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ABSTRACT

The study aimed to examine the correlation between loneliness and anxiety among children with Asperger's disorder in Riyadh, Saudi Arabia. The study sought to compare between the 164 children with Asperger disorder and normal children of both genders. The researcher analyzed data statistically using Pearson correlation coefficient, two-way analysis of variance (2×2), and "t" test. The study finds a positive relationship between loneliness and anxiety among children with Asperger's disorder. Further, the male children with Asperger's disorder feel loneliness and anxiety more than their female colleagues with Asperger's disorder. The researcher recommends engaging psychological counselor and social worker in schools and universities at different academic levels to help individuals confront potential psychological and social problems.

Keywords: Child Autism, Asperger's disorder, Anxiety, Loneliness, Saudi Arabia

INTRODUCTION

The mental disabilities field is an important area that has attracted the attention of many researchers in psychology and special education, especially infantile autism which is a by birth disorder and child suffers inability to communicate with others. Bonetti et al (2010) defines Asperger's disorder (AD) as one of the developmental disorders characterized by a significant deficiency of social interaction and limited patterns of activity and interests, even though the affected child enjoys a level of developmental language and mental performance appropriate for his chronological age approximately. The feeling of loneliness is accompanied by the internal dissatisfaction of the individual and a decrease in his interpersonal relationships, the desired quantity, and quality (Margalit, 2012). Anxiety represents a negative experience with unwanted effects and accompaniments, and this is evident through some of the symptoms accompanying it as some psychosomatic symptoms (Lundh, L. et al., 2010) such as the inability to communicate positively and social interaction with others, the loss of individuals for some important social skills, constant feeling of tension and social rejection, and avoidance/withdrawal behavior during social situations (Creed, A.& Funder, D., 1998). Anxiety can be distinguished as anxiety state and anxiety trait. State anxiety refers to a temporary emotional state in which an individual experiences internal feeling of stress and perceived danger that increase the activity of his nervous system and show signs of Anxiety that vary in intensity and fluctuation most of the time. Trait anxiety refers to the relatively constant individual differences in susceptibility to anxiety due to differences between individuals in their willingness to respond to perceived situations as situations that threaten to raise the anxiety state. (Al-Buhairi, 1984). The theoretical and empirical background related to the feeling of loneliness and its relationship to anxiety among individuals with infantile autism, autism spectrum and Asperger syndrome, the results of studies conducted on various age and societal segments indicated firstly, that the prevalence of loneliness feeling among individuals with apparent infantile autism, autism spectrum, and Asperger's syndrome compared to normal individuals (Hong,2014; Kalyva,2010; Losgaard et al., 2010; Locke et al., 2010; Andrew et al., 2009; Yeung,2009; Jobe& William-white, 2007; Bauminger, Shulaman., 2003; Bauminger & Kasari,2000). Secondly that the feeling of loneliness is positively related to anxiety among individuals with Asperger's disorder, apparent autism, and autism spectrum disorder of both genders, as found in (Hong,2014; Mazurex, 2014; Storck et al. 2012; Kalyva, 2010). Thirdly that, the differences between male and female children in the feeling of loneliness, it was found that male children of primary school students feel more loneliness than their female peers. (Junttila & Vauras, 2009). Given this discussion, the study problems can be transformed to assess the into the following questions.

Q1- What is the type of correlation between the feeling of loneliness and Anxiety among the study sample members of children with Asperger's disorder and normal children of primary school students in Riyadh?

Q2- Are there differences among the members of the subgroups that make up the study sample in the sense of loneliness, according to the gender variable (male/female), and the developmental disorder variable (children with Asperger's disorder and normal children)?

Q3- Are there differences between members of the subgroups of the study sample in Anxiety, according to the gender variable (male/female) and the developmental disorder variable (for children with Asperger's disorder and normal children)?

LITERATURE REVIEW

Asperger's disorder

Asperger's disorder is a subcategory of developmental disorders, characterized by significant difficulties in social interaction and specific, unfamiliar patterns of behavior and interests. One of the main features of Asperger's disorder is the specific weakness in social interaction and the issuance of specific, repetitive, and stereotypical patterns of behavior, interests, and activities (Ouda and Al-Babtain, 2014 p. 5). Children with Asperger's disorder have a deficit in social interaction which is one of the distinguishing symptoms of this disorder, and they lack interest in others, but they are also unable to modify their social behaviors to suit the requirements of the environment which hinders the child from making successful friendships and social contacts that makes them frustrated because of their frequent failure (Yeung, 2009).

