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ABSTRACT

This study examined the relationship between "Attention Deficit Hyperactivity Disorder" (ADHD) and depression in Riyadh, Saudi Arabia, primary school kids. The study will also examine "Attention Deficit Hyperactivity Disorder" and sadness by gender. 200 mixed-gender primary school students from many schools were the study sample. They were 9–13. The descriptive (comparative) study used the Pearson correlation coefficient and "t" test. The study used Al-Naubi (2005)'s "Attention Deficit Hyperactivity Disorder" exam and the "Scale of Children's Depression." "developed by Abdul Khalique, Ahmed (1991). The questionnaire was the primary data collection technique. The study found a positive correlation and statistical significance between the total sample of primary school students (both sexes)' "Attention Deficit Hyperactivity Disorder" test scores and their "Scale of Children's Depression" test scores. "The study found statistically significant differences between the average scores of the study sample members from primary school kids in the variable "Attention Deficit Hyperactivity Disorder" according to gender, favoring males. The average depression scores of primary school students were likewise statistically significant, favoring females. The study suggests using new and diverse educational approaches for ADHD children to create an appealing learning environment and activate "family therapy" for them and their families to find the optimal educational methods.

Keywords: Attention Deficit Hyperactivity Disorder, family therapy

INTRODUCTION

Attention Deficit Hyperactivity Disorder is regarded as one of the most significant emotional disorders that have captured the interest of psychologists. "ADHD" is defined as "weakness in the attention accompanied by increased motor activity," which results in a child's incapacity for psychological adaptation and social harmony due to socially unacceptable behaviors that disturb others. This condition is characterized by three primary symptoms: inattention, hyperactivity, and impulsivity.

These children's actions are characterized by impulsivity, lack of foresight, and impatience. Typically, they fail to complete assigned tasks and commit errors due to haste rather than a lack of comprehension. In addition, they cannot tolerate failure, no matter how minor, and consequently become depressed due to their inability to complete the required tasks.

Their speech lacks a logical progression, and words are occasionally confused due to their rapid speech. This condition is known as "attention deficit hyperactivity disorder" and affects children with "hyperactivity." So, he acts without thinking, generally does not take enough time to analyze the problem, exhibits a degree of irritability and a great deal of fidgeting, and cannot concentrate on one thing but instead jumps from one to the next. He also complains frequently.

The child exhibits "aggressive behavior" as one of the symptoms of this disorder, particularly among boys; he also displays intense emotional expressions, rapidly switches from one activity to another, and his mood oscillates between amusement and irritation; as a result, he becomes easily depressed.

Research Problem

The research problem is exemplified by several children with ADHD in multiple schools. It was observed that they suffer from low self-esteem and depression due to the alienation they experience from their schoolmates as a result of their characteristics, which include repeatedly disturbing others, being unable to wait for their turn in daily games and activities, and displaying aggressive behaviors. In addition, their mothers have difficulty

dealing with their children with "Attention Deficit Disorder Hyperactivity" (ADHD) because they call them "naughty boys" or "troublesome children" and then punish them. This has prompted the researcher to investigate the psychological impacts on the youngster.

The purpose of the study (Al-Syed, 2022) was to identify the most significant social, economic, psychological, emotional, and educational pressures that families of children with ADHD face. In addition, the study determined the role of individual service in their management. This descriptive study was conducted with all parents and guardians (father or mother) of children with ADHD in West El Fayoum Educational Administration, El Fayoum Governorate.

The research found an answer to the study's questions, which represented determining the social, psychological, educational, and economic pressures caused by children with ADHD and establishing the role of serving the individual by employing the "Cognitive Behavioral Model" to alleviate family pressures caused by children with ADHD. The findings of each study have demonstrated a positive relationship between "Attention Deficit Disorder Hyperactivity" and depression.

