

# The Anxiety Level of the Children with Autism and Its Relationship with Several Variables in Qatar

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## Abstract

The present study aimed to explore the anxiety level of the children with autism in Qatar. It aimed to explore whether there is any statistically significant difference between the anxiety levels of the autistic children which can be attributed to (gender, school stage, school type or family type). The researchers adopted a descriptive analytical approach. The sample consists from 250 female and male children with autism. Those children were selected from public and private schools in Qatar. The scale of the present study was developed based on the anxiety scale for children with autism spectrum disorder (ASC-ASD). The latter scale was developed by Rodgers et al. (2016). It consists from 24 items. It collects demographic data about (gender, school stage, school type and family type). The researchers concluded that the anxiety level of the children with autism in Qatar is low. They concluded that there isn't any statistically significant difference between the anxiety levels of the children with autism which can be attributed to (gender or school stage). They concluded that there are statistically significant differences between the anxiety levels of the children with autism which can be attributed to (the school type or family type). The latter differences are for the favor of the children in private schools. They are for the favor of the children who live in families in which one parent or both parents passed away. The researchers recommend integrating the children with autism into society through engaging those children in extra-curricular activities.

**Keywords:** anxiety, autism, children with autism, Qatar

## 1. Introduction

Governments provide much attention to the cognitive and physical development of children of various age categories. They also provide much attention to the children with special needs. That's because those children are in need for special care and services. However, the children with autism are in need for more attention than the children with other disabilities.

Autism is considered a neuro-developmental disorder that negatively affects one's capability to do daily life activities. It manifests during the early years of one's life. Autistic people suffer from many problems. For instance, they suffer from problems in communicating and interacting with others. They suffer from developmental problems. They suffer from problems in establishing and maintaining good social relationships with others. They carry out repetitive and limited behaviors. They have limited interests. They suffer from the repetitive use of words and things. They suffer from problem in concentration. They show low level of responsiveness (Al-Deeb, 2016).

Many scholars, and doctors conducted studies about autism. That's because autism is a serious disability that has many negative impacts on one. For instance, autism hinders one from developing properly in all areas, especially in the language area. It negatively affects one's learning outcomes. It negatively affects the way one interacts socially with others (Naser, 2012).

Autism is considered a neuro-developmental disorder that negatively affects one's development and capability to carry out activities. 1% of children worldwide suffer from autism. Autism hinders children from interacting and communicating effectively with others. It makes people do atypical and repetitive behaviors (The American Psychiatric Association (APA), 2013).

The children with autism look normal at the time of birth. They don't have physical disability. The early symptoms of autism are represented in poor communication capabilities. Later on, parents notice that their

children have poor capabilities in establishing social relationships with others. They notice that their children tend to alienate themselves from others. They notice that their children experience language-related problems. They notice that their children have poor capability in understanding ideas.

Autistic children may appear as mentally retarded children. However, the mentally retarded children show better social skills than the children with autism (Ma'azah, 2015). Based on the aforementioned theoretical literature, autistic children suffer from various social and psychological problems throughout their lives. However, the severity of such problems varies from one person to another. Such psychological problems include: experiencing anxiety disorders.

Similar to normal children, autistic children may suffer from anxiety in threatening situations. There are several reasons behind experiencing anxiety. Such reasons include: teaching the student something new and meeting new children. They include: separating the child from his/her parents. For instance, the working parents may put the child at a nursery or a relative's house. All these situations may make normal and autistic children experience anxiety.

Al-Ghunaimi (2010, p. 17) defines autism as a developmental disorder which negatively affects one's verbal and non-verbal communication. Autism affects the language-related capabilities and interests. It negatively affects one's capability to memorize words. It negatively affects one's social knowledge. It negatively affects one's visual and cognitive memories (Al-Ghunaimi, 2010, p. 17).

The American Psychiatric Association (2000) issued the fourth edition of the diagnostic and statistical manual of mental disorders. Based on the latter edition, pervasive developmental disorders may include the following disorders: Asperger syndrome, Rett syndrome, autism, and childhood disintegrative disorder (CDD). Autism is the most serious disorder among pervasive developmental disorders. It negatively affects the way children develop. It makes the children alienated in their own world (Al-Zare', 2010; the diagnostic and statistical manual of mental disorders-fourth edition, 2000).

In the light of the aforementioned information, autism negatively affects child development, especially the psychological development. It hinders the children from integrating effectively into the society. It makes the children isolated from others.

Based on the diagnostic and statistical manual of mental disorders (DSM-5, 2013), the symptoms of autism are classified into 3 types based on severity. Each degree of severity determines one's social and communication capabilities. It determines how repetitive the behavior is and how limited the interests are. The symptoms of autism are classified today into three levels. The third level involves (symptoms that require very substantial support). The second level involves (symptoms that require substantial support). The first level involves (symptoms that require support) (DSM-5, 2013).