It is possible to differentiate between children with Asperger syndrome and those with infantile autism in those who have a level of functional language development appropriate for their chronological age. At the same time, the situation is different for children with autism (Al-Shaghs, 2015 AD, p. 8). It also became clear that Asperger's disorder (AD) appears among children at an older age than the age at which symptoms of autism appear, or this disorder is known as a problem that goes beyond autism to some extent (Oudah and Al-Babtain, 2014, p. 5). A child with Asperger syndrome (AD) cannot empathize with others which is required as the ability to understand the feelings of other individuals, and they have a lower ability to identify their emotions (Yeung, 2009). Among the symptoms of Asperger's disorder are speech delays, and motor weakness and its main features are specific weakness in social interaction, and in specific, repetitive, and stereotypical patterns of behavior, interests, and activities (Ouda and Al-Babtain, 2014, p. 5). Sensory skills (visual, auditory, tactile, or solar) expose them to more behavioral problems (AL-Shaghs, 2015, p. 12). It was also found that children with Asperger's disorder have aggressive and anti-social behaviors, and they also have high levels of social Anxiety (Kalyva, 2010, p.1206; Hong, 2014, p.232).

Feeling of loneliness

The feeling of loneliness is a complex combination of feelings that include reactions to the absence of affection and social needs of individuals. It can be said that the feeling of loneliness represents a chronic state of feelings that appear and result from their roots in childhood. The processes of cohesion and failed friendships. Individuals with a chronic feeling of loneliness prefer social withdrawal and lack confidence in themselves and others. It was also found that they adopt an external locus of control where they see themselves as helpless and unable to control the course of things and that there are factors beyond their control that manage their success and failure, and it was found that they lack a sense of satisfaction with life in general (Willock. et al., 2012). The feeling of loneliness has some negative associations, including Anxiety and alienation (portnoff, 1988, p. 454; Bonetti & Campbell & Gilmore, 2010, p. 283; Odac & Kalkan, 2010; Willock, et al., 2012). The feeling of loneliness takes many forms, including:

1. A feeling of primary loneliness is considered a pervasive personality trait, or a disturbance in the personality traits. In both cases, it is related to social withdrawal from others. It can be said that it is a personality disorder that affects social behavior, which fails lonely individuals in positive social communication. The supporters of the developmental approach see that the feeling of loneliness results from disability and shortcomings in psychological and developmental functions, and personality disorders that cause the failure to hold successful social relationships in the individual (Qashqosh, 1983, p. 193).
2. A feeling of secondary loneliness occurs when the individual's social environment is torn apart after he had healthy and saturated relationships with others. It occurs as a response on the part of the individual to a sudden deprivation that occurs in his life with others of importance to him.
A) Transient psychological loneliness which results from the individual's sudden loss of his love, (b) the chronic feeling of loneliness experienced by the individual who spent his childhood or adult years in social isolation (Lynch, 1997, 9. 79).
3. The feeling of existential loneliness is viewed as a natural human condition and a human experience that the individual lives, and it is impossible to escape from it, and it results from dangerous technological progress which the individual fails to coexist with, and then feels that he is alien to the surrounding world which results in his failure to keep pace with the exigencies of life in a new culture (Portnoff,1988).

The feeling of emotional loneliness results from the absence of emotional attachment and the presence of intimate and friendly friendship with other people, makes him feel positively contained, satisfying his need for belonging, and pushes him to achieve positive self-efficacy. Also, the individual lacks close friends who represent a source of emotional fulfilment for him. And his need for intimacy and love (Rosalia & Dennis, 1990; Van-Baarsen, 2002, p. 40; McWhirter et al., 2002, p. 82). So, the individual loses sources of gratification, which hinders the achievement of interpersonal relationships and communications with others around him, which creates feelings of Anxiety for him (Clinton & Anderson, 1999; Buchholz & Cotton, 1999; Van-Baarsen, 2002; Margalit, 2012). Some studies have confirmed the prevalence of loneliness among children of primary school students of both genders, but it is higher in males than in females (Junttila & Vauras, 2009, p. 217). For children with Asperger's disorder (AD), it was found that they have a higher feeling of loneliness compared to their peers of normal children (Hong, 2014; Kalyva, 2010 p. 1206).

The results of previous studies indicated that individuals with apparent autism symptoms associated with physical traits feel lonelier than their normal peers. It was found that they face more interpersonal problems, and BAP disorder was positively associated with language difficulties in speaking (Lamport & Turner, 2014, p. 2011; William-White, 2007, p. 1487). Others found that the feeling of loneliness is positively associated with both Anxiety and depression in individuals with autism spectrum disorder (White & Roberson-Nay, 2009, p.1011; Mazurek, 2014, p.231; Storch et al., 2012, p.589). Previous studies have also indicated an increase in loneliness and depressive symptoms among individuals with Asperger syndrome, as well as among individuals with autism spectrum (Andrew et al., 2009; Yeung, 2009; Kalyva, 2010; Hong, 2014; White & Roberson-Nay, 2009, Bauminger & Kasari, 2000; Locke et al., 2010). The symptoms of Asperger Syndrome appear between the ages of 3 and 15 years. Children with Asperger Syndrome have a deficit in social skills, one of the biggest challenges. They also show an unwillingness to communicate on the phone and a lack of inclination to communicate with their peers (Church & Alisanshi., 2000; Kalyva, 2010; Hong, 2014; Yeung, 2009; Durkin et al., 2010; Bauminger & Kasari, 2000; Locke et al., 2010; Bauminger et al., 2003) (Ouda and Al-Babtain, 2014). As for the prevalence of Asperger syndrome symptoms among children of both genders, it was found that it is more prevalent in males than in females, and males with Asperger syndrome have a deficit in social skills more than their female counterparts (Yeung, 2009). In the past, the term Asperger's syndrome was used to refer to children who were previously diagnosed with autism (Andrew et al., 2009, Yeung, 2009; Kalyva,2010; Hong, 2014; White & Roberson-Nay, 2009, Bauminger & Kasari, 2000; Bauminger & Shulman., 2003; Jobe & William, 2007; Lasgaard et al., 2010; Locke et al., 2010).