The objective of study titled "Attention Deficit Hyperactivity Disorder among Third and Fourth Grade Students of Basic Education, First Episode: Diagnostic Study" was to clarify the relationship between "Attention Deficit Hyperactivity Disorder" (ADHD) and each of academic achievement, depression, and personal adjustment in its personal and social dimensions, as well as self-image, parents, environment, frustrations, and conflicts among the students of basic education. Compared to children of the same age, children with ADHD have hyperactive tendencies and cannot concentrate and tolerate patience.

Several previous studies have found that adolescents of both sexes with a history of childhood ADHD suffer from high anxiety, mood disorders, and general depression (Verreault & Berthiaume, 2010; Catherine et al. 2006; McGillivray & Baker, 2009; Celestin & Celestin 2008; Catherine, et al., 2006).

Research Questions

1. Is there a correlation between "Attention Deficit Hyperactivity Disorder" (ADHD) and depression among students of primary schools (both sexes) in Riyadh, Kingdom of Saudi Arabia?
2. Are there differences between the members of the study sample from students of primary school (both sexes) in "Attention Deficit Hyperactivity Disorder" in light of the gender variable (male/female)?
3. Are there differences between the members of the study sample from students of primary school (both sexes) in "depression" in light of the gender variable (male/female)?

Research Objectives

- 1) To identify the correlation between "Attention Deficit Hyperactivity Disorder" and depression among primary school students (both sexes).
- 2) To identify the extent of the existence of differences between the members of the study sample in the variable of "Attention Deficit Hyperactivity Disorder" in light of the gender variable (male/female).
- 3) To compare the study sample members in the variable of "depression" in light of the gender variable (male/female).

Research Significance and Justifications

Theoretical Aspect

The purpose of this study is to present some theoretical frameworks and both Arab and foreign literature to theorize the study's two variables (the subject of interest), which are Attention Deficit Hyperactivity Disorder (ADHD) and depression. Two important variables require additional Arabic research to investigate and examine their correlation among primary school students.

Practical Aspect

This is reflected in the research findings and recommendations, which may aid early counseling intervention to prevent the worsening of some significant behavioral problems, as they provide empirical data on the prevalence of this issue among elementary school students. In addition to assisting in the design of appropriate counseling programs to address negative associations and limit their exacerbation, they will help individuals avoid psychological mismatches so that they can invest their energy to the greatest extent possible.

Limitations of the Research

The research is limited to the following:

- **Human Limitations**
- The study sample consisted of (200) children of both sexes from the primary stage students in several primary schools. Their ages ranged between 9 – 13 years.
- **Spatial Limitations**

- The spatial limitations of the present research are the places where the experiment was conducted and the tools referred to were applied. These places are some primary schools for both sexes in Riyadh, Kingdom of Saudi Arabia.
- **Time Limitations**
- This study was implemented during the Second Semester of the Academic Year 1441-1442 AH.

Terminologies

1. Attention Deficit Hyperactivity Disorder

The definition of the designer of the "tool used" has been adopted, as he defines this disorder procedurally as a "disorder that manifests as regularly practiced behaviors that demonstrate the absence or total loss of focus in certain topics that require the focus." In addition to being hyperactive and impulsive, these children exhibit a state of dispersion because they cannot acquire a skill or learn something without paying attention. Consequently, its symptoms are inattention and hyperactivity, resulting in impulsivity. (Al-Naubi, 2005). The term is operationally defined by the subject's score on the employed scale.

2. Depression

The definition of depression as a "clinical condition or maladaptive behavior representing an abnormal response to stress and a manifestation of cognitive dysfunction" has been adopted from the designer of the "tool used" (Abdul-Khaleq, 2015). The phrase is operationally defined by the subject's score on the employed scale.

THEORETICAL FRAMEWORK

According to the American Psychiatric Association's (2013) third manual for diagnosing mental disorders, No. (314.01), children under the age of seven suffer from an inability to focus their attention, impulsivity, and excessive motor activity. (Al-Shakhas, 2010). It is also defined as a "chronic neurobehavioral condition with a persistent pattern of attention-deficit or hyperactivity, as well as forgetfulness and poor impulse control or impulsivity and distractibility" (Preedy & Watson, 2010).