There are differences between societies in terms of the degree to which autism is prevalent (Al-Zraiqat, 2010). However, the number of autistic individuals in societies have been increasing. That may be attributed to several factors. Such factors include: the increasing awareness about autism in societies. They include the development of professionals' diagnostic capabilities. They include: the development of diagnostic criteria.

It's difficult to calculate accurate rates for the extent of prevalence of autism in societies. That's because there are various diagnostic criteria for autism. Among 1000 births, there are 6.7 autism spectrum disorder cases. Among 4000 births, there are 6.7 cases with classical pattern of autism. Among 1500 female births, there is one case with Rett syndrome. Among 1000 births, there are 4.8 cases with Asperger syndrome. The latter statistics were recorded in the United States. In Japan, among 10,000 births, there are 16.2–21.2 cases of autism (DSM-5, 2013).

The early childhood stage is considered very important stage in one's life. That's because this stage affects one's future life. During the early childhood stage, children's physical and psychological capabilities shall significantly develop. During the early childhood stage, children may experience generalized anxiety disorder. In fact, about 10% of children experience generalized anxiety disorder (Al-Farsi, 2018). The latter disorder may be attributed to social anxiety and separation anxiety. For instance, some children are separated from their parents due to divorce or death. The generalized anxiety disorder increases the probabilities of experiencing suicide. It increases the probabilities of experiencing psychiatric disorders (e.g., depression) in later stages in life (Wehry et al., 2015). It's suggested that there is a significant relationship between anxiety and autism due to a genetic cause (Geschwind, 2011). Due to the major negative impacts of anxiety, it is necessary to conduct studies about the anxiety level of autistic children. Conducting such studies shall enable decision makers to take effective measures and decisions for promoting security among autistic children.

Based on the relevant theoretical literature, the development of autistic children is affected by several psychological factors. Such factors include: anxiety and stress. Several studies suggest that anxiety is prevalent among autistic children. Therefore, the researchers believe that it's necessary to conduct studies about anxiety among autistic children.

Psychologists suggest that anxiety is an unpleasant emotional state that is experienced due to having a perceived threat in the surrounding environment. Anxiety is associated with certain personality types. It may be useful sometimes. That's because it motivates one to work hard and modify his/her behavior in a manner that's consistent with the surrounding environment. In some cases, anxiety is a disorder. In this case, anxiety negatively affects one's development and capability to learn (Al-Farsi, 2018).

MacLennan et al. (2020) suggest that autistic children are at greater risk of experiencing anxiety. They suggest that experiencing problems in sensory reactivity by autistic children are a greater risk factor for experiencing anxiety. They suggest that there is a relationship between sensory hyper-reactivity from one hand and anxiety and some phobias from another hand (MacLennan et al., 2020).

Rodgers et al. (2019) suggest that anxiety disorder is common among autistic children. The key symptoms of anxiety disorder include: intolerance for uncertainty. Such intolerance manifests through negative emotional, and cognitive, reactions to unknown situations. It may manifest through negative behavioral response to such unknown situations (Rodgers et al., 2019).

Based on the aforementioned literature, autistic children often feel lonely. They also experience problems in interacting socially with others. Such problems make autistic children feel confused about the surrounding environment. They make those children experience anxiety. It should be noted that the severity of the symptoms of autism differs from one autistic child to another.

Several studies—e.g., Rodgers et al. (2019)—suggest that autistic children suffer from poor perceptual abilities. In other words, those children suffer from perceptual problems. For instance, they experience problems in auditory and visual perception. They can be provided with training to address such problems. The perceptual problems lead to experiencing other disorders, such as: sleeping and eating disorders. Hence, autistic children must be provided with training about the way of processing perceptual information. Such training shall enable autistic children to respond effectively to stimuli. It shall enable autistic children to engage actively in daily life activities at schools and worship houses. The parents must be provided with training about the way of dealing with their autistic children at home (Rodgers et al., 2019). Due to serious impacts of autism, the researchers of the present study believe that it is important to conduct studies about autistic children.

The researchers of the present study believe that anxiety negatively affects the psychological well-being of autistic children. They believe that anxiety negatively affects the outcomes of the learning process. For instance, Lowe and Ang (2012) suggest that anxiety causes behavioral, mental and physical problems. They also add that anxiety negatively affects one's academic achievement. Due to problems caused by anxiety, the researchers of the present study aimed to explore the anxiety level of autistic children in Qatar.