Anxiety

It was clear that Anxiety and deficits in social skills have been shown to mediate feelings of loneliness and social isolation among individuals with the autism spectrum (White & Roberson-Nay, 2009, p.1007). It was also found that high social anxiety, fear of negative evaluation by others, and a high feeling of loneliness were positively associated with deficits in social skills among individuals with autism associated with physical symptoms (BAP) (Jobe & William, 2007, p.1487). Anxiety is defined as an unpleasant emotional experience experienced by the individual when he feels fear and intimidation about something that he cannot clearly define, and this condition is often accompanied by some physiological changes (Abdul Ghaffar, 1990 AD, p. 119). The causes of Anxiety vary, including the individual's involvement in situations that represent painful and stressful experiences that include unresolved problems, especially in childhood (Nezlek, J., 2002, p.273). Others attribute causes of Anxiety to individuals' loss of social support or lack of social adequacy, feelings of rejection in interpersonal relationships, fear of social interaction, and behavioral interaction situations. (Harb, G. et al., 2002, p.963; Lee, R. & Robbins, S., 1998, p.341). It has been shown from the studies' results conducted in the foreign environment that the feeling of loneliness is positively associated with Anxiety among individuals with Asperger's disorder, apparent autism, and autism spectrum (Hong, 2014; Mazurek, 2014; Storch et al., 2012; Kalyva, 2010). It was also found that the prevalence of loneliness feeling among individuals with apparent infantile autism, autism spectrum, and those with Asperger syndrome compared to normal individuals of both genders (Hong, 2014; Kalyva, 2010; Lasgaard et al., 2010; Locke et al., 2010; Andrew et al., 2009; Yeung, 2009; Jobe & William-White, 2007; Bauminger et al., 2003; Bauminger & Kasari, 2000). As for the gender differences in the feeling of loneliness, it was found that male children of primary school students feel more loneliness than their female counterparts (Junttila & Vauras, 2009).

Feeling of loneliness and its relationship to Anxiety

Hong, J., (2014) conducted a study examining the feeling of loneliness and its relationship to social anxiety and social skills among children with Asperger syndrome. The study sample consisted of (21) children with Asperger's disorder and (21) children with Asperger's disorder compared to natural children. The study results showed a high level of loneliness among children with Asperger's disorder than normal children. The feeling of loneliness was positively associated with social anxiety among children with Asperger syndrome.

Mazurek (2014) also conducted a study to examine the feeling of loneliness and its relationship to some other variables, including Anxiety and depression among adults with the autism spectrum disorder. The study sample consisted of (108) adults with an autism spectrum disorder. The study reached results indicating that loneliness is positively associated with anxiety and depression among all members of the study sample with the autism spectrum disorder.

Storch et al. (2012) conducted a study to examine some problems related to bullying children with an autism spectrum disorder. The study sample consisted of (60) individuals with the autism spectrum disorder associated with feelings of high Anxiety. Their ages ranged between 11 and 14 years, and the study results indicated that Anxiety was positively associated with a feeling of loneliness among all sample members with an autism spectrum disorder.

Kalyva (2010) conducted a study examining the feeling of loneliness and its relationship to social skills and Anxiety among children with Asperger syndrome. The study sample consisted of (21) children with Asperger syndrome. The results indicated a high feeling of loneliness among children with Asperger's disorder. It was shown that loneliness is positively related to social Anxiety and negatively to social skills among children with Asperger syndrome.

Lasgaard et al. (2010) conducted a study to examine the prevalence of psychological loneliness among adolescents with autism spectrum disorder and examine the relationship between loneliness and perceived social support for them. The study sample consisted of (19) male adolescents with an autism spectrum disorder. The study results showed the prevalence of high loneliness among male sample members with the autism spectrum disorder.

Loche et al., (2010) also conducted a study examining loneliness among adolescents with autism. The study sample consisted of (27) adolescents with autistic disorder and (13) normal adolescents from secondary schools) in Los Angeles. The study results indicated that adolescents with autistic disorder have a higher feeling of loneliness than their normal peers.

Andrew et al., (2009) also conducted a study to examine the feeling of loneliness and its relationship to friendship and depression among adolescents with Asperger's disorder. The study sample consisted of (35) adolescents with Asperger's disorder. The study results indicated a high level of loneliness among the sample of adolescents with Asperger's disorder.

Junttila & Vauras (2009) conducted a study examining loneliness and its prevalence among children of both genders. The study sample consisted of (981) children of a primary school of both genders, and their ages reached approximately ten years. The study results indicated that loneliness was prevalent among the male sample members more than their female colleagues from the primary school students.