Concentrating on stimuli long enough to finish a task is a continuous and prolonged physical activity. It is categorized as not paying attention to the supervisor's instructions and demonstrates that he is distracted by his thoughts; his behavior is categorized as tense and hostile and can occasionally lead to despair. (Abu Khalil, 2011).

It is also considered the most prevalent childhood psychiatric and developmental disorder worldwide. Its primary symptoms are hyperactivity, impulsivity, and attention deficit, and it has three subtypes: hyperactivity and impulsivity predominance, attention deficit predominance, and complicated type. Children with this disorder may have difficulty adapting to daily demands at school or home, exposing them to anger and disgust, which can sometimes lead to despair. (Imre & Ilina, 2013). They define it as a "developmental disorder characterized by a persistent pattern of attention deficit hyperactivity or hyperactivity and impulsivity in at least one of the following settings: home, school, workplace, with relatives, friends, or parents." Its symptoms appear before the age of 12 years (American Psychiatric Association, 2013).

In addition, it is characterized as a "very impulsive action that is improper for the situation and has no clear objective." It grows proportionally to the child's age and harms his behavior and academic achievement. It is more prevalent in males than females and may persist during adolescence.

It is also defined as "a sharp, enlightened and long-term motor activity in the child such that he cannot control the movements of his body, but spends the majority of his time in continuous movement, and this phenomenon is frequently associated with cases of brain injuries or maybe for psychological reasons, and this behavior typically appears between the ages of 4 and 15."

A child with Attention Deficit Hyperactivity Disorder is characterized by an inexcusably high level of motor activity, an inability to concentrate for long periods, a lack of self-control, and an inability to form positive relationships with peers, teachers, and parents. (Jad Al-Mawly, 2016)

It is also defined as a neurodevelopmental disorder that affects approximately 6.4 million children between the ages of 4 and 12 who exhibit hyperactivity, distraction, and impulsivity in their behavior. (Ibrahim, 2018).

Previous Studies

Unquestionably, "Attention Deficit Hyperactivity Disorder" (ADHD) is a persistent behavior resulting from increased movement and attention deficit with impulsive behavior, all of which are disproportionate to the child's age. This causes numerous difficulties in the child's education and peer relationships.

Some Characteristics of ADHD

1. Behavioral Characteristics

The most important behavioral characteristics that distinguish children with ADHD are arguing with elders, not listening to their instructions, breaking laws and rules, performing actions that are not acceptable to adults, fighting with others, hurting animals, using weapons and tools to harm others, stealing, absence from school, running away from home, neglecting hygiene and external appearance, recklessness and impulsivity (Al-Absher & Mumadi, 2013).

2. Behavioral Characteristics

21% of children with ADHD suffer from depression, and 23% suffer from anxiety, introversion, negativity, lack of self-confidence, loss of a sense of safety, mood disturbance, and incompatibility between their social role and responses to an event or stimulus. In addition, they cannot express their emotions, such as delight, surprise, sadness, fear, and disgust. In addition, they suffer from low self-esteem and difficulty forming healthy relationships with others. They are also emotionally immature and possess turbulent emotions. (Sabri & Hamed, 2016)

3. Social Characteristics

A person with ADHD exhibits several socially undesirable characteristics, including a lack of devotion to established traditions and rules, emotional instability, frequent conversation or persistent gossip, and interrupting others when speaking. Such behaviors result in a loss of social compatibility and social rejection for the affected individual. Additionally, individuals with the illness are defined by bad connections and typically pose a challenge for their parents, professors, and other individuals.

