

The Feeling of Loneliness and its Relationship to Aggressive Behavior among Children with Asperger's Disorder in Riyadh, Kingdom of Saudi Arabia

Sultan Mousa Al-Owidha¹, Nevien Mohamed Zahran^{2*}

¹Department of Psychology, College of Education, King Saud University, Riyadh 11451, Saudi Arabia

²Department of Mental Health, Prince Naif Arab University for Security Sciences, Saudi Arabia

ABSTRACT

The current study examined the association between loneliness and violent conduct in Riyadh, Saudi Arabia, Asperger's children, and normal children. 128 Asperger's and normal youngsters made up the research sample. A correlative descriptive approach was used to achieve research goals. The study indicated both male and female Asperger's youngsters feel more psychological loneliness than their counterparts of the typical gender. Male and female Asperger's children are more aggressive than their normal classmates, and male Asperger's and normal children are more aggressive than normal and Asperger's female children. Based on the research results, some recommendations were formulated, the most important of which is the need to activate in-service training for psychologists supervising children with Asperger's disorder and raise their parents' competence to deal with this group optimally. Early detection through trained psychologists present in primary and middle schools to identify children with special needs, with the need to treat them by professionals, is also essential.

Key words: loneliness, Feeling, Aggressive behavior, Asperger's disorder, Riyadh city

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Corresponding author: Nevien Mohamed Zahran

e-mail ✉: maniv200065@gmail.com

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INTRODUCTION

Numerous psychologists and special educators study mental impairments and incredibly infantile autism. Autism is born-onset. Symptoms include the inability to communicate with others, lack of or weakness in language, stereotyped conduct, aversion to environmental change, and failure to imagine and connect [1]. Autism includes an inability to interact or communicate, although this is not a physical condition. The Psychiatric Diagnostic Manual says infantile autism may accompany medical disorders, even though most autistic children have seizures. Neurological sickness hasn't been confirmed. Infantile autism is autistic isolation with decreased reactivity. Autistic people live in isolation, are unaware of others, and speak strangely stereotyped ways. They may replay audio snippets clichédly. Autistic children often self-abuse, laugh and scream, are unable to detect danger, and shake uncontrollably. Asperger's disorder is linked to infantile autism. To identify this disease, social

interaction must be deficient in two ways. Substantial deficiency in non-verbal behaviors such as eye contact, facial expressions, gestures, or loss of communication and social engagement, coupled with stereotyped conduct [2].

Campbell says Asperger's is characterized by limited social engagement, activity, and interests. The child's verbal and cognitive skills are age-appropriate [3]. Asperger's disorder is social. Asperger's youngsters can engage in social relationships, but they lack motivation. Dissociation and social ineptitude characterize their social behavior [3,4]. Loneliness is a major psychological problem. It causes young people significant psychological issues, which s/he complains [5]. Loneliness is the perception of lacking acceptance, love, and attention. In addition to his lack of social skills, he's highly dependent on people [6]. Individual loneliness can cause people to withdraw from society and enjoy sitting alone. They may struggle to make and keep friends [7]. Autism spectrum disease sufferers are lonely, alone, and distant, according to a study [8-10]. Observant males with ASD also experience loneliness [11].

Research show Asperger's children are lonely [9,11-14]. Asperger's and autism are associated with violent and anti-social behavior [15-17]. Aggressive behavior is a significant factor in juvenile criminality. Aggression is linked to personality problems, anti-social behavior, juvenile delinquency, and adult crime [2,18,19]. The

aggressive child and his peers aren't compatible. Aggression, impulsivity, and irresponsibility may cause the child's peers to reject him as an irritation and nuisance [20]. Some view aggressive behavior as a collection of acts that violate proper behavior and are aimed at hurting oneself, others, or property [21,22]. Aggressive behavior harms the perpetrator, people, and nearby items. Causes and expressions vary by society and person [23]. Many emotionally and behaviorally troubled kids are aggressive (Yahya, 2007). Aggressive behavior causes bodily or psychological harm to others, such as insulting. It's fueled by dissatisfaction or a desire to dominate people [24].

Asperger's and child violence are linked, according to research [15-17]. Isolation was linked to violent behavior in normal children and teens of both sexes [25-28]. Asperger's and infantile autism children also exhibited violent and anti-social behavior [15-17]. From the above, it's clear that in-depth scientific research on the topic's variables is needed. Most important are loneliness and aggressive behavior among normal children and those with Asperger's Disorder (AD) (Riyadh city - The Kingdom of Saudi Arabia as a model).

The research problem

In light of the theoretical and empirical context around the feeling of isolation and its association with violent behavior among individuals with infantile autism, autism spectrum disorder, and Asperger syndrome. The outcomes of the performed research indicated the following:

- ✓ First: The prevalence of loneliness among Asperger's condition youngsters of both sexes [9,11-14].
- ✓ Second: The prevalence of aggressive and anti-social conduct among children with Asperger's and autism spectrum disorders [15-17].
- ✓ Third: The sensation of isolation is positively connected with aggressive conduct in Asperger's condition youngsters [15-17].
- ✓ Fourth: The sensation of isolation is positively associated with violent conduct in normal children and adolescents of both sexes [25-28].

All of them indicate the research problem nature that will be addressed in the current research, whose features can become more evident by asking the following questions:

- I. What is the correlation between loneliness feelings and aggressive behavior among the study sample members of children with Asperger's disorder and normal children of primary school students in Riyadh?
- II. What are the differences between the two study groups members in the loneliness feeling according to the gender variable (male/female) and the developmental disorder variable (children with Asperger's disorder and normal children)?

- III. What are the differences between the two study groups' members in aggressive behavior according to the gender variable (male/female) and the developmental disorder variable (children with Asperger's disorder and normal children)?

Therefore, from the above, it is clear that there is a need to raise this problem and subject it to scientific research to find answers to these questions.

The research objectives

- ✓ To examine the correlation between loneliness feelings and aggressive behavior among a sample of children with Asperger's disorder and normal children from primary school students in Riyadh.
- ✓ To draw comparisons between the two study groups members in the loneliness feeling, according to the gender variable (male/female), the developmental disorder variable (children with Asperger's disorder and normal children).
- ✓ To draw comparisons between the two study groups' members in aggressive behavior, according to the gender variable (male/female) and the developmental disorder variable (children with Asperger's disorder and normal children)?

The research importance

The study's theoretical and practical value rests in its investigation of loneliness and its association with violent behavior among primary school adolescents with Asperger's Disorder (AD), a critical age and educational segment. The study used Arab and foreign theoretical frameworks to explain loneliness, aggression, and Asperger's disorder (AD). This research adds to the Arabic library with research results and recommendations that may aid in early counseling intervention to reduce the worsening of some serious psychological issues by giving empirical data in preparation for appropriate counseling programs.