### *1.1 Statement of the Problem*

Psychological problems in general, and anxiety in particular have been receiving much attention by the researchers specialized in autism-related issues. About 50% of autistic children experience a high level of anxiety, and suffer from an anxiety disorder (Rodgers et al., 2019).

In Qatar, several measures were taken for meet the needs of autistic children and their families' needs. For instance, (the Qatari national plan of autism) aims at improving the living conditions of the autistic individuals and their families. It was developed in order to meet the needs of autistic children and their families. It aims at promoting awareness among people about autism and diagnosing autistic children in an early age. It aims at providing the individuals with autism with education and healthcare services of high quality. Through meeting the needs of the children with autism and their families, those families shall enjoy a high-quality life (Doha International Family Institute (DIFI), 2018). Hence, the problem of this study is represented in the following questions: What is the anxiety level of the children with autism in Qatar? What is the relationship between this level from one hand and (gender, school stage, school type or family type) from another hand?

### *1.2 The Study's Objectives and Questions*

This study aimed to explore the anxiety level of the children with autism in Qatar. It aimed to explore whether there is any statistically significant difference between the levels of anxiety of the children with autism which can be attributed to (gender, school stage, school type or family type). To be specific, this study aimed to offer answers to those questions:

Q.1: What is the anxiety level of the children with autism in Qatar?

Q.2: Is there any statistically significant difference between the levels of anxiety of the children with autism which can be attributed to (gender, school stage, school type or family type)?

### *1.3 The Study's Significance*

The present study is significant due to the following reasons:

- The present study is significant because it offers knowledge about the anxiety level of children with autism in the Qatari society. It is significant because it offers knowledge about the relationship between anxiety level from one hand and (gender, school stage, school type or family type) from another hand among children with autism in the Qatari society.
- The present study is significant because it suggests that it is necessary to offer support to the professionals who work with autistic children in the public and private schools. Such support include: offering knowledge about the anxiety level of the children with autism. It includes offering knowledge about the social reasons of anxiety. Providing such support shall contribute to improving the psychological wellbeing of autistic children and reducing their anxiety levels.

### *1.4 Definition of Terms*

The study's terms are defined below:

**Autism:** It refers to a disorder that leads to experiencing problems in social communication. It leads to experiencing a developmental delay in social, linguistic, and sensory areas. It leads to showing atypical behavior, and having limited interests. The symptoms of autism manifest during the early childhood stage (DSM-5, 2013).

**Children with autism (operational definition):** They refer to the children with autism who are either enrolled in public or private school in Qatar. They suffer from social, and sensory problems. They also suffer from problems in communication, and interaction

**Anxiety:** It is an unpleasant emotional state that is experienced due to facing a threat or having fears. It causes physiological changes. For instance, the anxious person may experience a temporary rise in the number of heartbeats, hypertension level, and breath rate. He/she may experience: nausea and loss of appetite, sense of suffocation and incapability to sleep deeply. He/she may experience: muscle tension (Al-Shaboun, 2011, p. 766).

**Anxiety (operational definition):** It refers to a state of anxiety that is associated with fear and anticipation of risk. This state is experienced by the children enrolled in public and private schools in Qatar

### *1.5 The Study's Limitations*

The present study was conducted in public and private schools in Qatar. It was conducted during the period (January-March, 2020). It targets children with autism.

## **2. Literature Review**

The researchers of the present study reviewed several studies. Those studies are identified below from the latest ones to the oldest ones:

MacLennan et al. (2020) aimed to explore the relationship between sensory reactivity and anxiety among 41 children suffering from autism. The ages of those children are within the range of 3–14 years. MacLennan et al. (2020) adopted a descriptive analytical approach. They used a questionnaire to collect the required data. They concluded that there is a positive relationship between sensory hyper-reactivity from one hand and anxiety, separation anxiety and fears from physical injury from another hand among autistic children. They concluded that there is a relationship between sensory hypo-reactivity and social anxiety among autistic children.

Rodgers et al. (2019) developed the first intervention program that targets intolerance for uncertainty among children with autism in the United Kingdom (UK). They aimed to explore the impact of intolerance for uncertainty on anxiety level among autistic children. They adopted a descriptive analytical approach. They used a questionnaire to collect the required data. The sample consists from several parents whose autistic children's ages are within the range of 6–16 years. Rodgers et al. (2019) concluded that about 50% of children with autism suffer from anxiety. They concluded that anxiety significantly affects the everyday life of the families that have children with autism. They concluded that anxiety is a risk factor for suffering from mental health-related problems, like: suicide. They concluded that intolerance for uncertainty affects the anxiety level of autistic children

Hollocks et al. (2019) conducted a meta-analysis for the studies that shed a light on anxiety and depression

among the autistic adults. They explored the influence of the assessment methods on the estimated rates of the prevalence of autism. They reviewed the studies that were published during the period (January 2000 and September 2017). They reviewed 30 studies measuring anxiety. They reviewed 29 studies measuring depression. Based on the meta-analysis, Hollocks et al. (2019) concluded that using a questionnaire as a measure and the presence of comorbid intellectual disability (ID) diagnosis significantly affect the estimated rates of the prevalence of autism.

