No	
	N	%	N	%	N	%
Self feeding practices						
1. Training the child in preparation and putting food	8	13.3	16	26.7	36	60.0
2. Training the child in feeding him/her self	7	11.7	15	25.0	38	63.3
3. Using cup for drinking or using a straw in drinking fluid	9	15.0	17	28.3	34	56.7
4. Encourage the child to set until ending meal eating	12	20.0	14	23.3	34	56.7
5. Determining eating time and take in concentration the child pictures	10	16.7	13	21.7	37	61.7
6. Discussing the food with the child by using pictures	6	10.0	16	26.7	38	63.3
7. Encourage the child to and determine his/her attitude toward foods	7	11.7	14	23.3	39	65.0
8. Using dolls and playing objects to teach types of food	9	15.0	11	18.3	40	66.7
Elimination						
1. Observing the child to identify his/her time of elimination	5	8.3	18	30.0	37	61.7
2. Make schedule to enter bathroom regularly on fixed time	10	16.7	9	15.0	41	68.3
3. Training the child to go to bathroom after every meal regularly	8	13.3	12	20.0	40	66.7
4. Encourage the child to go to bathroom when needing	6	10.0	11	18.3	43	71.7
5. Knowing the child the bathroom place	4	6.7	14	23.3	42	70.0
6. motivate the child when he/she go to bathroom for elimination	4	6.7	19	31.7	37	61.7
7. Motivate the child when he/ she still set until ending elimination	5	8.3	10	16.7	45	75.0

This table clarifies that ,(63.3%),(63.3%)and (66.7%) of the parents had in competent practices regarding to their children Self feeding practices(Training the child in feeding him/her self, discussing the food with the child by using pictures and Using dolls and playing objects to teach types of food. Also, there were(68.3%),(71.7%) and (75.0%)of the parents had competent practices regarding to their children elimination practices such as(Make schedule to enter bathroom regularly on fixed time, Encourage the child to go to bathroom when needing and motivate the child when he/ she still set until ending elimination.

"Table 6b"Number and percentage distributions of practices of the parent's having children with autism (n= (60)

Daily living activities of children with autism	Parent's practices N=60					
	Yes		Some Times		No	
	N	%	N	%	N	%
Personal hygiene						
1. Training child to wash his/her hands before and after eating	12	20.0	14	23.3	34	56.7
2. Training child to brushing his/her teeth	18	30.0	14	23.3	28	46.7
3. Training child to clean his/her nose	19	31.7	15	25.0	26	43.3
4. Training child to clean his/her self after	15	25.0	16	26.7	29	48.3

elimination						
Wearing clothes skills						
1. Training child to wear clothes in right (internal clothes after that shirt, trousers)	15	25.0	10	16.7	35	58.3
2. Training child how to get off clothes	16	26.7	12	20.0	32	53.3
3. Training child how to wear shoes	12	20.0	16	26.7	32	53.3
Sleeping						
1. Reading nice stories appropriate to child age before sleeping with 5 minute every day	16	26.7	15	25.0	29	48.3
2. Change my position from sleeping to set bedside child with continuous support touch child	10	16.7	18	30.0	32	53.3
3. Decreasing support touch and depending on speak with him/her in soft sound	15	25.0	16	26.7	29	48.3

This table clarifies that , (56.7%),(48.3%) of the parents had in competent practices regarding their children Personal hygiene practices such as(Training child to wash his/her hands before and after eating, Training child to clean his/her self after elimination)also,(58.3%),of the parents had in competent practices regarding Wearing clothes skills in addition to (48.3%),(53.3%) and (48.3%) of the parents had in competent practices regarding Sleeping practices.

"Table7" Number and percentage distribution of the Social interaction practices of parent's having children with autism n= (60)

Social interaction skills for children with autism	Parent's practices N=60					
	Yes		Sometimes		No	
	N	%	N	%	N	%
1. Encouraging children to initiate relationship with other children (playing in group)	8	13.3	14	23.3	38	63.3
2. Determine to child role to share with family members	9	15.0	11	18.3	40	66.7
3. Training child to use hand gesture remark for approval or disapproval	12	20.0	9	15.0	39	65.0
4. Training child to have eye contact when communicate with others	11	18.3	9	15.0	40	66.7
5. Encourage child to go to clubs and nursery	10	16.7	14	23.3	36	60.0
6. Encourages child to observe and concentrate with other children and imitate them	9	15.0	7	11.7	44	73.3
7. Taking child in birthday events and other family events and parties	14	23.3	8	13.3	38	63.3
8. Taking child In holiday	17	28.3	9	15.0	34	56.7
9. Encouraging child to play with others children in group playing that he/she interested with it	12	20.0	12	20.0	36	60.0