The research limitations

- ✓ Objective limits: The objective limits were represented in the research topic, which represents the focus of its interest, namely: the loneliness feeling and its relationship to aggressive behavior among children with Asperger's disorder in Riyadh, Saudi Arabia.
- ✓ Spatial limits: The spatial boundaries of the research were represented in primary schools for male children and others for females, affiliated with the educational administrations in Riyadh, among whom the experiment was conducted.
- ✓ Time limits: The research tools were applied in the second semester of the academic year 1441 AH - 1442 AH.

The research terminologies

The feeling of loneliness

The following procedural definition is "the individual's lack of acceptance, affection, love, and attention from people around him." In addition to lacking numerous social abilities that would allow them to engage in intense connections with others, they cannot satisfy their need for such interactions [6]. The procedural definition of the phrase is the examinee's score on the employed scale.

Aggressive behavior

It's a socially recognized, goal-oriented conduct. The person frustrates his motivations and aspirations. His wrath and unbalance drive him to damage himself or others to relieve agony. The individual's personality balance is restored after experiencing frustration and contributing to fulfilling the frustrated motive [29]. Procedure-wise, it's the examinee's scaled score.

Asperger disorder

It's a developmental illness defined by a lack of social interaction skills, nonverbal communication, limited activities, interests, and sensory and motor deficits, with average intelligence and age-appropriate language development [3]. Asperger's disorder is characterized by verbal, nonverbal, social, behavioral, and cognitive domains. The examinee's performance on the scale defines the word.

Theoretical framework

Asperger's is a developmental disease characterized by social difficulties, unusual behavior, and interests [4]. Wilkinson defines Asperger's as lacking social skills, limited interests, average or above-average IQ, and age-appropriate language development. Asperger's youngsters have average IQ, nonverbal reasoning skills, and visual-spatial integration. They lack social judgment and are sensitive to visual, auditory, and olfactory signals, which can lead to behavioral issues [3]. Asperger's youngsters also exhibit violent and anti-social tendencies and social anxiety [15,17].

Characteristics and symptoms of asperger's disorder (AD)

- ✓ Weak social comprehension and limited verbal capacity to communicate with others.
- ✓ Limited interests and attention to specific themes occupy most of their thoughts, delayed social maturity, and lack of nonverbal communication.
- ✓ They cannot comprehend others' sentiments and emotions when interacting with them.
- ✓ Some students struggle to maintain concentration in the classroom.
- ✓ Most of these children require more excellent assistance from their moms in self-care skills than expected for their chronological age and cognitive abilities.
- ✓ Some people have balance and motor coordination issues, while others have heightened sensitivity to

certain sensory stimuli.

- ✓ Some parents of these children may also have the same symptoms, leading some to speculate that, in this scenario, the disease may be caused by hereditary or neurological issues rather than psychological or environmental ones [3,4].

Individuals with Asperger's condition (AD) and children with autism (ASD) have been observed to have a decline in the quantity and quality of friendships, as well as a possible lack of communication and social interaction skills [1,2,4,8-10]. Loneliness is one of the most significant psychological difficulties faced by people with Asperger syndrome and children with autism [8-11,13,15,17,30-32].

Loneliness is a fundamental human trait, like happiness, hunger, and self-actualization. Others believe everyone, regardless of age or gender, should feel loneliness since it undermines social ties [33,34]. It includes rejection, worthlessness, despair, fury, humiliation, frustration, tension, aggression, and resentment [35]. Lack of affection and familiarity in a person's upbringing (cold house, family rupture, shallow parent-child ties, and accidental childhood trauma/disease) may contribute to social sensitivity and poor social skills in early life [36]. The frequency of loneliness among children with Asperger's disorder is average for both genders [9,11-17].

Aggressive behavior is any physical or verbal attack on one side. This behavior can be direct and explicit and taken against oneself, others, or the same person. It projects onto people or the surroundings [4]. It's also any action that injures another person or property or tries to generate disruption or hatred or exercise physical or verbal control over another [1,37]. It has four sub dimensions:

Directly aggressive conduct

It includes physical hostility, is designed to harm others or one, and is stated plainly and immediately.

Aggressive verbal behavior

The verbal response causes psychological and social injury to the opponent or group, hurts their feelings or ridicules them, and encompasses all morally or morally unpleasant verbal utterances.

Hostility

The projected homicidal animosity is latent aggressiveness, communicated indirectly and sometimes not explicitly without striking or destroying as in direct hostile action.

Anger

Anger is classified as a negative emotion since it is the source of aggression or hostility, adding the buss, A. Watson, and D. subscales to the general hatred and aggressiveness scale [38]. Direct aggressive behavior involves causing harm to oneself or others and is more common in men than women. Women experience more indirect animosity than men [23,38,39]. Some believe

there are biological reasons for aggression, such as the male hormone that causes aggressive behavior or brain injury with certain diseases, as well as the use of certain medications and alcohol. Other reasons for aggression include observing aggressive behavioral patterns that a child can imitate [2,24,40].

Freud says violent behavior manifests the death instinct since the individual seeks to destroy and the child is born aggressive [2]. Behaviorism teaches violence. Children mimic aggressive conduct [1]. The cognitive theory claims violent behavior stems from erroneous beliefs and ideas that affect a person's self-image and relationships. These beliefs cause aggressiveness [41,42]. The emotional-behavioral theory argues a person's ideas influence his emotions and conduct, and violent action is the outcome of faulty perception. He's emotional and impulsive [24,42]. Some research show violent and anti-social behavior in Asperger's and ASD

[15-17].