Causes of Depression

First: "Biological Causes," which include:

a) Genetic Causes

The studies proved that the members of those families affected by depression are more likely to have the same symptoms of depression than the members who did not suffer from depression.

b) Chemical Organic Causes: The most important reasons for this are the following:

- Imbalance in the concentration of sodium and potassium salts in the body.
- The changes that occur in hormones.
- The increase in cortisone secretion is due to the increase in the hormone responsible for its secretion from the pituitary gland.
- Decrease in the secretion of stimulating hormone thyroid.
- Imbalance in the secretion of chemicals at the end of the nerves.
- Take some medications, such as those used to treat high blood pressure.
- Drinking alcohol. (Al-Najma, 2008; Al-Ajouri, 2007)

Second: "Psychological and Social Causes." Some of these causes are mentioned below:

- Emotional tension, sad circumstances, painful experiences, severe disasters, and defeat in the face of adversity.
- Deprivation (and depression is a response to this), loss of love and emotional support, loss of a job or wealth, loss of social status, loss of dignity, loss of honor, loss of health, loss of vital function, extreme poverty.
- Frustration, failure, disappointment, and anxiety.
- Weak superego, self-accusation, feelings of unforgivable guilt about past behavior (especially about sexual issues), and desire for self-punishment.
- Loneliness, spinsterhood, indolence age (menopause), deterioration of sexual capacity, old age, and retirement.
- Traumatic experiences and unrealistic misinterpretation of experiences.
- Wrong upbringing (discrimination in treatment, domination, neglect, etc.).
- The mismatch between the actual or perceived self-concept and the ideal self-concept (Al-Najma, 2008).

Also, some other biological factors contribute to depression, and the following are some of them:

- a) The course of the disease is characterized by periods of alternating improvement with episodes of depression or mania, which are evidence of disorder with a biological basis.
- b) The presence of a set of symptoms suggests a disturbance in the vital processes, such as (sleep disturbance, appetite, and mood variation, with disturbances in psychomotor processes).
- c) Genetic Factors.
- d) The physical response to therapeutic drugs, especially in individuals with biological disorders (Al-Otaibi, 2006).

RESEARCH HYPOTHESES

First Hypothesis

There is a positive and statistically significant correlation between the scores obtained by members of the total sample of the study from the students of primary school (both sexes) on the "Attention Deficit Hyperactivity Disorder" test and the scores obtained by the same individuals on the used scale of children's depression.

Second Hypothesis

There are statistically significant differences between the average scores of the study sample members from the students of primary school in the variable of "Attention Deficit Hyperactivity Disorder," and that is according to the gender variable (male/female) in favor of males, as measured by the tool used.

Third Hypothesis

There are statistically significant differences between the average scores of the study sample members from the students of primary school in the variable of "Depression," and that is according to the gender variable (male/female) as measured by the tool used.

RESEARCH METHODOLOGY

The study employed a descriptive approach (relational/comparative), which focuses on describing the phenomenon and analyzing the correlation between the two variables of the study.

The population of the Study

The study population consisted of male and female primary school students in Riyadh with "Attention Deficit Hyperactivity Disorder," excluding children with obvious physical impairments, those who do not live in a normal parental environment, and those who do not enjoy the company of their parents/family (due to death or divorce). In addition, the sample members were homogenized in terms of their chronological age in months. The male children were drawn from four Riyadh primary schools, while the female children were drawn from seven Riyadh primary schools.

Study Sample

The total sample consisted of 200 children of both sexes with "Attention Deficit Hyperactivity Disorder" among Riyadh's elementary school students. In addition, the study's final sample was divided into two groups. The first group consisted of 100 male ADHD children, while the second group comprised 100 female ADHD children. Their chronological ages ranged from nine to thirteen years. As shown in the following table, the members of the sample (males and females) were homogenized in terms of "chronological age in months."

Table 1: The results of the significance of the differences between the average scores of the two study groups (male and female) and that in the "chronological age in months" using the "T" test

Two Groups of Comparison	Number of Sample Members	M1	M2	Factor1	Factor2	The Calculated Value of "T"	Statistical Significance
Total Number of Children (Male) with ADHD	100	180.4	-	29	-	.87	Not significant at any level of statistical significance
Total Number of Children (Female) with ADHD	100	-	176.6	-	26.5		

In terms of chronological age in months, the members of the two study groups (male and female) were homogeneous, as evidenced by the fact that the calculated value of "t" did not reach the required value to become significant at any of the familiar levels of significance.