Also done by Young, A. (2019 AD) with a study examining the loneliness of children with Asperger's disorder and its relationship to depression. The study sample consisted of (42) children with Asperger's disorder whose ages ranged between 8 and 12 years. The study results showed a high level of loneliness and depression among the children with Asperger's disorder sample members.

Jobe and William-White (2007) also conducted a study examining the feeling of loneliness among individuals with autistic disorder and its relationship to social skills, on the other hand. The study sample consisted of (97) undergraduate students, and the average of their age is between 4 and 19 years. The study reached results indicating a higher level of loneliness among the sample members with apparent autism than their natural peers.

It was performed by Bauminger et al. (2003 AD), a study aimed at examining the feeling of loneliness and its relationship to social interaction among autistic children. The study sample consisted of: (18) children with infantile autism and (17) normal children who were homogeneous with children with infantile autism. The study results indicated that children and children with autism are more emotionally lonely than their natural peers.

Bauminger and Kasari (2000) conducted a study examining the feeling of loneliness and its relationship to social skills among children with infantile autism. The study sample consisted of (41) children, and their ages ranged between 8 and 14 years. The study results showed that autistic children had more loneliness than their peers, and the feeling of loneliness was negatively associated with social skills among children with autistic disorder.

It is evident from this discussion that the prevalence of a feeling of psychological loneliness among individuals with apparent infantile autism, autism spectrum, and Asperger syndrome compared to normal children, as shown by each of (Hong, 2014; Kalyva, 2010; Lasgaard et al., 2010; Locke et al., 2010; Andrew et al., 2009; Yeung, 2009; Jobe & William-White, 2007; Bauminger et al., 2003; Bauminger & Kasari, 2000). The feeling of loneliness is positively related to Anxiety among individuals with Asperger's disorder, apparent autism, and the autism spectrum of both genders, as shown by each (Hong, 2014; Mazurek, 2014; Storch et al., 2012; Kalyva, 2010). As for the gender differences in feeling loneliness, it was found that male children of primary school students feel more loneliness than their female counterparts (Junttila & Vauras, 2009).

Study hypotheses

H1: There is a no statistically significant correlation between the children with Asperger's disorder and normal children on the "Children's Feeling of Loneliness" scale, and the scores obtained by the same individuals on the "Children Anxiety" scale.

H2: There is no significant effect for each of the gender variables (males/females) and the developmental disorder variable (children with Asperger's and normal children), and the interaction between them on the variation of the scores obtained by members of the subgroups on the "Children's Feeling of Loneliness" scale.

H3: There is no significant effect for each of the gender variables (males/females) and the developmental disorder variable (Asperger's children and normal children), and the interaction between them on the variation of the scores obtained by subgroups members on the "children's anxiety" scale.

Study Methodology

The study adopted the descriptive method (correlative/comparative) where the correlational relationships between the variables of the study were examined as it is in the reality of primary schools in Riyadh, by finding the coefficient of statistical correlation between the two variables of the study that were included in the research problem, a method that tests the data validity that was available during the application of psychometric tools on the study sample members of primary school students (males and females) in Riyadh.

The study sample was derived from its original community of primary school students in Riyadh (males/females) with Asperger's disorder. Children with low mental abilities, those with multiple developmental disorders, children with significant obvious impairments, and children with significant impairments were excluded from the study's initial sample of those who live in a natural patriarchal climate. In terms of chronological age and mental abilities, those with parental/family deprivation (by death or divorce) and male and female children with Asperger's disorder have been homogenized. The two groups of male children were derived from (6) primary schools in Riyadh, and the two groups of female children were derived from (8) primary schools in Riyadh.

The study's total sample consisted of (128) children of both sexes with Asperger's disorder and normal children from primary school students in the Kingdom of Saudi Arabia, and the study sample members were homogenized according to the chronological age in months. Single-parent children, those with multiple mental disabilities, those with obvious physical impairments, those with parental deprivation (by death or divorce), and children who do not live in a natural parental climate were excluded from the initial sample of the study. The final sample of the study was divided into four subgroups, as follows:

Subgroup-1: It includes male children with Asperger's disorder from primary schools in Riyadh city, and its number is (32) boys.

Subgroup- 2: It includes normal male children from primary school students from primary schools in Riyadh city, and their number is (32) boys.

Subgroup-3 includes female children with Asperger's disorder from primary school students in Riyadh, and their number is (32) girls.

Subgroup-4: It includes the normal female children of primary school pupils in Riyadh, and their number is (32) girls.