Al-Farsi (2018) aimed to explore the relationship between separation anxiety among the first-grade students in Muscat and the personal traits of their mothers. They adopted a descriptive analytical approach. The sample of the study consists of 63 students and 63 mothers. Al-Farsi (2018) used a separation anxiety scale and personal traits scale. The separation anxiety scale consists of 35 statements. Al-Farsi (2018) concluded that 44% of the sampled males and females experience anxiety. They concluded that the personality traits that are common the most among mothers are the extraversion trait, lying, and psychoticistic personality respectively. They concluded that there is a significant relationship between the anxiety of separation and the trait of neuroticism. There isn't any significant difference between the mothers' personality traits which can be attributed to age.

Chauhan et al. (2018) explored the anxiety level of the children with autism. He explored the relationship between anxiety level and IQ score among the children with autism. The sample consists from 50 participants. 20-item CASI Anxiety scale was used. The Chi-Square test was conducted. A descriptive analytical approach was adopted. The factor analysis was conducted. Chauhan et al. (2018) concluded that there is a positive relationship between IQ score and anxiety level among the children with autism. In other words, the higher the IQ score is, the more anxious the child shall be.

Mohammad (2018) explored the level of depression among the mothers of children with autism. He explored whether there are significant differences between the mothers' depression levels which can be attributed to (age and academic qualification). The children of those mothers are enrolled in the schools and centers for children with special needs in Riyadh and Jaddah, Saudi Arabia. The random stratified sampling method was used. Mohammad (2018) adopted a descriptive approach. The sample consists from 58 mothers whose children suffer from autism. Those mothers were selected from the study's population. Beck scale for depression was used for collecting data. Mohammad (2018) concluded that the level of depression of the mothers of children with autism is moderate. He concluded that there isn't any statistically significant relationship between the mothers' levels of depression which can be attributed to age or academic qualification.

Francisca and Emma (2017) conducted a theoretical study about anxiety among autistic children. They suggest that the children with autism show higher anxiety levels than normal children. They suggest that there are statistically significant differences between the autistic children's anxiety levels which can be attributed to IQ score and age. For instance, autistic youth show higher levels of anxiety than children. Francisca and Emma (2017) suggest that autistic children suffer from higher anxiety levels than the youth with other developmental problems.

Rodgers et al. (2016) adapted the revised child anxiety and depression scale (RCADS). Content validity was measured. The polychoric factor analysis was conducted. The sample consists from 170 children with autism. The ages of those children are within the range of 8–16 years. Through the study, Rodgers et al. (2016) created a valid and reliable scale for measuring anxiety of autistic children. The latter scale consists from 24 items and sheds a light on the following areas: performance anxiety, uncertainty, anxious arousal, and separation anxiety.

Al-Deeb (2016) explored the levels and sources of stress among the mothers whose children suffer from autism. He explored the needs of those mothers and the way of reducing their stress levels. He explored the relationship between their stress levels and the extent of meeting their needs. The sample consists from 174 mothers who have children with autism. Those children are enrolled in a center for rehabilitating the ones with disability in the United Arab Emirates (UAE). Al-Deeb (2016) used the random stratified sampling technique. An inventory was used for identifying the stress level of the mothers whose children suffer from autism. In addition, a questionnaire was used for identifying the needs of the mothers whose children suffer from autism.

Al-Deeb (2016) found that there are five sources for stress. These sources include: the nature of the child behavior which is ranked first. They include the emotional stress which is ranked second. They include behavioral and cognitive stress which are ranked last. It was found that the mothers whose children suffer from autism have much needs that must be fulfilled. Such needs include: community-based needs which are ranked first. They include: the needs for training and knowledge which are ranked second. They include: social needs which are ranked third. They include: financial needs which are ranked last. It was found that there is a statistically significant positive relationship between stress level and the amount of needs that are not fulfilled

among the mothers whose children suffer from autism.