Previous studies

These studies will be dealt with by presenting them under the following themes:

Feeling of loneliness and its relationship to aggression among Asperger's disorder and normal children

Hong, et al. [15] studied Asperger syndrome children's social skills and aggressiveness (AS). The study sample included (21) Asperger syndrome and (21) non-disordered children. Asperger syndrome children lack social skills and act aggressively and antisocially. Asperger's kids felt alone. Silvina, et al. [16] studied the association between social skills, anti-social behavior, and loneliness among Argentine primary school children of both sexes. (106) male and female elementary school students comprised the study sample. This study found

Table 4: Participant feedback regarding the assurance of Saudi dentists.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	3.94%
0	Not at all	4.93%
1	Agrees with preservation	3.94%
2	Agrees sometime	9.36%
3	Agrees	12.81%
4	Agrees most of the time	29.06%
5	Agrees strongly	35.96%
Weighted Average Scale		3.93

PARTICIPANTS FEEDBACK TOWARD SAUDI DENTIST ASSURANCE

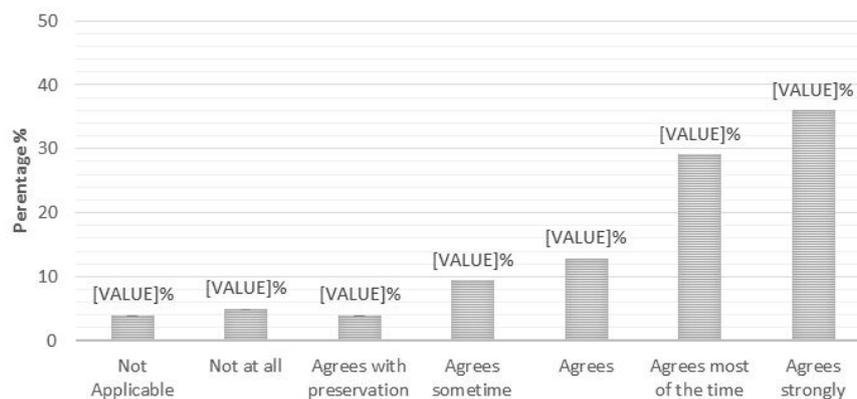


Figure 3: Participants' feedback regarding assurance.

Table 5: Participant feedback regarding the accountability of Saudi dentists.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	3.94%
0	Not at all	5.91%
1	Agrees with preservation	6.90%
2	Agrees sometime	10.34%
3	Agrees	9.85%
4	Agrees most of the time	26.60%
5	Agrees strongly	36.45%
Weighted Average Scale		3.83

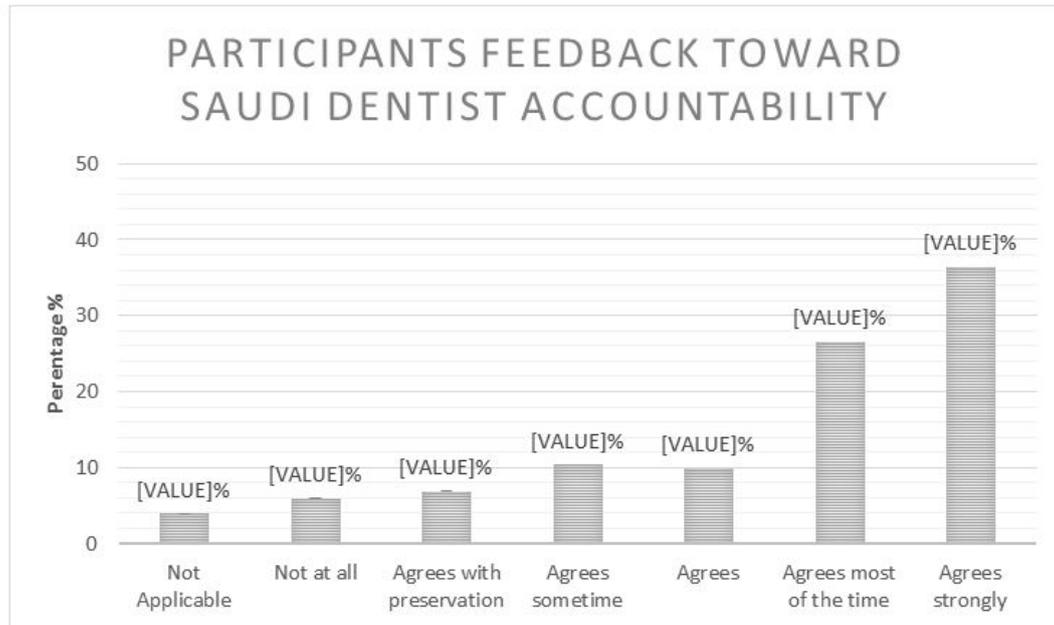


Figure 4: Participants’ feedback regarding accountability.

Table 6: Participant feedback regarding the empathy of Saudi dentists.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	2.60%
0	Not at all	4.90%
1	Agrees with preservation	10%
2	Agrees sometime	15.50%
3	Agrees	19.50%
4	Agrees most of the time	25%
5	Agrees strongly	22.50%
Weighted Average Scale		3.22

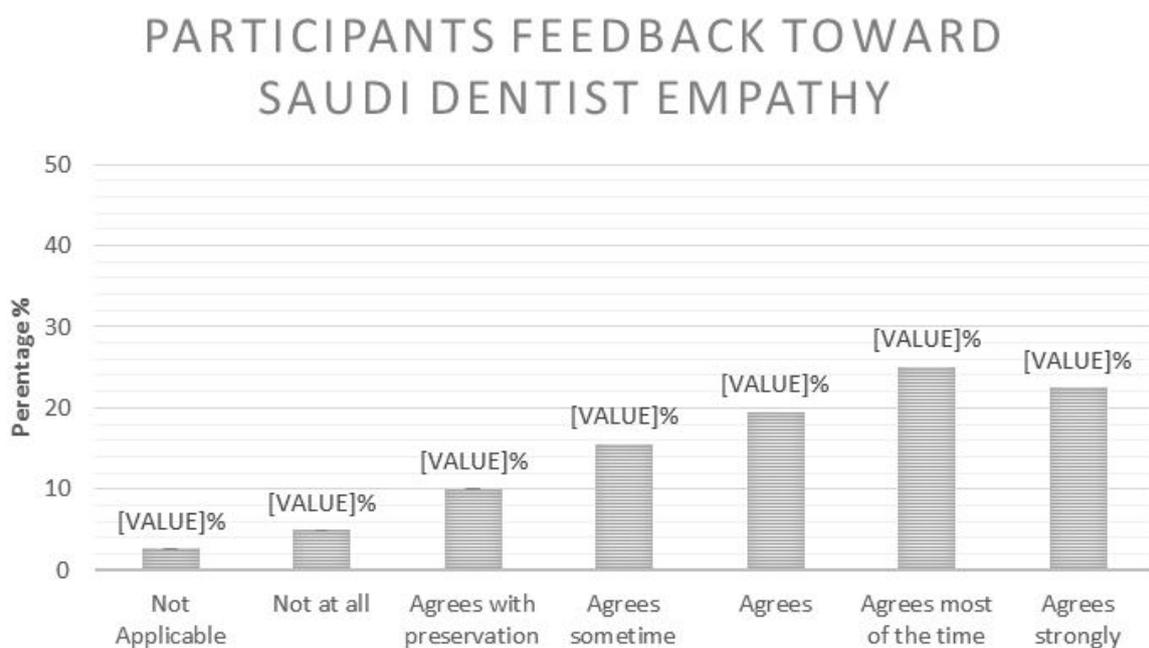


Figure 5: Participants’ feedback regarding empathy.