Statistical Results and Discussion

Multiple scales were used to find and assess the results. First scale prepared by Amani Abdel Wahab (2005) to test for loneliness among children. The tool stability was verified by the method of repeating the procedure on a random sample of (90) male students (90) female students from the primary schools in Riyadh with a time difference of three weeks between the two procedures to find the correlation coefficient between the two procedures. The correlation coefficient reached (0.861) for male students and (0.794) for female students, and they are positive and statistically significant correlation coefficients. This indicates the stability of the tool and its ability to measure this variable and its validity for the procedure on the study sample members of the primary school students. The second scale was prepared Al-Bebrawi, Viola (1987) and tested multiple times in Arab regions. The scale stability was also calculated using the procedure and reaction method, which resulted in a coefficient of (0.84). The stability was calculated by the split-half method, which resulted in a stability coefficient of (0.76). Both values of stability are positive and statistically significant which confirms the scale stability and its ability to measure the variable. The current study sought to verify the tool validity to perform the members of the current study sample in the Saudi environment among children of primary school students in Riyadh, so the tool reliability was verified by testing and re-testing on a random sample of (100) boys, (100) girls from primary school students in Riyadh, with a time difference of three weeks, to know the correlation coefficient between the two procedures. The variable and its validity to conduct on the current study sample members from primary school students in Riyadh. Al-Shaghs (2015) prepared the "Asperger's Disorder Diagnosis" scale and to verify the validity of this scale on the members of the current study sample in the Saudi environment among primary school students in Riyadh, the tool stability was verified by the test and re-test

method on a random sample of (90) male and (90) female students in primary school in Riyadh and with a time difference of three weeks to find out the correlation coefficient between the two procedures, the correlation coefficient reached (0.694) for the male group, (0.617) for the female group, and they are positive and statistically significant correlation coefficients that indicate the stability of the tool and its ability to measure this variable and its validity for the procedure on the individuals of the current study sample. The other scale used in this research was adopted from Mansi (1998), the Economic/Social Level of the Family in the Saudi Environment.

Table 1: The results of the two-way analysis of variance (2x2) for the homogeneity of the members of the four subgroups according to "chronological age in months" (n = 128).

Variance source	Sum of squares	F degree	Average of squares	Calculated F	Statistical significance
Gender (male / female)	43.5	1	43.5	0.62	All of them are not significant at either confidence level
Developmental Disorder (with Asperger's/Normal)	30.4	1	30.4	0.43	
interaction (gender x disorder)	67.7	1	67.7	0.96	
The error	8662.7	124	69.86		
The total	8804.3	127			

It is clear from the previous table that the calculated value of "F" did not reach the limited value to become significant at any levels (0.99), (0.99) of confidence and statistical significance, which indicates the homogeneity of the sample members (the four subgroups) according to the "chronological age in months." ". To verify the validity of the first hypothesis, which states that "there is a positive and statistically significant correlation between the scores obtained by the total sample members of the study from children with Asperger's disorder and normal children on the scale of "feeling of loneliness for children" and the scores obtained by the same individuals on the scale." Anxiety for children" used, and the Pearson correlation coefficient was found between the scores obtained by the sample members of the normal children. They are (64) boys and girls who applied the scale "feeling of loneliness for children", and the scores obtained by the same individuals on the scale of "anxiety for children", and this is clear in the following:

Table 2: The correlation coefficient of scores obtained by individuals of the study sample of children with Asperger's disorder on the scale "children's feeling of loneliness" and the scores obtained by the same individuals on the scale "anxiety for children" (n = 64) boys and girls

Number of sample members of children with Asperger's	correlation coefficient	Statistical significance
64	0.72	significant at 0.99 confidence level for statistical significance

It is clear from the previous table that there is a positive and statistically significant correlation at the 0.99 level of statistical significance where the calculated (t) value reached (0.72), which is greater than the limited value required for the level of statistical significance that confirmed the positive association of loneliness with Anxiety among the study sample of children with Asperger's disorder of both genders.

Table 3: The correlation coefficient of scores obtained by individuals of the study sample of normal children on the scale "the feeling of loneliness for children" and the scores obtained by the same individuals on the scale "anxiety for children" (n = 64) boys and girls.

Number of sample members of children with Asperger's	correlation coefficient	Statistical significance
64	0.52	significant at 0.99 confidence level for statistical significance

It is clear from the previous table that there is a positive and statistically significant correlation at the 0.99 level of statistical significance where the calculated (t) value reached (0.52) which is greater than the limited value required for the level of statistical significance that confirms the positive association of loneliness with Anxiety among the members of the study sample of normal children.

To verify the validity of the second hypothesis which states that “there is no significant effect for each of the sex variables (males/females), the developmental disorder variable (children with Asperger’s disorder and normal children), and the interaction between them on the variation in the scores obtained by the members of the study subgroups on the used scale of "the feeling of loneliness of children", a statistical analysis of variance (2×2) was used, for the scores obtained by the members of the four subgroups of the study, and this is evident in the following table:

Table 4:Results of two-way analysis of variance (2×2) for the scores obtained by the members of the four subgroups on the "Children's Feelings of Loneliness" scale, (n = 128) children.