Alkharan (2016) explored the problems that face children with autism spectrum disorder. He explored the methods used by the families who has an autistic family member for addressing these problems. He explored the sources of the support provided to those families. He adopted a descriptive approach and used a survey for collecting data. The sample consists from 66 parents who have autistic children. The ages of those children are within the range of 3–14 years. To meet the goals of the study, the researcher developed a scale for exploring the problems faced by autistic individuals. The latter scale aimed to identify the methods used by the latter families for addressing the problems faced by their autistic family members. It aimed to explore the sources of the support provided to those families. Those families suffer from problems in interacting socially with others. Alkharan (2016) found that there isn't any significant difference between the respondents' attitudes which can be attributed to academic qualification, family income, or the child's gender. However, there are significant differences between the respondents' attitudes which can be attributed to age and severity of the disability. The latter differences are for the favor of the ones whose ages are within the range of 1–5 years. They also for the favor of the autistic children who have mild disability.

Van Steensel et al. (2011) conducted a theoretical study. They suggest that autistic children and adolescents who have low IQ scores show high levels of social anxiety. They suggest that the severity of the generalized anxiety disorder of autistic children and adolescents is greater than the counterpart severity of their normal peers.

Riyami (2010) developed a group counseling program that is based on cognitive behavioral therapy. He aimed to explore the effectiveness of the latter program in reducing the social anxiety levels of physically disabled individuals in the Sultanate of Oman. The experimental group consists from 10 disabled individuals: 5 males and 5 females. The members of the experimental group participated in the group counseling program. The latter program lasted for 2 months. Through this program, two sessions were held a week. The control group consists from ten disabled individuals: 5 males and 5 females. Riyami (2010) concluded that there are statistically significant differences between the respondents' social anxiety levels. The latter differences are for the favor of the experimental group. Riyami (2010) concluded that the social anxiety level of the experimental group is lower than the counterpart level of the control group. That is attributed to engaging in the proposed group counseling program. However, Riyami (2010) concluded that there isn't any significant difference between the respondents' social anxiety levels which can be attributed to gender.

The aforementioned studies—e.g., MacLenna et al. (2020) and Lau (2019)—shed a light on autism and anxiety. Some of the aforementioned studies—e.g., Rodgers et al. (2016)—developed a scale for measuring anxiety. The scale of the present study was developed based on the anxiety scale for children with autism spectrum disorder (ASC-ASD). The latter scale was developed by Rodgers et al. (2016). It was used by Rodgers et al. (2020).

Most of the aforementioned researchers adopt a descriptive analytical approach. Some of those researchers used a scale to collect data. Some of those researchers made interviews for collecting data. The aforementioned studies vary from each other in terms of the targeted population. They vary in terms of the subject. As for the present study, it aimed to explore the anxiety level of the children with autism in Qatar. It aimed to explore whether there is any statistically significant difference between the levels of anxiety of the children with autism which can be attributed to gender, school stage, school type or family type. Reviewing the aforementioned studies enabled the researchers of the present study to identify the most suitable approach to adopt. They enabled the researchers of the present study to develop the study's instrument. They enabled the researchers to identify the procedures to be followed for conducting the present study. They enabled the researchers to identify the methods that can be used for analyzing data.

The aforementioned studies—e.g., Van Steensel et al. (2011)—suggest that there is a significant relationship between autism and anxiety among children. They suggest that more studies must be conducted about the anxiety level of autistic children. They suggest that more studies must be conducted about the factors affecting the anxiety level of autistic children. They suggest that the anxiety of autistic individuals affect the quality life of families and cause social problems

The present study serves as an important reference for the researchers who want to conduct studies about the anxiety of autistic children. It serves as an important reference because it offers a reliable scale that was developed based on the anxiety scale for children with autism spectrum disorder (ASC-ASD). The latter scale was developed by Rodgers et al. (2016). It was used by Rodgers et al. (2020).

### 3. Methodology

#### 3.1 Approach

The researchers adopted a descriptive analytical approach. The descriptive approach is a methodological tool. It is adopted to obtain information from stakeholders about their experiences. It may be adopted to offer interpretation for reality. It may be adopted to describe phenomena and explore policies (Seixas et al., 2018). It is adopted for measuring and exploring quantitative variables. The descriptive analytical approach is adopted for collecting data of multidimensional nature (Gabor, 2010).

#### 3.2 Population

The population consists from all the autistic children who are either enrolled in public or private schools in Qatar. Based on the records of the Qatar Ministry of health, there are 5000 autistic children enrolled in Qatari public and private school. Some of those children hold Qatari nationality and the rest of them hold another nationality

#### 3.3 Sample

The random stratified sampling method was used. The sample consist from 250 children with autism. Those children were selected from public and private schools in Qatar. The scale was filled by the students. Some students received assistance by their teachers and parents in filling in the scale form. Table 1 presents the distribution of the sample in accordance with gender, school stage, school type, school stage, and family type.