Table 7: Participant feedback regarding the quality of Saudi dentists.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	4.93%
0	Not at all	3.94%
1	Agrees with preservation	6.90%
2	Agrees sometime	7.39%
3	Agrees	13.30%
4	Agrees most of the time	30.54%
5	Agrees strongly	33%
Weighted Average Scale		3.89

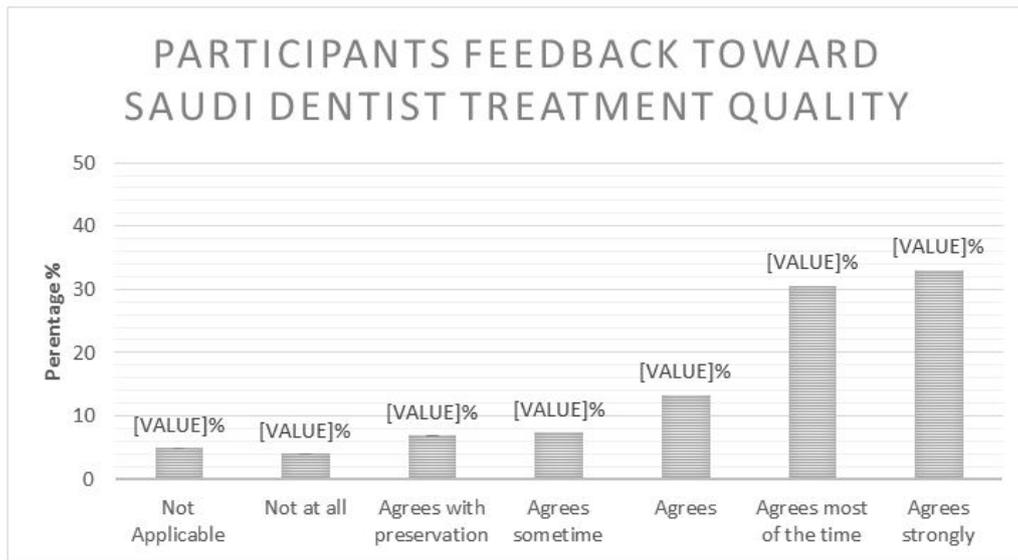


Figure 6: Participants' feedback regarding treatment quality.

Table 8: Participant feedback regarding satisfaction with Saudi dentists.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	5%
0	Not at all	5%
1	Agrees with preservation	4.50%
2	Agrees sometime	8.50%
3	Agrees	15%
4	Agrees most of the time	27%
5	Agrees strongly	35%
Weighted Average Scale		3.9

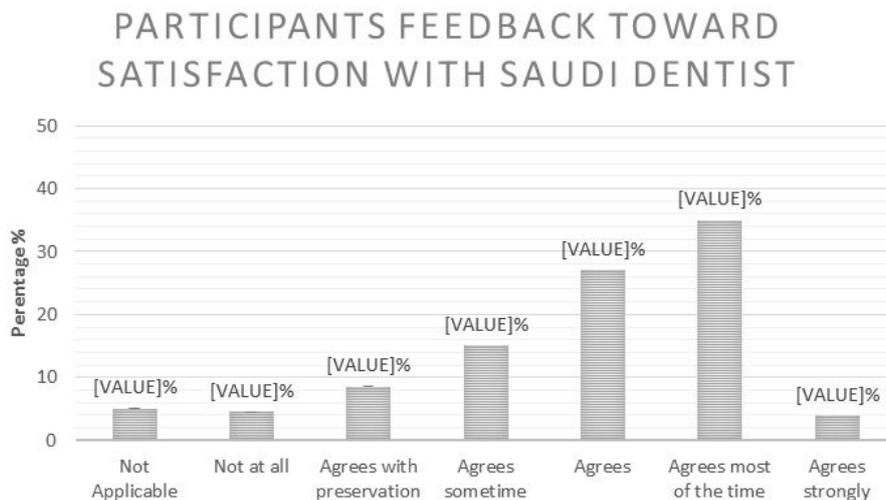


Figure 7: Participants' feedback regarding satisfaction.

Table 9: Participant feedback regarding willingness to visit a Saudi dentist.

Scale	Level of agreement	Participant feedback
N/A	Not Applicable	2.50%
0	Not at all	6.50%
1	Agrees with preservation	3%
2	Agrees sometime	11%
3	Agrees	15.50%
4	Agrees most of the time	24%
5	Agrees strongly	37.50%
Weighted Average Scale		3.86

PARTICIPANTS FEEDBACK TOWARD WILLINGNESS TO VISIT SAUDI DENTISTS

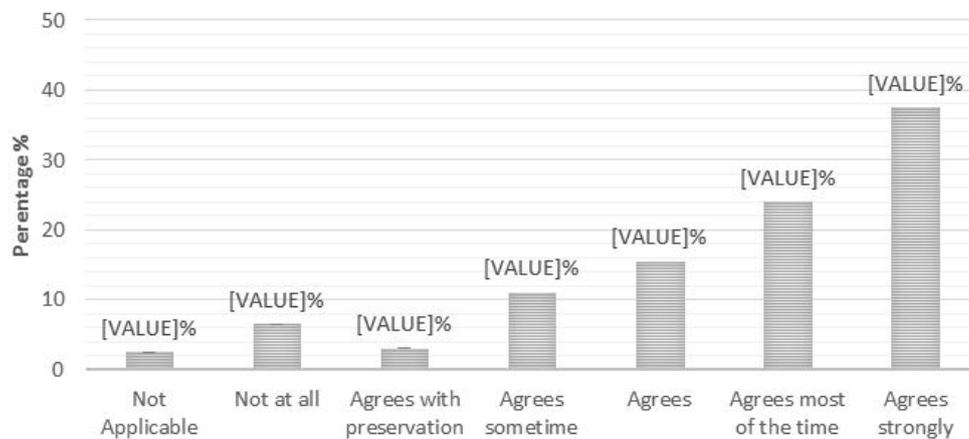


Figure 8: Participants' feedback regarding their willingness to visit Saudi dentists.

Table 10: Dimensions that influence patient satisfaction.