Variance source	Sum of squares	F degree	Average of squares	Calculated F	Statistical significance
Gender (male / female)	199.4	1	199.4	3.9	All of them are not significant at 0.99 confidence level
Developmental Disorder (with Asperger's/Normal)	263.1	1	263.1	5.5	
interaction (gender x disorder)	111.6	1	111.6	2.2	
The error	6258.9	124	50.5		
The total	6833	127			

It is clear from the previous table that there is a significant effect of the gender variable (males/females) on the variance of the members of the four subgroups of the current study, on the scale of "the feeling of loneliness for children" where the calculated "F" value (3.9) exceeds the limited value required to become significant when 0.01 level of statistical significance. It was also found that there was a significant effect of the developmental disorder variable (children with Asperger's disorder) and (normal children) on the variance of the members of the four subgroups of the study on the scale of "feeling of loneliness for children", where the calculated "F" value (5.2) exceeds the required limit value to become "F" is significant at the 0.99 level of confidence for statistical significance.

It was also found that there was a significant effect of the interaction variable (gender x developmental disorder) on the variation in the scores of the four subgroups on the scale of "the feeling of loneliness for children" where the calculated "F" value reached (2.2) which exceeds the required limit value to become "F" a significant at the 0.99 level of confidence for statistical significance. It was also found that there was a significant effect of the interaction variable (gender x developmental disorder) on the variation in the scores of the four subgroups on the scale of "feeling of loneliness for children" where the calculated "F" value reached (2.2) that exceeds the required limit value to become "F" significant at the 0.99 level of confidence for statistical significance.

To verify the validity of the third hypothesis which states that “there is no significant effect for each of the gender variables (males/females), the developmental disorder variable (children with Asperger’s and normal children), and the interaction between them on the variation in the scores obtained by the members of the study subgroups on a scale ” Anxiety for children", the statistical analysis of variance (2×2) method was used, for the scores obtained by the members of the four subgroups of the current study", and the following table illustrates this:

Table 5:The two-way analysis of variance (2×2) results for the scores obtained by members of the four subgroups on the "children's anxiety scale", (n = 128) children.

Variance source	Sum of squares	F degree	Average of squares	Calculated F	Statistical significance
Gender (male / female)	368.5	1	368.5	12	All of them are not significant at 0.99 confidence level
Developmental Disorder (with Asperger's/Normal)	450.2	1	450.2	14.7	
interaction (gender x disorder)	157	1	157	5.1	
The error	3794	124	3794		
The total	8551	127	8551		

It is clear from the previous table that there is a significant effect of the gender variable (males/females) on the variance of the members of the four subgroups on the scale of “anxiety for children” where the calculated “F” value reached (12) which exceeds the required limit value to become a function at the level of 0.99 for

confidence in statistical significance. It was also found that there was a significant effect of the developmental disorder variable (children with Asperger's disorder and normal children) on the variance of the members of the four study subgroups on the "children's anxiety" scale where they reached the calculated "F" value (14.7) which exceeds the limited value to become "F" significant at the 0.99 confidence level of statistical significance. It was also found that there was a significant effect of the interaction variable (gender x developmental disorder) on the variation in the scores of the four subgroups members on the "children's anxiety" scale where the calculated "F" value reached (5.1) which exceeds the limited value to become "F" significant at the level of 0.99 for confidence in statistical significance.

CONCLUSION

The feeling of loneliness is positively related to Anxiety among the study sample members of children with Asperger's disorder of both genders, and perhaps this result is consistent with the findings of (Hong, 2014; Mazrekk, 2014; Storch, et al., 2012; Kalyva, 2010). Male and female children with Asperger's disorder feel lonelier than normal male and female peers. This result is consistent with the findings of (Andrew, et al., 2009; Kalyva, 2010; Bauminger & Kasari, 2000; Bauminger, et al., 2003; Job & William, 2007; Lasgaard, et al., 2010; Locke, et al. 2010). Male children with Asperger's disorder are lonelier than their male/female peers with Asperger's disorder, and this result is consistent with the findings of (Jumtila & Vauras, 2009; Lasgaard, et al., 2010).