This table shows that, (**63.35**),(**66.7%**), (**65.0%**), (**66.7%**) and (**73.3%**) of the parents had in competent practices regarding Social interaction skills for children with autism such as Encouraging children to initiate relationship with other children (playing in group), Determine to child role to share with family members, Training child to use hand

gesture remark for approval or disapproval, Training child to have eye contact when communicate with others and Encourages child to observe and concentrate with other children and imitate them.

"Table 8" Number and percentage distribution of the Attention and concentration practices of parent's having children with autism n= (60)

Attention and concentration skills for children with autism	Parent's practices N=60					
	Yes		Sometimes		No	
	N	%	N	%	N	%
1. Grasping child attention to something for a long period	13	21.7	16	26.7	31	51.7
2. Giving positive reinforcement when he/she respond to me	16	26.7	4	6.7	40	66.7
3. Giving clean simple information and step in training specific skills	9	15.0	12	20.0	39	65.0
4. Using activity schedule to assist child to follow daily routine	12	20.0	8	13.3	40	66.7
5. Encourage child to practice some plays helping in concentration as(building blocks, drawing picture ,and similarity pictures)	16	26.7	16	26.7	28	46.7
6. Grasping child attention by taping on his/her shoulders continually and call him /her by his/her name	10	16.7	8	13.3	42	70.0

This table shows that, (66.7%),(66.7%) and (70.0%) of the parents had in competent practices regarding Attention and concentration skills for children with autism such as, Giving positive reinforcement when he/she respond to me, Using activity schedule to assist child to follow daily routine and Grasping child attention by taping on his/her shoulders continually and call him /her by his/her name.

"Table 9"Number and percentage distributions of the communication practices of parent's having children with autism n= (60)

communication skills for children with autism	Parent's practices N=60					
	Yes		Some Times		No	
	N	%	N	%	N	%
1. Starting communication with one word and gradually move to complex sentence	9	15.0	6	10.0	45	75.0
2. Using picture, written, verbal, with gestures. Visual with the child to train specific skills	14	23.3	9	15.0	37	61.7
3. Avoid asking question needs to more explanation from the child	16	26.7	10	16.7	34	56.7
4. Using gesture to grasp the child attention in communication with the child	9	15.0	14	23.3	37	61.7
5. Encourage child to pronoun words of specific thing that pointing to it	7	11.7	13	21.7	40	66.7
6. Using picture to that is used continuous every day to facilitate	15	25.0	17	28.3	28	46.7

communication with the child						
7. Helping the child in practice activity that increase mouse muscles coordination	9	15.0	15	25.0	36	60.0
8. Training child on imitate tongue movement, tone of voice and some pictures	12	20.0	12	20.0	36	60.0

This table clarifies that, (75.0%),(56.7%),(66.7%)and (60.0%) of the parents had in competent practices regarding communication skills for their children , such as Starting communication with one word and gradually move to complex sentence, Avoid asking question needs to more explanation from the child, Encourage child to pronoun words of specific thing that pointing to it and Training child on imitate tongue movement, tone of voice and some pictures.

"Table 10"Number and percentage distributions of the motor activity practices of parent's having children with autism n= (60)

motor activity skills for children with autism	Parent's practices N=60					
	Yes		Some times		No	
	N	%	N	%	N	%
1. Encourage child to practice simple physical activity as reining and jumping	15	25.0	20	33.3	25	41.7
2. Encourage child to holding pencil and painting	17	28.3	18	30.0	25	41.7
3. Encourage child to practice fine motor activity by fingers	16	26.7	14	23.3	30	50.0
4. Encourage child to steady walking	14	23.3	16	26.7	30	50.0
5. Training the child to reduce stereotyped movements	10	16.7	15	25.0	35	58.3
6. Encourage child to join in different physical activity	13	21.7	16	26.7	31	51.7

This table illustrated that,(50.0%),(50.0%),(58.3%) and(51.7%) of the parents had in competent practices regarding motor activity skills for their children such as Encourage child to practice fine motor activity by fingers, Encourage child to steady walking, Training the child to reduce stereotyped movements and Encourage child to join in different physical activity.