Dimension	Weighted Average Scale, 0-5	Satisfaction weighted scale average, 0-5	P-value
Reliability	3.95	3.9	0.65
Assurance	3.93		0.78
Accountability	3.83		0.6
Empathy	3.22		0.001
Treatment Quality	3.89		0.94

DIMENSIONS INFLUENCE ON SATISFACTION

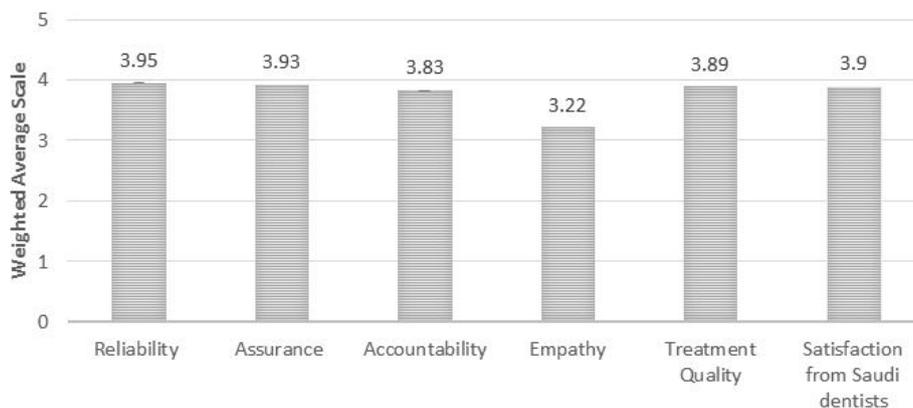


Figure 9: Dimensions influence on satisfaction.

Table 11: Dimensions that influence patient willingness to visit Saudi dentists.

Dimension	Weighted Average Scale, 0-5	Patient willingness to visit Saudi dentists weighted scale, average 0-5	P-value
Reliability	3.95	3.86	0.48
Assurance	3.93		0.6
Accountability	3.83		0.78
Empathy	3.22		0.003
Treatment Quality	3.89		0.85
Willingness to visit Saudi dentists	3.86		

DIMENSIONS INFLUENCE ON PATIENT WILLINGNESS TO VISIT SAUDI DENTISTS



Figure 10: Dimensions influence on patient willingness to visit Saudi dentists.

Table 12: Dimension influence by gender.

Gender	Reliability	Assurance	Accountability	Empathy	Treatment Quality	Satisfaction	Willingness to visit Saudi dentists
Male							
Average Scale	3.7	3.6	3.59	3.5	3.65	3.64	3.54
Female							
Average Scale	3.8	3.86	3.6	3.5	3.68	4.74	3.8
P-value	0.59	0.31	0.96	1	0.89	0.65	0.2

DIMENSIONS INFLUENCE BY GENDER

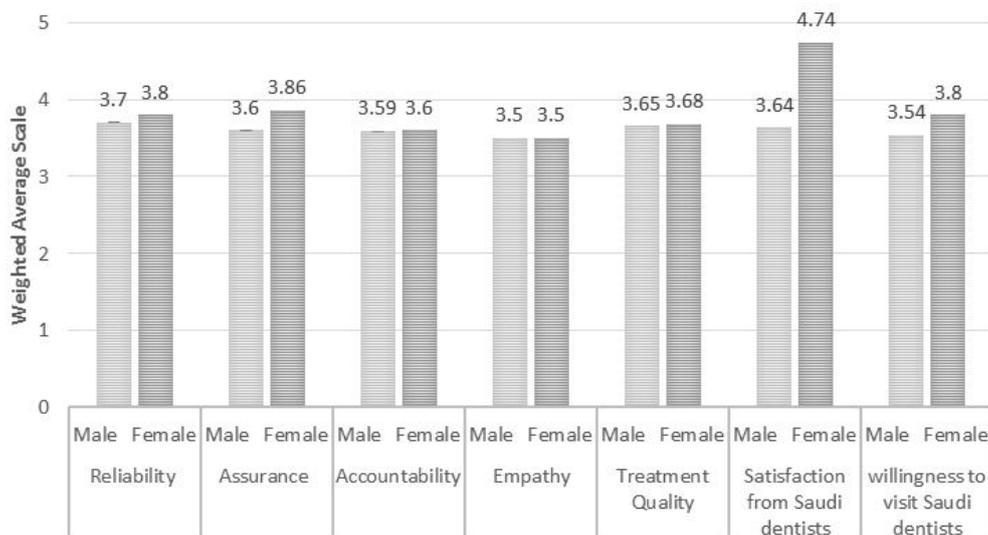


Figure 11: Dimensions influence by gender.

a link between social skills, isolation, and anti-social conduct among male and female elementary school students.

Kalyva, et al. [17] studied the link between Asperger syndrome and loneliness. The sample includes 21 Asperger's children. Asperger syndrome children are aggressive and anti-social. The study found a link between loneliness and violent behavior in Asperger's children. Alyagon, et al. [25] studied the relationship between violent behavior and isolation in primary-aged boys. 145 8- to 11-year-olds were studied. The statistical analysis of the study data showed a link between isolation and aggressive behavior among male elementary school students. Buelga, et al. [26] conducted a study where the sample included (1319) 11 to 16-year-olds (594 males and (725 females). Isolation is linked to violent behavior in teenage boys and girls as per this study.

Chen, et al. [27] studied isolation and violent behavior in children and adolescents. The study sample included 2,263 9-12-year-olds. After analyzing the study data, researchers found that isolation is linked to violent behavior among Chinese children. Crick, et al. [28] studied violence, psychological and social adjustment, and loneliness. 491 sixth-grade boys and girls were studied. Female respondents were more aggressive than males, and aggressive behaviors were positively associated with group separation.

The prevalence of loneliness feeling among children with Asperger's disorder and normal children of both genders

Lasgaard, et al. [11] studied autistic male teenagers' loneliness and social support. The study involved 19 autistic male teens (ASD). Autistic males are lonely, according to the study. Locke, et al. [9] studied loneliness in autistic teens. The study sample included (27) autistic teens and (13) Los Angeles high schoolers. Autism teens report loneliness more often than non-autistic teens, say researchers. Junttila, et al. [12] studied the loneliness of primary pupils and parents. The study sample included 981 10-year-old primary school boys and girls. In their study sample, many children were lonely. Male children experience loneliness more than females. Jobe, et al. [13] explored autistics' loneliness. The sample included (97) undergrads. People living with autism reported more loneliness than their peers.

It is clear from the extrapolation of the previous studies' results that:

First: The feeling of loneliness is positively associated with aggressive behavior among children with Asperger's disorder [15,17].

Second: The loneliness feeling is positively related to aggressive behavior among normal children and adolescents of both genders [25-28].

Third: The prevalence of loneliness among children with Asperger's disorder and typical for both genders [9,11-14].

Fourth: The feeling of loneliness is more prevalent among males than females [12].

Fifth: The prevalence of aggression among females is more significant than males [28].