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REFERENCES

1. Abdel Ghaffar, Abdel Salam, - (1990). *Introduction to Mental Health*, Cairo - The Egyptian Renaissance House.
2. Abdel-Wahab, Amani Abdel-Maksoud, (2005). *Children's Psychological Loneliness Test*, Scale Guide, Anglo-Egyptian Library.
3. Al-Beblawi, Viola, (1987). *The Anxiety Scale for Children*, Instruction Booklet, Cairo - Anglo-Egyptian Library.
4. Al-Buhairi, Abdel Raqeeb, (1984). *The Anxiety Trait Test for Adults*, Cairo - The Egyptian Renaissance Library.
5. Al-Qasim, Jamal and Obaid, Majid, (2000). *Behavioural Disorders*. Amman - Dar Al-Safa for Publishing and Distribution.
6. AL-Shaghs, Abdel Aziz Al-Sayed, (2010). *Dictionary of Special Education and Rehabilitation for People with Special Needs (English-Arabic)*, TA, Cairo - Omrania Offset Press.
7. AL-Shaghs, Abdel Aziz El-Sayed (2015). *Asperger's Disorder Diagnostic Scale*. Items and Scoring Booklet, Cairo - Anglo-Egyptian Library.
8. Andrew, J.; Whitehouse, K.; Durkin, K.; Jaquet, E.; Ziatas, E.; (2009). Friendship, Loneliness and depression in adolescents with Asperger's Syndrome. *Journal of Adolescence*, (32)2, 309-322. <https://doi.org/10.1016/j.adolescence.2008.03.004>
9. Bauminger, N., Shulman, C., & Agam, G. (2003). Peer interaction and Loneliness in high-functioning children with autism. *Journal of autism and developmental disorders*, 33(5), 489-507. DOI: 10.1023/a:1025827427901
10. Bauminger, N., & Kasari, C. (2000). Loneliness and friendship in high functioning children with autism. *Child development*, 71(2), 447-456. <https://doi.org/10.1111/1467-8624.00156>
11. Bonetti, L., Campbell, M. A., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children' and adolescents' online communication. *Cyberpsychology, behavior, and social networking*, 13(3), 279-285. <http://doi.org/10.1089/cyber.2009.0215>
12. Buchholz, E. S., & Catton, R. (1999). Adolescents' perception of aloneness and Loneliness. *Adolescence*, 34(133), pp.203-213. <https://go.gale.com/ps/i.do?id=GALE%7CA54657540&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=00018449&p=AONE&sw=w&userGroupName=anon%7E7fa1cccb>
13. Church, C., Alisanski, S., & Amanullah, S. (2000). the social, behavioral and academic experiences of children with Asperger Syndrome. *Focus on Autism and Other Developmental Disabilities*, 15(1), 12-20. <https://doi.org/10.1177/108835760001500102>

14. Clinton, M., & Anderson, L. R. (1999). Social and emotional loneliness: Gender differences and relationships with self-monitoring and perceived control. *Journal of Black Psychology*, 25(1), 61-77. <https://doi.org/10.1177/0095798499025001005>
15. Creed, A. T., & Funder, D. C. (1998). Social anxiety; from inside and outside. *Personality and Individual Differences*, 25(1), 19-33. [https://doi.org/10.1016/S0191-8869\(98\)00037-3](https://doi.org/10.1016/S0191-8869(98)00037-3)
16. Durkin, K.; Whitehouse, A.; Jaquet, E.; Ziatas, K.; Walker, A. (2010). Cellphone use by adolescents with Asperger Syndrome. *Research in Autism Spectrum Disorders*, 4(2), 314-318. <https://doi.org/10.1016/j.rasd.2009.09.017>
17. Habib, M, A, (1991). *Public and Private Anxiety*, A Factorial Study of Anxiety Tests, Researches of the Seventh Psychology Conference in Egypt, The Egyptian Society for Psychological Studies, Cairo - Anglo Library.
18. Harb, G. et al. (2002). the psychometric properties of the interpersonal sensitivity measure in social anxiety disorder. *Behavior Research and Therapy*, 40, 961-979. [https://doi.org/10.1016/S0005-7967\(01\)00125-5](https://doi.org/10.1016/S0005-7967(01)00125-5)
19. Hong, J. (2014). Multirater congruence on the social skills assessment of children with Asperger Syndrome: self, mother, father, and teacher ratings. *Journal of the American Academy of child & Adolescent Psychiatry*, 53(2), 231-233. <https://doi.org/10.1007/s10803-010-0978-y>
20. Jobe, L. E., & White, S. W. (2007). Loneliness, Social relationships and a broader autism phenotype in college students. *Personality and Individual Differences*, 42(8), 1479-1489. <https://doi.org/10.1016/j.paid.2006.10.021>
21. Junttila, N. & Vauras, M., (2009). Loneliness among school aged children and their parents: Development and aging. *Scandinavian Journal of Psychology*, 50(3), 211-219. <https://doi.org/10.1111/j.1467-9450.2009.00715.x>
22. Kalyva, E. (2010). Multirater congruence on the social skills assessment of children with Asperger syndrome: self, mother, father, and teacher ratings. *Journal of Autism and Developmental Disorders*, 40(19), 1202-1208. <https://doi.org/10.1007/s10803-010-0978-y>
23. Lasgaard, M., Nielsen, A., Eriksen, M. E., & Goossens, L. (2010). Loneliness and Social Support in adolescent boys with autism Spectrum disorders. *Journal of Autism Development Disorders*, 40, (2). 218-226. <https://doi.org/10.1007/s10803-009-0851-z>
24. Lee, R. M., & Robbins, S. B. (1998). The relationship between social connectedness and anxiety, self-esteem and social identity. *Journal of counseling psychology*, 45(3), 338-345. <https://doi.org/10.1037/0022-0167.45.3.338>
25. Locke, J. & Ishijima, E. & Kasari, c. & London, N. (2010). Loneliness, friendship quality and the social networks of adolescents with high-functioning autism in an inclusive school setting. *Journal of Research in Special Educational Needs*, 10(2), 74-81. <https://doi.org/10.1111/j.1471-3802.2010.01148.x>
26. <https://doi.org/10.1111/j.1471-3802.2010.01148.x>
27. Lundh, Lars et al. (2010). Cognitive bias, emotion, and, and somatic complaints in a normal sample. *Cognition & Emotion*, 15(3).
28. <https://doi.org/10.1080/02699930126255>
29. Lynch, J., (1997). *The broken heart: The medical consequences of loneliness*, New York, Basic Book. <http://hdl.handle.net/10822/775478>
30. Mansi, Mahmoud Abdel Halim, (1419 AH-1998). The Economic and Social Level Form in the Saudi Environment", College of Education, King Abdulaziz University, Madinah.
31. Margalit, M. (2012). *Loneliness among children with special needs: Theory, research, coping, and intervention*. Springer Science & Business Media. New York Inc.
32. [https://books.google.com.eg/books?hl=en&lr=&id=kW_jBwAAQBAJ&oi=fnd&pg=PA3&dq=Margalit,+Malka+\(2012\):+%E2%80%9CLoneliness+among+children+with+special+needstheory,+research,+coping+and+intervention%E2%80%9D,+SpringerVerage,+New+York+Inc.&ots=b7ZTyunwH1&sig=xRVdRKfq5tVxOULqc2o8eeLx4Rc&redir_esc=y#v=onepage&q&f=false](https://books.google.com.eg/books?hl=en&lr=&id=kW_jBwAAQBAJ&oi=fnd&pg=PA3&dq=Margalit,+Malka+(2012):+%E2%80%9CLoneliness+among+children+with+special+needstheory,+research,+coping+and+intervention%E2%80%9D,+SpringerVerage,+New+York+Inc.&ots=b7ZTyunwH1&sig=xRVdRKfq5tVxOULqc2o8eeLx4Rc&redir_esc=y#v=onepage&q&f=false)
33. Mazrek, M. (2014). Loneliness, friendship and well-being in adults with autism spectrum disorders", *Autism*, 18(3), 223-232.
34. <https://doi.org/10.1177/1362361312474121>
35. Mc whirter, B. et al. (2002). Loneliness in high-risk adolescents: The role of coping, self-esteem and empathy". *Journal of Youth Studies*, 5(1), 69-84. <https://doi.org/10.1080/13676260120111779>
36. Nezlek, Johan (2002). Day-to-day relationships between self-awareness, daily events, and anxiety", *Journal of personality*, 70(2), 249-275. <https://doi.org/10.1111/1467-6494.05005>