Table 1. Distribution of the sample in accordance with gender, school stage, school type, school stage, and family type

Variable	Category	Frequency	Percent
Gender	Male	147	58.8
	Female	103	41.2
	Total	250	100.0
School stage	Primary	151	60.4
	Intermediate	99	39.6
	Total	250	100.0
School Type	Public school	118	47.2
	Private school	132	52.8
	Total	250	100.0
Family Type	Family with married parents (regular family)	134	53.6
	Family with divorced parents	62	24.8
	Family that lost one parent or both parents	45	21.6
	Total	250	100.0

#### 3.4 The Study's Instrument

For identifying the level of anxiety of autistic children in Qatar, the researchers of the present study developed a scale. The study's scale was developed based on the anxiety scale for children with autism spectrum disorder (ASC-ASD). The latter scale was developed by Rodgers et al. (2016). It was used by Rodgers et al. (2020). The study's scale consists from 24 items. It was drafted in Arabic language. The forms of the scale were distributed to the sample in Arabic language. However, the scale was translated into English language to be presented in this study. Through using the scale, demographic data about the sample was collected. Such data include: gender, school stage, school type, and family type. The four-point Likert scale was adopted. The rating categories in the latter scale are: never, sometimes, often and always. The score of these categories are: 1, 2, 3 and 4 respectively. The scale was filled by the students. Some students received assistance by their teachers and parents in filling in the scale form

#### 3.5 Validity of the Scale

The validity of the scale refers to the capability of the scale to measure what's intended to measure. It was measured through passing the initial version of the scale to several experts in order for them to assess it. This version is written in Arabic language. Those experts include: faculty members in Qatari universities, and doctors who were selected from Rumailah Hospital, and Al-Shafilah Center for Special Education. They were asked to assess the scale in terms of language, relevancy and clarity. In the light of the experts' comments, several changed were made. For instance, the researchers re-drafted two items and corrected some language mistakes. The final version of the scale was drafted. It was translated into English language to be presented in this research.

### 3.6 Reliability of the Scale

The reliability of the scale was measured through calculating the Cronbach alpha coefficient value. The latter value is 0.801 which is accepted. It indicates that the scale offers reliable data.

### 3.7 The Study's Variables

The study's variables are listed below:

The independent variables: They are represented in the demographic variable (i.e., gender, school stage, school type and family type).

The independent variable: It is represented in the anxiety level of the students with autism in the Qatari society.

### 3.8 Methods and Criteria for Statistical Analysis

The SPSS program was used for analyzing the collected data. Several methods were used to analyze data statistically. Such methods are:

- Frequencies and percentages: Through calculating them, the characteristics of respondents were identified.
- Means and standard deviations: Through calculating them, the attitudes of the respondents were identified.
- Cronbach alpha coefficient value: Through calculating it, the reliability of the scale was measured.
- Multivariate analysis of variance (MANOVA) was conducted

The following criteria were used to classify means:

1–2.49: low

2.50–3.24: moderate

3.25–4: High

## 4. Results and Discussion

### 4.1 Results and Discussion Related to the First Question

Question ones: What is the anxiety level of the children with autism in Qatar?

Means and standard deviations are calculated. Table 2 presents these values:

Table 2. Means and standard deviations for identifying the anxiety level of the children with autism in Qatar

No	Statements	S.D	M	Degree
6	Sometimes, I feel that I am suffocating	0.90	2.62	Moderate
7	I am anxious towards unfamiliar things, places and people	0.89	2.56	Moderate
11	When I don't know what shall occur in the future, I feel helpless	0.76	2.46	Low
1	Sometimes, I feel really scared	0.81	2.45	Low
5	I worry about doing bad on assessments.	0.75	2.41	Low
3	My heart suddenly starts beating too quickly	0.71	2.40	Low
10	I worry about making mistakes while interacting socially with others	0.72	2.39	Low
16	Sometimes, I start shaking or trembling	0.74	2.39	Low
14	I feel anxious about making fool of myself in front of others	0.74	2.39	Low
17	Sometimes, I feel dizzy and sometimes, I faint	0.76	2.38	Low
4	I feel anxious in the situations in which I may commit a mistake.	0.69	2.38	Low
12	I experience anxiety when I think that I haven't performed as well as I expected.	0.72	2.38	Low
2	I worry about what others think of me	0.68	2.37	Low
15	I worry about having something awful happening to a person I know	0.70	2.36	Low
9	I worry about having changes to my routine or surrounding environment	0.67	2.35	Low
18	I worry if I don't know what will happen. I also worry in case the plans changed	0.69	2.34	Low
8	I start shaking physically, when I face a problem	0.66	2.34	Low
13	I need to be well-prepared to handle situations	0.66	2.29	Low
20	Sometimes, I become incapable of thinking, speaking or doing things.	0.60	2.28	Low
19	I fear that something bad may happen to me	0.60	2.28	Low
23	I experience anxiety if I didn't know the things that shall occur. For instance, I experience anxiety if something changed in the pre-planned program	0.61	2.23	Low
21	I experience anxiety when I am in places that crowded, or including much light or noise.	0.59	2.21	Low
24	I always fear of having something bad happening to me	0.55	2.16	Low
22	Sometimes, I feel dizzy without having a reason	0.49	2.12	Low
Total		0.67	2.43	Low