Sixth: The prevalence of aggressive and anti-social behavior among children with Asperger's disorder and autism spectrum disorder [15,17].

Seventh: The prevalence of loneliness feeling among children with Asperger's disorder and normal [9,11-13,15,17].

Research hypothesis

The study is undertaken in light of the following hypotheses:

- ✓ There is a positive and statistically significant correlation between the scores obtained by the total sample members of children with Asperger's disorder and normal children on the scale of "the loneliness feeling for children" and the degree obtained by the same individuals on the scale of "Ain Shams scale of aggressive behavior forms for children."
- ✓ There are no statistically significant differences between the average scores of the study sample members of children with Asperger's disorder and typical children in the variable of loneliness, according to the gender variable (male/female), as measured by the tool used.
- ✓ There are no statistically significant differences between the average scores of the study sample members of children with Asperger's disorder and typical children in the aggressive behavior variable, according to the gender variable (male/female), as measured by the tool used.

Research method

The research employed a descriptive (correlative/comparative) methodology. The correlational relationships between the study variables were evaluated as they exist in elementary schools in Riyadh, Saudi Arabia.

Research community

The research community consisted of primary school students in Riyadh (males and females) with Asperger's disorder, and the research community also included normal children.

Research sample

Riyadh elementary school pupils of both sexes with Asperger's and typical children constituted the research sample of 128. The research sample has been age-standardized in terms of calendar months. The sample was separated into the following four subgroups:

- ✓ The first subgroup consisted of (32) male children with Asperger's disorder enrolled in Riyadh elementary schools.

- ✓ The second subgroup comprised (32) youngsters who were normal male children of primary school pupils from Riyadh primary schools.
- ✓ The third subgroup consisted of (32) girls with Asperger's disorder who were elementary school students in Riyadh.
- ✓ The fourth subgroup comprised (32) girls who were the natural female children of primary school pupils from Riyadh primary schools.

Note that the four categories have been homogenized in terms of "chronological age in months" and cognitive ability as follows (Table 1):

It is clear from the previous Table 1 that the calculated "F" value did not reach the threshold value required to become significant at any normal levels of significance which indicates the homogeneity of the sample members (the four subgroups) in terms of the "chronological age in months" variable.

Research tools

The "feeling of loneliness for children" scale [6]:

The developer gathered the instrument's components from two primary sources represented in the theoretical basis of the sense of loneliness and its definitions, components, and dimensions. Which are:

- ✓ Friendship, affection, and love relationships, and the extent of their absence.
- ✓ Feeling of isolation and social avoidance.
- ✓ Social skills and the extent to which they are absent.
- ✓ Fear and mistrust refer to the child's lack of self-confidence and the defamation of the opinions of others.

In light of the preceding, the examination may contain (51) items for which the student chooses one of three possible responses (always, sometimes, never). To compute the validity of the test, the tool's developer performed the validity of the arbitrators to edit or eliminate some items; the final version of the test contained (48) items after three were removed. After administering the instrument to fifty elementary school pupils, one of the instrument's measurements was determined. Concerning the test's dependability, the instrument was administered twice with a two-week interval to a group of (50) fourth- and fifth-grade male and female students. She determined the correlation coefficient between the collected scores. The group members in the first process and the scores received by the same individuals in the second operation

for each instrument dimension and the overall test. The correlation coefficients for the scale's sub dimensions were (0.555), (0.561), and (0.754), while the correlation coefficient for the tool's total score was (0.754). (0.936). All correlation coefficients were positive and statistically significant at the level of (0.01), indicating the reliability of the research instrument. Primary school pupils of both sexes comprised the study's sample population to validate the validity of the procedure's instrument. The tool's stability was determined by performing the procedure and re-procedure on a random sample of (90) male and (90) female children from Riyadh's elementary schools three weeks apart to determine the correlation coefficient between the two procedures. The correlation coefficient reached (0.861) for male students and (0.794) for female students; these are positive and statistically significant correlation coefficients, indicating the stability and validity of the instrument for the procedure on the primary school students who comprised the study sample.

Ain Shams scale of aggressive behavior types for children, developed [29]:

The tool's creators constructed the scale consisting of (80) items distributed over (20) circumstances for aggressive behavior. The instrument developer employed the following methods to verify the scale's validity and the procedure's consistency. Initially, the scale's validity:

- ✓ **Logical validity:** The process by which the scale was presented in its initial form to a panel of experts for evaluation and to verify that it accurately represented the construct being evaluated in terms of its features and consistency throughout the scale's questions.
- ✓ **Structural or formative validity:** Calculating the inter-correlation coefficients of the four dimensions of the scale (physical aggression, verbal aggression, passive aggression, and normal or normal behavior). This resulted in a correlation between the four scale components, whose values varied between (52.18), which was statistically significant (0.05).
- ✓ **Factorial validity:** The tool's creator did a factor analysis to determine the factorial validity of the scale items, which resulted in a factorial matrix of the rank (120 120) containing the saturation values of each factor with the general factor. All of these saturations are statistically significant. It ranged between (0.78, 0.92, 0.88, and 0.91), indicating the scale's validity.

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

Variance source	Sum of squares	Freedom degree	Mean of squares	Calculated F	Statistical Significance
Gender (male / Female)	43.5	1	43.5	0.62	Insignificant at any significance level
Developmental disorder (Asperger's/Normal)	30.4	1	30.4	0.43	
Interaction	67.7	1	67.7	0.96	
Error	8662.7	124	69.86		
Total	8804.3	127			

Second, the stability of the scale

For the re-test approach, the scale was administered again to the same sample members with a two-week delay between administrations. Correlation coefficients were retrieved between the scores of the sample members, yielding correlation coefficients for each dimension (0.87, 0.92, 0.88, and 0.91). All correlation coefficients are positive and statistically significant.

The Kuder-Richardson equation-based variance analysis method produced correlation coefficients for each dimension (0.79, 0.84, 0.80, 0.83). These correlation coefficients are positive and statistically significant, indicating a high degree of scale stability and suitability for the technique. The procedure and re-procedure were performed on a random sample of (80) kids of both genders in the primary stage of Riyadh schools to test the tool's stability and applicability to the study sample members in the Saudi primary environment school students.

An Asperger's Disorder diagnostic scale developed by Al-Shaghs, et al. [3]

The instrument's author developed a definition of the notion and a method for evaluating and diagnosing the disease until he discovered four categories he used to construct the current scale.

Verbal and nonverbal forms of communication

Social distancing.

Interests and behaviors.

Mental and cognitive ability.