"Table 11"Total practices of parent's regarding their children disorder (n =60)

Total practices of parents having children with autism	Parent's practices N=60	
	N	%
Competent	22	36.7
Incompetent	38	63.3
Mean ± SD	78.6±14.66	

This table shows that the total practices of parents (63.2%) were incompetent regarding caring of their autistic children, while the Mean ± SD were78.6±14.66.

"Table 12"-Relation between socio demographic characteristics of the parents and their total Knowledge. (n=60)

Items	Total knowledge N=60					
	Satisfactory		Unsatisfactory		Chi-square	
	N	%	N	%	X2	P-value
Age (years)						
<30	0	0.0	14	100.0	23.515	<0.001** HS
30- <35	4	18.2	18	81.8		
35- <40	7	46.7	8	53.3		
40 or more	8	88.9	1	11.1		
Father's degree of education						
Illiterate	0	0.0	3	100.0	22.735	<0.001** HS
Primary	0	0.0	7	100.0		
Preparatory	0	0.0	8	100.0		
Secondary	5	22.7	17	77.3		
University	14	70.0	6	30.0		
Mother's degree of education						
Illiterate	0	0.0	5	100.0	17.078	0.002* S
Primary	0	0.0	7	100.0		
Preparatory	0	0.0	4	100.0		
Secondary	5	23.8	16	76.2		
University	14	60.9	9	39.1		
Mother's job						
Employee	6	66.7	3	33.3	5.994	0.014* S
a housewife	13	25.5	38	74.5		

This table shows that, there are highly statistically significant differences between total knowledge and the age & Father's degree of education. Also, there are statistically significant differences between total knowledge Mother's degree of education when p-value was **0.002*** and Mother's job when p-value was **0.014***.

"Table 13" -Correlation between the parent's total practices and Total Knowledge. (n=60)

Total practices	Total Knowledge					
	Satisfactory		Unsatisfactory		Chi-square	
	N	%	N	%	X2	P-value
Competent	19	31.7	3	5.0	48.027	<0.001** HS
Incompetent	0	0.0	38	63.3		

>0.05 Non significant <0.05 significant <0.001** High significant*

This table shows that there are highly statistically significant differences positive correlation between the parent's total practice and total Knowledge of parents having children with autism.

**Discussion: -**

Autism Disorder is a developmental disorder usually noticed among children within the first two or three years of their lives which have a profound impairment in social communication and social interaction and restricted and repetitive behavior, interest, and activities, Some studies concluded that parents having autistic children reported higher psychological distress and showed lower marital satisfaction, self-confidence and it increased negative emotions such as anger, fear, and resentment **Muhammad., [28]**.

Every member of the family has a dream child concept that influences their attitudes towards the unborn baby. Parents and grandparents want the baby to be perfect mentally and emotionally and physically sound and along with the baby they want to enjoy a happy life. But everyone does not get what he/she wishes. So, if any autistic baby is born in a family, its dreams are broken down. Caring for an autistic baby needed more struggle and at the same time parents always think about the child's uncertain future that create psychological disturbances among the parents **Kousha et al., [22]**

Regarding to socio-demographic characteristic for the parents of children with autism under the study, the finding of the present study showed that, about two thirds of the studied sample were mothers; this may be due to that the Fathers spend most of their time at work and are responsible for providing money for their children, while of the mothers in the Egyptian culture are responsible for the household and child care. These results were supported by many studies as **Gabra, et al.,[13]** who conducted a study on 70 caregivers of children with autism and found that, more than half of the family caregivers were mothers of children with autism.

The present study revealed that, the mean age of parent's (33.23 ± 4.95), and more than half of them are in age group 30- <35years old, This reflects that parents at this age are mature enough to take responsibility for providing care for their children. This result was in accordance with **Al ansari et al., [1]** who conducted a study on 126 family caregivers of children with autism at the Child Psychiatric Unit, Psychiatric Hospital, and Kingdom of Bahrain who found that more than three quarter of the studied sample age ranged from 31-60 years old.