Based on Table 2, the anxiety level of the autistic children in Qatar is low. That is because the overall mean is 2.43 which is low. The overall standard deviation is 0.67. The mean of statement 6 is ranked first. It is 2.62 which is moderate. The standard deviation of the latter statement is 0.90. The latter statement states the following: Sometimes, I feel that I am suffocating. The mean of statement 22 is ranked last. It is 2.12 which is low. The standard deviation of the latter statement is 0.49. The latter statement states the following: Sometimes, I feel dizzy without having a reason.

The researchers concluded that the anxiety level of the respondents is considered low. The latter result may be attributed to the fact that the Qatari government provides the children with autism with much attention. For instance, the Qatari government developed a national plan for improving the living conditions of autistic people and their families. The latter plan aims at meeting the physiological and psychological needs of autistic people. It aims at providing autistic people with healthcare services of high quality. It aims at raising the quality life levels of autistic people and their families. It aims at improving the psychological wellbeing of autistic individuals. Thus, the latter plan contributes to reducing the anxiety level of autistic children in Qatar (Doha International Family Institute (DIFI), 2018).

The anxiety level of the respondents is low. However, the results of the present study can't be generalized to all autistic children. That's because the quality of the services provided to autistic children in the selected schools differs from the counterpart quality at other schools and institutions in Qatar. It is because the quality of the special educational services in Qatar differs from the counterpart quality in other countries. Despite that, the latter result is consistent with what's suggested by Al-Farsi (2018). The latter researcher suggests that 10% of autistic children suffer from generalized anxiety disorder.

The latter result is inconsistent with the result concluded by Rodgers et al. (2019). The latter researchers found that about 50% of the children with autism suffer from anxiety in the United Kingdom (UK). They add that anxiety negatively affects the families that have children with autism. They found that anxiety is a risk factor for suffering from mental health problems (e.g., suicide) in the future.

The latter result is consistent with the result concluded by Riyami (2010). The latter researcher found that the anxiety level of autistic children is low. The latter result is inconsistent with what's suggested by MacLennan et al. (2020). The latter researchers suggest that autistic children are at greater risk of experiencing anxiety. The latter result is inconsistent with what's concluded by Hollocks et al. (2019). The latter researchers found that the anxiety level of autistic children is high. Most of the relevant studies suggest that autistic children are at greater risk of experiencing anxiety. However, the present study suggests otherwise. Thus, the researchers of the present study believe that the low anxiety level may be attributed to the fact that autistic children in Qatar enjoy good living conditions at home and school. They believe that the low anxiety level may be attributed to the effective development courses provided for Qatari teachers and specialists.

#### 4.2 Results and Discussion Related to the Second Question

Q.2: Is there any statistically significant difference between the levels of anxiety of the children with autism which can be attributed to gender, school stage, school type or family type?

To answer this question, means and standard deviations are calculated. These values are calculated to identify the anxiety levels of the children with autism in Qatar in accordance with gender, school stage, school type and family type. Table 3 presents those values:

Table 3. The anxiety levels of the children with autism in Qatar in accordance with (gender, school stage, school type and family type)

Variable	Category	No	S.D	M
Gender	Male	147	0.74	2.72
	Female	103	0.03	2.00
School stage	Primary	151	0.744	2.70
	Intermediate	99	0.01	2.00
School Type	Private school	118	0.74	2.67
	Public school	132	0.51	2.20
Family Type	Stable family	134	0.77	2.75
	Family with divorced parents	62	0.16	2.09
	Family in which one parent or both parents passed away	45	0.01	2.00

Based on Table 3, it appears that there are differences between the anxiety levels of the children with autism in Qatar which can be attributed to gender, school stage, school type and family type. To identify whether these differences are statistically significant or not at the statistical significance level of  $\alpha = 0.05$ , the multivariate analysis of variance was conducted. The results of the latter analysis are presented below through Table 4 below:

Table 4. The results of the multivariate analysis of variance

Source	Sum of Squares	df	Mean Square	F	Sig. *
Gender	.275	1	0.275	0.919	0.339
School stage	.037	1	0.037	0.123	0.727
School Type	6.946	1	6.946	23.177	0.000
Family Type	6.818	2	3.409	11.376	0.000
Error	73.123	244	0.300		
Total	1586.920	250			

Based on Table 4, it was found that there isn't any statistically significant difference between the anxiety levels of the children with autism which can be attributed to (gender or school stage). That is because the significance values of gender and school stage are 0.339 and 0.727 respectively. The latter values aren't statistically significant.