After examining the arbitrators' opinions and deleting items without 90% agreement, the number of items left on the scale was (97). According to the instrument's compiler's internal consistency calculation, all intercorrelation coefficients are statistically significant (0.01). The Alpha-Cronbach method was employed to calculate the scale's stability, which showed high coefficients of 0.86 to 0.97. The published scale gives median and percentile norms for scale degrees, demonstrating its stability. The test and re-test technique was used on a random sample of (90) male and (90) female elementary school children in Riyadh to validate the scale's performance. The association between the two procedures takes three weeks to determine. Male and female correlation coefficients were (0.694) and (0.617), respectively. This displays the instrument's consistency, measurement competence, and approach compatibility. Male and female Riyadh primary school students make up the sample.

The statistical methods

Some descriptive statistics methods were used, the most

important of which are:

- ✓ Pearson correlation coefficient.
- ✓ Spearman & Brown correlation coefficient.
- ✓ Two-way analysis of variance (2 * 2).
- ✓ T-test.

RESEARCH RESULTS AND DISCUSSION

To determine the validity of the first hypothesis, which states, "There is a positive and statistically significant correlation between the scores obtained by the total sample members of children with Asperger's disorder and normal children on the "loneliness feeling for children" scale and the degree obtained by the same individuals on the "Ain Shams scale of aggressive behavior forms for children." The Pearson correlation coefficient was found between the scores obtained by the sample members of children with Asperger's disorder (64 boys and girls) on the scale "the loneliness feeling for children" and the scores obtained by the same individuals on the "Ain Shams scale of aggressive behavior forms for children," and the Pearson correlation coefficient was found between the scores obtained by the sample members of the normal Chinese children on the scale "the loneliness feeling for children" and the scores obtained by the same individuals on the Ain Shams scale of aggressive.

It is clear from the previous Table 2 that there is a positive, statistically significant correlation at the significance level of 1%, where the calculated value of (t) is (0.81). It is greater than the required limit value for the level of statistical significance, indicating a positive correlation between the loneliness feeling and aggressive behavior among the study sample members of children with Asperger's disorder of both genders.

It is evident from the data in the preceding Table No. 3 that there is a positive, statistically significant correlation at the significance level of 1% when the computed value of (t) reaches 1. (0.66). It exceeds the needed threshold for statistical significance, indicating a positive link between loneliness and aggressive behavior among the study sample of typically developing children of both sexes.

To test the validity of the second statistical hypothesis, which states, "There are no statistically significant hypotheses between the average scores of the study sample members of children with Asperger's disorder and normal children on the variable of psychological loneliness, according to the gender variable (male/female)." The analysis utilized a two-by-two statistical discrepancy for the scores received by members of the four subgroups of the study, as shown in Table 4.

Table 2: Correlation coefficient of scores obtained by the study sample members of children with Asperger's disorder on the scale of "the feeling of loneliness for children" and the scores obtained by the same individuals on the scale of "Ain Shams of aggressive behavior forms for children," (n=64) boys and girls.

Number of sample members of children with Asperger's disorder	Correlation coefficient	statistical significance
64	0.81	Significant at the significance level of 1%

It is evident from the data in Table No. 4 that there is a substantial effect of the gender variable (male/female) on the variance of the four subgroups of the current study, as measured by the "feeling of loneliness for children" scale. The computed "F" value was (3.9), which surpasses the threshold necessary for significance at the 0.05 level of statistical significance (0.01). The calculated "F" value for the influence of the developmental disorder variable (children with Asperger's disorder) and (normal children) on the variance of the four subgroups members on the scale of "the sensation of loneliness for children" was significant (5.2). It exceeds the threshold value required for "F" significance at the 1 percent significance level.

The same Table's data also revealed that the interaction variable (gender developmental disorder) significantly affected the variance of the four subgroups' members on the scale "the sense of loneliness for youngsters." The estimated "F" value was (2.2), which exceeds the needed limit value for significance at the 1 percent significance level. The T-test was also utilized to determine whether there were significant variations between the average scores of the four subgroups on the scale "the sense of loneliness for children." It is evident from the information in the Table 5.

Where it is evident from the preceding Table that there are statistically significant variations between the mean scores of the following categories on the "feeling of loneliness for children" scale, namely:

The group of male children with Asperger's and male children without the disorder, for whom the estimated "T" value was more significant than zero (8.6). It exceeds the acceptable limit value at the 1% significance level in favor of the group with the highest mean, namely male children with Asperger's disorder. This suggests that male children with Asperger's disorder experience more feelings of loneliness than their classmates.

The group of female children with Asperger's disorder and the group of normal female children, where the "T" value was calculated to be more than 0.05, respectively (7.2). It exceeds the needed limit value at the 1% level

of statistical significance in favor of the group with the highest mean, namely the group of female children with Asperger's disorder. This suggests that females with Asperger's disorder experience more feelings of loneliness than their peers.

The group of male children with Asperger's disorder and normal children together and female children with Asperger's disorder and normal children together; where the estimated "T" value achieved a statistically significant level (6). It exceeds the minimum value required for significance at the 1% level in favor of the group with the highest mean, the group of male children with Asperger disorder and normal children combined. This implies that male children with Asperger disorder and typical male youngsters feel more alone than their female counterparts with Asperger disorder and typical females.

The group of children (males and females) with Asperger's disorder and the group of children (males and females) who are normal, where the calculated "P" value approached statistical significance (6.5). It exceeds the minimum value required for significance at the 1% level in favor of the group with the highest mean, namely the group of youngsters (males and females) with Asperger's disorder. This suggests that youngsters (males and females) with Asperger's disorder feel more alone than their peers (males and females).

To test the validity of the third statistical hypothesis, which states, "There are no statistically significant differences between the average scores of the study sample members with Asperger's disorder and normal children on the aggressive behavior variable, according to the gender variable (male/female)." Statistical variance analysis (2 2) for the four subgroup members' scores. This is obvious from the following Table 6 data:

The calculated "F" value indicates that there is a statistically significant effect of the gender variable (male/female) on the variance of the four sub-groups members of the current study on the "Ain Shams scale of aggressive behavior forms," as shown in Table 6. (4). It is greater than the value required for statistical

Table 3: Correlation coefficient of the scores obtained by the study sample members of the normal children on the scale of "the feeling of loneliness for children" and the scores obtained by the same individuals on the scale of "Ain Shams of aggressive behavior forms for children" (n=64) boys and girls.