The current study results regarding Residence of the study sample revealed that More than three quarters of the parents were from urban area. This finding might be due to the environmental-related factors which contribute to this disparity. The exposure to hazardous air pollutants during pregnancy and early childhood may have potential association with increased risk for autism, while hazardous air pollutants usually concentrate in urban environments. Hygiene practices commonly in urban areas lowered microbial exposure in pregnancy and neonatal life that affects the risk for ASD. These results goes in the same line with **Mohamed., [25]**who conducted a study on 68 parents of children having autism, found that more than three quarters of the parents were from urban area.



Concerning the Father's degree of education, the present study revealed that, the majority of the father's degree of education was secondary school this result was in agreement with **Hoang et al. [16]** who conducted a study on about 2000 children those positively diagnosed with autism. And found that most of the fathers had completed secondary school education or higher.

Regarding to level of education of the mothers having children with autism under the study, the study revealed that, the majority of the mother's level of education was University degree. This result was in agreement with **Al ansari et al., [1]** who found that near to half of the studied sample was University degree of education.

Regarding to the family income of the studied sample, present study shows that; more than half of the parents see that their income is exactly enough to their requirements. this is may be due to the spend a lot of to treat their children suffered from autism and because most of the mothers are house wife so that the family income exactly sufficient for the family's needs, this finding in agreement with **Oneib et al., [32]** who conducted a study among 130 children with autism and their parents followed in child psychiatry consultation of the hospital for the mental health for ASD for approximately 2 years, found that the family income and socioeconomic status of the family was mild or enough to the family needs.

The current study results illustrated that, more than half of the studied sample there were from 4- 5 person on the family. This study was in the same line with **Hamid et al., [14]** who conducted the study on 270 students, 90 students were autistic and the remaining 180 were non-autistic children for comparison. found that more than half of studied sample size or numbers were up to 4 member on the family.

Regarding to the history of mental illness in the family this study revealed that, more than three quarters of the parents reported that ,there is no history of mental illness in the family, this is disagreed with **Alotaibi., et al [5]** who carry out the study on 127 children with autism at Center for Autism Research, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia, found that The most frequently reported positive family history was for speech delay, followed by intellectual disability , and ADHD. There were three cases with a family history of Down's syndrome and some of them have Psychiatric disability.

Regarding to the Parental consanguinity between the mother and father, this study shows that, all of parents reported that there wasn't Parental consanguinity between the mother and father except one, this result was disagree with **Alshaigi., [6]** who carried out a study on 172 parents of children with autism, found that there were Parental consanguinity between the majority of the parents.

The present study explained that, more than three quarters of the study sample wasn't attended any educational courses on how to deal with your child with autism before the program of this study, this may be due to due to the lack of specialized centers for autism and the lack of training courses.. this study in agreement with **Alkazam & Al-**



Dujaili., [2] who conducted a study on (52) caregivers were selected from Imam Hussein Autism Center (IHAC) was (37) and (15) sample from Imam Ali Institute in Najaf city, found that, more than tree quarter of the study sample were not trained for autism spectrum disorder or attended any educational courses on how to deal with your child with autism.

the finding of the present study illustrated that, slightly more than half of the children in the study age ranged from 5- <10 years with Mean±SD 7.45±2.7, that is may be due to the specialist can confirmed the diagnosis of the children with autism disorder in this age, this finding supported by **Nik Adib. Et al., [31]** who carry put the study on 227 of parents having children with autism. Found that, the mean age of AD children was 7.45 (3.54) years.

The present study clarified that, the majority of children with autism under the study were male. This was in line with the report of the Center for Disease Control and Prevention in 2018, with four times higher of boys' percentage than that of girls **Maenner et al., [23]** Therefore; this may be due to physical differences between male and female and the body composition differences of them.

Regarding to The order of the child within the family, the present study cleared that, half of the children under the study were the second child for the family. This is may be due to that the child orders are very important factors that affect the parent's ability to gain knowledge about the disorder. The present study is compatible with **Khudhair., [20]** who found that the second child has a higher chance of having ASD than the first child.

Regarding to The children with autism level of education, the present study clarified that, slightly more than half of the study have Primary school; this result disagreed with **Bhuiyan., [8]** Who conducted the study on 154 children with autism at two special schools and two specialized hospitals of Dhaka city, found that, the majority of the children were in pre-primary level of education.