Tools of the Study

To accomplish the objectives of the current study, several psychometric tools were used, which are as follows:

1. The "Attention Deficit Hyperactivity Disorder" test, prepared by Al-Naibi (2005).
2. The Scale of "Child Depression," prepared by Abdul Khaleq (2015).
3. Questionnaire to Collect Preliminary Data, prepared by Research Team.

Tools and Scales used in the Current Study

"Attention Deficit Hyperactivity Disorder" (prepared by Al-Naibi, 2005): It was evaluated, and its dimensions, including "attention deficit, hyperactivity, and impulsivity," as well as a family portrait, school portrait, and child portrait, were determined. In its ultimate form, the test consists of several items for each dimension. In its final form, the test consists of twenty-four (24) items (phrases) for the family photo and twenty-four (24) phrases for the school picture. As for the image of the child, it is comprised of thirty-six sketches and

photographs. In an attempt to legalize it, the designer of the tool presented it to the arbitrators for the validity of each of the (quantitative and qualitative reports). Also, the designer determined the type of responses of the scale to the 5-Point Likert Scale and calculated the stability of the test and its dimensions in the following ways.

First: Cronbach's Alpha Coefficients Results

- 1) Attention deficit and the family picture. The value reached 0.73 for the school picture and about 0.78 and 0.64 for the picture of the child.
- 2) The value of this coefficient for the hyperactivity/family picture was about 0.70; for the school picture, it was 0.65; for the illustrated picture, it was 0.74.
- 3) Impulsivity: the value of this coefficient for family pictures was about 0.78; for school photos, it was about 0.79; for the illustrated photo, it was about 0.66.

In addition, the tool's designer confirmed the tool's internal homogeneity (consistency) by calculating the intercorrelation coefficients for the items and dimensions of the tool, as well as the total score for each dimension. The correlation coefficients for the family portrait ranged from 0.32 to 0.74, for the school portrait from 0.33 to 0.78, and the child portrait from 0.36 to 0.80.

Regarding the examination of the instrument's validity, the researcher employed the methods of logical validity (content) and apparent validity (the validity of the arbitrators) as well as the validity of the correlative test, which consisted of calculating correlation coefficients between the instrument and another instrument measuring the same dimensions. In addition, the "Attention Deficit Hyperactivity Disorder" test was selected, and yielded positive and high correlation coefficients ranging from 0.812-0.972, indicating the validity of the scale for the procedure.

The test and re-test method was used to validate the instrument's applicability to primary school students in Riyadh, Saudi Arabia, as members of the current study sample in the Saudi environment. This was performed on a random sample of 80 students of both sexes from primary schools in Riyadh, 6 weeks apart, to calculate the correlation coefficient between the two applications. The correlation coefficient reached approximately 0.66, indicating the existence of a statistically significant positive correlation. This verifies the instrument's reliability, capacity to measure this variable, and applicability to the Riyadh primary school students who comprise the current study sample.

The Degree of Childhood Depression: It was put together by (Abdul Khaleq, 2015 AD): This scale in its ultimate form has 27 elements, with three replies for each statement determining the response (rarely - sometimes - often).

To determine the validity of the scale, the following methodology was adopted

Face Validity

It is known as a search for the fact that the tool (scale) measures it, and when looking at the scale, it may seem true because its name relates to the function to be measured, bearing in mind that the name often indicates the purpose of using the scale. In other words, face validity indicates how the scale appears to be suitable for the purpose for which it was set, and this type is evident through the initial examination of the contents of the scale. By looking at the paragraphs and knowing what it is intended to measure, then matching what appears to be the function to be measured, the test was valid, and its paragraphs are often related to what is required to be measured.

1. Self-Validity

The coefficients of self-validity can be obtained by extracting the square root of the stability coefficients of each significance scale (the split-half coefficient) when the correlation coefficient between the dimensions of the scale and the total degree of the scale reaches approximately 0.793%.