Number of sample members of normal children	Correlation coefficient	statistical significance
64	0.66	Significant at the significance level of 1%

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

Variance source	Sum of squares	Freedom degree	Mean of squares	Calculated F	Statistical Significance
Gender (male / Female)	199.4	1	199.4	9.3	All of them are significant at a significance level of 1%
developmental disorder (Asperger's/ Normal)	263.1	1	263.1	5.2	
Interaction	111.6	1	111.6	2.2	
Error	6258.9	1	50.5		
		24			
Total	6833	1			
		27			

Table 5: The significance of the differences between the mean scores of the four subgroups scores obtained by individuals on the "Children's Feeling of Loneliness" scale, using the "T-Test".

Comparing groups	Number of individuals	Mean 1	Standard deviation 1	Standard deviation 2	calculated T value	Statistical significance	
Boys with Asperger's disorder	32	55.7	-	8	-	8.6	
Normal boys	32	-	40.3	-	6.1		
Girls with Asperger's disorder	32	44.8	-	7.6	-	7.2	
Normal girls	32	-	32.5	-	5.2		
The sum of boys with Asperger's disorder and normal boys	64	48.4	-	7.8	-	6	All of them are significant at a significance level of 1%
The sum of girls with Asperger's disorder and normal girls	64	-	41.1	-	6		
The sum of girls and boys with Asperger's disorder	64	43.7	-	7.2	-	6.5	
The sum of ordinary girls and boys	64	-	36.5	-	5.6		

Table 6: The results of the two-way analysis of variance (2*2) for the scores obtained by the four subgroups members on the "Ain Shams scale of aggressive behavior forms" (n=128) for boys and girls.

Variance source	Sum of squares	Freedom degree	Mean of squares	Calculated F	Statistical Significance
Gender (male / Female)	240.4	1	240.4	4	significant at significance level 0.01
developmental disorder (Asperger's/Normal)	301.3	1	301.3	5	significant at significance level 0.01
Interaction	165.1	1	165.1	1.33	insignificant at any significance level
Error	7443.8	12	60		
		4			
Total	8150.6	12			
		7			

significance at the 0.01 level. A substantial effect of the developmental disorder variable (children with Asperger's disorder) and (normal children) on the variance of the four subgroups' members on the "Ain Shams scale of aggressive behavior forms" was also discovered. The computed "F" value was 5, which surpasses the threshold value necessary for significance at the 0.01 level of statistical significance.

There is no statistically significant influence of the interaction variable (gender * developmental disorder) on the variance of the four subgroups' scores on the "Ain Shams of Aggressive Behavior forms" scale, as indicated by the data in the Table previously referenced. The computed value of "F" reached (1.33). It falls short of the minimum value required to qualify as "statistically significant at any of the significance levels. The T-test was utilized to confirm the differences in the mean scores of the four subgroups on the Ain Shams scale of aggressive behavior forms, and Table 7 reveals:

The calculated "F" value indicates that there is a statistically significant effect of the gender variable (male/female) on the variance of the four sub-groups members of the current study on the "Ain Shams scale of aggressive behavior forms," as shown in Table 6 (4). It is greater than the value required for statistical significance at the 0.01 level.

A substantial effect of the developmental disorder variable (children with Asperger's disorder) and (normal children) on the variance of the four subgroups' members on the "Ain Shams scale of aggressive behavior

forms" was also discovered. The computed "F" value was 5, which surpasses the threshold value necessary for significance at the 0.01 level of statistical significance.

There is no statistically significant influence of the interaction variable (gender * developmental disorder) on the variance of the four subgroups' scores on the "Ain Shams of Aggressive Behavior forms" scale, as indicated by the data in the Table previously referenced. The computed value of "F" reached (1.33). It falls short of the minimum value required to qualify as "statistically significant at any of the significance levels. The T-test was utilized to confirm the differences in the mean scores of the four subgroups on the Ain Shams scale of aggressive behavior forms, and Table 7 reveals:

There are statistically significant differences between the mean scores of the following groups on the "Ain Shams of aggressive behavior forms" scale, as indicated by the data in the previous Table:

The group of children with Asperger's disorder and the group of normal male youngsters, for whom the "T" value was calculated to be (7.1). In favor of the group of male children with Asperger's disorder, it exceeds the minimum value required to reach statistical significance at the 1% level. This suggests that boys with Asperger's disorder are more aggressive than their typically developing peers.

The group of female children with Asperger's disorder and the group of normal female children, where the "T" value was calculated to be more than 0.05, respectively (6.7). It exceeds the value required to become statistically

significant at the 1% significance level in favor of the group of girls with Asperger's disorder. This suggests that girls with Asperger's disorder are more aggressive than their typically developing counterparts.

The group of male children with Asperger's disorder and normal children together, and the group of female children with Asperger's disorder and normal children together, where the calculated "T" value was not significantly different from zero (2.8). It exceeds the minimum value necessary for significance at the 1% significance level in favor of the group of male children with Asperger's disorder and normal children combined. This suggests that male children with Asperger's syndrome and normal male children are more aggressive than their female counterparts with Asperger's syndrome and normal female children.

The group of children (males and females) with Asperger's disorder and the group of children (males and females) with typical development, where the computed "F" value was less than 0.05. (3.7). It crosses the threshold for significance at the 1% level in favor of the group of children (males and females) with Asperger's illness who are more aggressive than their standard counterparts (males and females).

THE SUMMARY OF THE RESULTS

After statistically evaluating the data, the research findings can be summed up as follows:

Loneliness is positively connected with aggressive behavior in the study sample of Asperger's disorder and normal children of both sexes. This outcome is consistent with previous research findings [15,17,25-28]. Male and female youngsters with Asperger's disorder experience greater loneliness than their peers who do not have the disorder. This outcome is consistent with previous research findings [12-14]. Boys and girls with Asperger's disorder are more aggressive than their peers who do not have the disorder. This outcome is consistent with previous research findings [15,17]. Males with Asperger's disorder are more aggressive than their female counterparts with the same disorder. This outcome differs from what was discovered [28].

EDUCATIONAL RECOMMENDATIONS

Activating the training service for psychologists overseeing children with Asperger's disorder and teaching the parents of these children to interact with this population appropriately.

Early identification of children with special needs by qualified psychologists is evident in elementary and middle schools, as is the necessity for early diagnosis and treatment by professional specialists.

Caring for institutions focused on intellectual development that provides temporary and permanent housing for children with special needs.

Paying attention to the quality of courses and curricula offered to children with emotional and mental illnesses, particularly those with specific needs, such as attention deficit hyperactivity disorder, autism, and Asperger's.

SUGGESTED FUTURE RESEARCH

Developing a counseling approach to lessen the feeling of isolation among Asperger's disorder patients.

Designing a counseling approach to minimize or eliminate aggressive conduct in Asperger's disorder and autism youngsters.

Preparing a study on the sense of loneliness related to the loneliness of both male and female parents of children with Asperger's disorder.

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