Regarding to The children degree of autism, the present study revealed that more than three quarters of children with autism under the study have Moderate degree of autism, This may be due to early detection and of the child disorder, and closed observation of the caregivers to their children and providing complete care and management for them , this result was disagreement with **Tan &Quang., [37]** who found that more than half of the children under the study sample have severe degree of autism.

The present study explained that, the majority of the children don't suffer from any mental illness besides autism; this result was disagree with **Oneib et al., [32]** who carried out a study on 130 parents of children having autism and found that the children with autism was co morbid with other organic and mental illness.

Regarding to the child age that suspected of being abnormal, the present study cleared that Mean±SD of the suspected age of abnormality was 2.34±0.92 years, this may be due to that at this age the parents can observe some



changes on their children and differences among the children and the other child in the family such as, changes in verbal and non-verbal communication, social relationship, delays in speech, attention to others and the child concentration with other people. This result was in agreement with **Nguyen., et al [30]** who carry out the study on 32 children diagnosed with autism, found, that the average age of first sign abnormality was 24.8 months.

The present study revealed that, the age in which the children diagnosed with autism was 3.07 ± 1.17 years. This may be due to the identification of autism is difficult before the age of about 12 months but diagnosis is ordinarily possible by the age of two years. The current study result was in agreement with **Bhuiyan, et al., [8]** who conducted a study on 154 children with autism, found that, about the children's age at diagnosis of autism the majority of the children were diagnosed at the age of 3-4 years.

Current study results revealed that, nearly more than three quarters of the parents had incorrect answer 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., [36]** who carry out 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 in correct 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.

Regarding parents' total knowledge, the current study revealed that, nearly more than three quarters of the parents had unsatisfactory knowledge this result agree with **Saad et al.,[34]** who carried out a study on 120 parents of children diagnosed with autism at child psychiatry out-patient clinic in psychiatry center at Tanta university hospital, El-Gharbia governorate and found that, the half of them had poor knowledge. Also, slightly less than one quarter had good knowledge and more than one quarter of them had average knowledge.

Regarding to the parents' total practices, the present study shows that, slightly more than three quarters of the parents had incompetent practices regarding their children with autism. This finding was supported by **Hutton, [18]** who conducted a study in New Zealand about autism spectrum disorders and diet in children, he found that 65% of parent had unsatisfactory practices regarding caring of their children with autism.

Regarding to the parents' total attitude, the present study shows that, more than three quarters of the parents have positive attitude toward their children with autism. this study result in agreement with **marcus & schpler ., [24]** who applied a study in New York about " parents as co therapists with autistic children ", found that more than three quarters of the parents had positive attitude toward their children with autism.

The current study observed that, there was a highly statistically significant difference between total score of parents' knowledge and their socio demographic characteristics such as the parent's age. Level of education and the mother's job. This result agreed with **Mousa O., et al [27]** who found that there was a highly statistically significant between total knowledge and the parent's age but there wasn't any statistical significance between other socio demographic characteristic of the parent having children with autism.



The current study revealed that, there was a highly statistical significant difference positive correlation between total knowledge and total practices of parents having children with autism. This result in agreement with **Chandran, H., et al.,[11]**who carried out a study on primary caregivers of children with ASD from five different centers of Satya special school at Puducherry. A total of 60 primary caregivers, found that, there was a positive correlation between total knowledge and total practice among primary caregivers of children with autism.

Conclusion

The present study concluded that, nearly more than three quarters of the parents had unsatisfactory knowledge regarding their children disorder. Also more than three quarters of the parents had positive attitude toward their children. In addition to, slightly more than three quarters of the parents had incompetent practices regarding their children with autism.

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Recommendation

Based upon the finding of the current study and the research hypothesis; the following recommendations can be deduced:

- Conducting a continuous practical training and health educational programs for all members of the families having children with autism.
- Encourage the parents of children with autism to engage in a cognitive behavioral therapy to enhancing their attitude toward children and helping them to cope with their children disorder.
- Psychiatric nurse working in this area should provide the parents of children with autism with a discharge plan which include increase the parent's awareness about the importance of follow up and the continuous check up for their children and to take the appropriate treatment after all treatment sessions.
- It is important to develop a training program for workers in the educational system to learn skills on how to work with children with Autism. This will help to ensure that the children with Autism are taught the right behaviors and will receive the most benefit from their education.



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