It was found that there are statistically significant differences between the anxiety levels of the children with autism which can be attributed to (school type). The latter differences are for the favor of the ones enrolled in private schools. That means that the children enrolled in private schools show higher anxiety levels than the children enrolled in public schools. That may be attributed to the fact that the Qatari public schools provide services of high quality to disabled children. It may be attributed to the great attention provided by the Qatari government for disabled children. It may be attributed to the fact that the Qatari government dedicates much money for improving the services and psychological wellbeing of autistic children. It may be attributed to the fact that Qatari public schools provide autistic children with an environment that is better than the environment of private schools. The good school environment contributes to reducing the anxiety level of autistic children and promoting psychological security among them.

The latter result may be attributed to the capability of public schools in Qatar to deal efficiently with the children with autism. Such efficiency contributes to addressing the social problems of those children. It contributes to reducing the anxiety level of those children. The low anxiety level of respondents may be attributed to the fact that people in Qatar enjoy good living conditions. To illustrate more, it's known that people in Qatar receive a very high income. Receiving a high income shall make people in Qatar feel secure. It shall free people from many fear. It shall enable the parents of autistic children to provide their children with good and safe environment. Thus, that shall make normal and disabled people experience low anxiety levels.

The low anxiety level of respondents may be attributed to the fact that the Qatari government enjoy an excellent economic status. Thus, the Qatari government spends much money for improving the educational services provided at schools, especially at public schools. Such improvement shall make autistic children like their school and reduce their anxiety level.

Scheffe test was conducted to explore the ones whose the family type-related differences are for their favor. The results of the latter test are presented in Table 5 below:

Table 5. The results of Scheffe test

(I) Family	(J) Family	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Children living in stable families	Children living in families that have divorced parents	.6664	.08408	.000	.4593	.8735
	The children who live in families in which one parent or both parents passed	.7567(*)	.08824	.000	.5394	.9740
Children living in families that have divorced parents	Children living in stable families	-.6664	.08408	.000	-.8735	-.4593
	The children who live in families in which one parent or both parents passed	.0903(*)	.10190	.676	-.1606	.3413
The children who live in families in which one parent or both parents passed	Children living in stable families	-.7567(*)	.08824	.000	-.9740	-.5394
	The children who live in families in which one parent or both parents passed	-.0903(*)	.10190	.676	-.3413	.1606

Note. \*: This sign means that the value is statistically significant at the statistical significance level of ( $\alpha = 0.05$ ).

Based on Table 5, it was found that there are statistically significant differences between the anxiety levels of the sampled children which can be attributed to the family type. They are for the favor of the children who live in families in which one parent or both parents passed away. That mean that the latter children tend to have more anxiety than other children. That's because those children receive less parental care than other children. Receiving less parental care shall negatively affect the psychological security of those children. Thus, their anxiety level shall increase.

The latter result is consistent with the result concluded by Rodgers et al. (2019). For instance, the latter researchers found that family life affects the anxiety level of autistic children. Therefore, the death of a parent and the separation from a parent due to divorce shall negatively affect the family environment provided for autistic children. Thus, it shall negatively affect the psychological security of by autistic children. That shall increase the extent of experiencing anxiety by autistic children who live in families in which one parent or both parents passed away. The latter result is attributed to the fact that the nature of family life affects the capability of the family to meet the needs of the autistic child.

## 5. Conclusion

It was found that the anxiety level of the children with autism in Qatar is low. The researchers concluded that there isn't any statistically significant difference between the anxiety levels of the children with autism which can be attributed to (gender or school stage). They concluded that there are statistically significant differences between the anxiety levels of the children with autism which can be attributed to (the school type or family type). The latter differences are for the favor of the children in private schools. They are for the favor of the children who live in families in which one parent or both parents passed away.

## 6. Recommendations

The researchers recommend the following:

- Integrating the children with autism into society. That can be done through engaging those children in extra-curricular activities that are performed outside school and centers
- Conducting more studies about the anxiety levels of autistic individuals. That should be done with targeting other categories of autistic individuals, such as: the autistic individuals who finished school and autistic adults.
- Offering support to the professionals who work with autistic children in the public and private schools. Providing such support shall contribute to improving the psychological wellbeing of autistic children and reducing their anxiety levels.

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