As for the peripheral comparison, the arithmetic mean of the group with the lowest scores was calculated to be 1.53 with a standard deviation of 0.80, while the arithmetic mean of the group with the highest scores was 2.61 with a standard deviation of 0.49.

As for differences between the lower and higher groups, (*t*) reached 7.01 with a significance level of less than 0.01, indicating differences between the means. In this instance, the scale's subscales can differentiate between members of the study sample, reassuring researchers of the instrument's reliability.

Statistical Methods: To accomplish the objectives of the study, the following statistical methods were used:

- 1) Pearson & Spearman-Brown correlation coefficient
- 2) Pearson Correlation Analysis
- 3) T-test

RESEARCH FINDINGS AND DISCUSSION

To test the validity of the first hypothesis, which states, "There is a positive and statistically significant correlation between the scores obtained by members of the total sample of the study from the students of primary school (both sexes) on the "Attention Deficit Hyperactivity Disorder" test and the scores obtained by

the same individuals on the Child's Depression scale used in this study." The Pearson correlation coefficient was calculated between the scores of 200 children of both sexes on the "Attention Deficit Hyperactivity Disorder" test and the scores of the same individuals on the Child's Depression scale, as shown in the table below.

Table 2:Correlation coefficient of the scores obtained by the study sample members on the "Attention Deficit Hyperactivity Disorder" test and the scores obtained by the same individuals on the "Child Depression" scale, (n = 200) boys and girls.

Total Sample Members from Children	Correlation Coefficients	Statistical Significance
200	0.62	Statistically significant at the level of 1%

The above table demonstrates a positive, statistically significant correlation at the 1% significance level, as the calculated t-value is approximately 0.62, which is greater than the required limit value for the significance level. This confirms the existence of a correlation between Attention Deficit Hyperactivity Disorder and Depression among the study's participants.

Consistent with the findings of (McGillivray & Baker 2009; Celestin & Celestin 2008; Treuting & Hinshaw, 2001) which demonstrated a positive correlation between ADHD and Depression, the result mentioned above confirmed this correlation.

The study titled "Attention Deficit Hyperactivity Disorder among Third and Fourth Grade Students in Basic Education" compared to typical children, the results demonstrated a clear and statistically significant decline in academic achievement, depression, and personal and social adjustment among children with ADHD.

The analysis of children's CAT Test responses revealed that children with ADHD suffer from disorders involving self-image, parents, and the child's environment, as well as conflicts, frustration, and failure.

In addition, the findings of the following studies (Verreault & Berthiaume, 2010; Philip et. al. 2009; Celestin & Celestin, 2008; Catherine et. al, 2006) indicated a high level of anxiety, mood disturbance, and general depression in adolescents of both sexes with a history of childhood ADHD.

To test the validity of the second hypothesis, which states that there are statistically significant differences between the average scores of the study sample members from the students of primary school on the variable "Attention Deficit Hyperactivity Disorder" and that according to the gender variable (male/female) as measured by the instrument used, the t-test was used to examine the differences between the average scores of both groups (male and female).

Table 3:The significance of the differences between the average scores of the members of two study groups :(male and female), which they obtained on the "Attention Deficit Hyperactivity Disorder" test and that is by using the "T" test

Two Groups of Comparison	Number of Sample Members	M1	M2	Factor1	Factor2	The Calculated Value of "T"	Statistical Significance
Total Number of Children (Male) with ADHD	100	177.8	-	34.5	-	3.7	Significant at the level of statistical significance
Total Number of Children (Female) with ADHD	100	-	160.4	-	31.3		0.99

The above table demonstrates statistically significant differences between the average scores of male and female children on the "Attention Deficit Hyperactivity Disorder" test, as the calculated "t" value exceeded the required limit value to become a function at the 1% level of statistical significance. This implies that more boys than girls suffer from "Attention Deficit Hyperactivity Disorder."