37. Ouda, Mohamed Mohamed and Babatin, Sarah Jassem, (2014 AD). "Hilliam's Scale for Asperger's Disorder - James Gilima", Instruction Booklet, Cairo - Anglo-Egyptian Library.
38. Portnoff, G., (1988). Loneliness: Lost in the landscape of meaning, *The Journal of Psychology*, 122(6), 545-555. <https://doi.org/10.1080/00223980.1988.9915529>
39. Qashqous, Ibrahim Zaki, (1983). *The sense of psychological loneliness of Cairo university students* - Anglo-Egyptian Library.
40. Rokach, Ami, (1990). Surviving coping with loneliness. *The Journal of Psychology*, 124(1), 39-54. <https://doi.org/10.1080/00223980.1990.10543204>
41. Rosalia, S. and Dennis, H. (1990). Unraveling paradoxes in loneliness: Research and element of social theory and loneliness. *Social Behavior*, 5(3), 401-416.
42. Storch, E. & Larson, M. & Ehrenreich-May, J. & Arnold, E., Jones, A. & Renno, p. & Fuji, C. & Lewin, A. & Mutch, P. & Murphy, T. & Wood, J. (2012). Peer victimization in youth with autism spectrum disorders and co-occurring anxiety: Relation with psychopathology and loneliness. *Journal of Development and Physical Disabilities*, 24(6), 575-590. <https://doi.org/10.1007/s10882-012-9290-4>
43. Van-Baarsen, B., (2002) Theories on coping with loss: the impact of social support and self-esteem on adjustment to emotional and social loneliness following a partner's death in later life", *Journal of Gerontology, Series B*, 57(1), 833-842. <https://doi.org/10.1093/geronb/57.1.S33>
44. White, S. W., & Roberson-Nay, R. (2009). Anxiety, social deficits, and loneliness in youth with autism spectrum disorders", *Journal of Autism and Developmental Disorders*, 39(7), 1006-1013. <https://doi.org/10.1007/s10803-009-0713-8>
45. Willock, B.; Bohm, Lori; Curtis, Rebecca (2012). Loneliness and longing, conscious and unconscious aspects, *Routledge Taylor & Francis Group*, London and New York. <https://doi.org/10.1080/15551024.2013.766956>
46. Yahya, K, A. (2007). *Behavioral and Emotional Disorders*, 3rd Edition, Amman - Dar Al-Fikr for Publishing and Distribution,
47. Yeung, A. W. (2009). *The perception of friendship for children with Asperger's disorder and its relationships with loneliness and depression*. University of Hartford. <https://www.proquest.com/openview/b6dcee1a22ca9144b77b427ea21a0520/1?pq-origsite=gscholar&cbl=18750>