This result is consistent with the ICD-10 classification of mental and behavioral disorders, which states that males are twice as likely as females to experience hyperactivity disorders. (Sulaiman & Tantawi, 2015).

Mustafa, Eid & Khidr (2013) conducted a study in Egypt to estimate the prevalence of "Attention Deficit Hyperactivity Disorder" in a clinic-based sample over six months. Approximately 190 patients were evaluated, and 39 were diagnosed with ADHD (6.5% prevalence). 67% of the diagnosed cases involved males, whereas 33% of the cases involved females. This means that the male-to-female ratio is approximately 1:1.

In addition, a study (Al-Harmasi, 2014) was conducted in Bahrain to identify the most prevalent behavioral issues among kindergarten children ages 3-6 from the perspective of kindergarten teachers. The findings indicate that "Attention Deficit Hyperactivity Disorder" is more prevalent in boys than in girls.

Another study (Mofeed & Abdel-Fattah, 2015) in Iraq and a study in the city of Ouargla concluded that the prevalence of "Attention Deficit Hyperactivity Disorder" is estimated to be 25.1% in (57) schools, with a higher prevalence among males (15.67%) than females (9.34%).

The t-test was used to investigate the differences between the average scores of both groups (male and female) on the "Child's Depression Scale" to verify the validity of the third hypothesis, which states that there are statistically significant differences between the average scores of the study sample members from the students of primary school in the variable "Depression" and that is according to the gender variable (male/female) as measured by the instrument used.

Table 4: The significance of the differences between the average scores of the members of two study groups (male and female) which they obtained on the scale of "Child's Depression" and that is by using the "T" test

Two Groups of Comparison	Number of Sample Members	M1	M2	Factor1	Factor2	The Calculated Value of "T"	Statistical Significance
Total Number of Children (Male) with ADHD	100	148.7	-	30.2	-	14.4	Significant at the level of statistical significance
Total Number of Children (Female) with ADHD	100	-	222.5	-	41	0.99	

The above table demonstrates statistically significant differences between the average scores of male and female children on the "Child's Depression" scale, as the calculated "t" value exceeded the required limit value to become statistically significant at the 1% level of statistical significance. This shows that female children are more likely than male children to experience "depression."

CONCLUSION

After statistically evaluating the study's data, it was determined that the study's principal findings could be summed up as follows:

"Attention Deficit Hyperactivity Disorder" is inversely associated with self-esteem among youngsters of both sexes, which may be consistent with the findings of previous research (Brook & Boaz, 2005; Popali, & Shaw-Zirt, 2005; Treuting, & Hinshaw, 2001)

RECOMMENDATIONS

Based on the study's findings, the following can be suggested:

1. Innovative, diverse, and engaging educational methods should be utilized in the various academic subjects for children with ADHD to create an engaging learning atmosphere.
2. It is crucial to activate the role of family counseling for children with ADHD and their families to adopt the most effective educational strategies for dealing with the disorder.
3. The significance of early diagnosis and intervention for all emotional, behavioral, and psychological disorders, with therapeutic follow-up by specialists.

PROPOSED FUTURE STUDIES

It is proposed to conduct scientific studies in the future on the following:

1. The effectiveness of cognitive behavioral counseling in reducing depression in children of both sexes with ADHD.
2. Depression and its relationship with anxiety in children of both sexes with ADHD.
3. Feeling lonely and its relationship to ADHD in children from broken and healthy families.

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REFERENCES

1. Abu Khalil, F. (2011). *Class Management and Classroom Behavior Change*. Beirut, Arab Renaissance House.
2. Abdul Khaleq, A. M. (2015). *Beck's Depression Inventory*. (2nd ed.). Cairo - Anglo-Egyptian Library. <https://www.anglo-egyptian.com/ar/book.php?id=12971>

3. Al-Absher, M. & Mamadi, S. (2013). *Attention deficit hyperactivity disorder as a model*. Journal of Educational and Educational Research, Issue (3): pp. 127-138. <https://www.asjp.cerist.dz/en/article/37842>
4. Al-Ajouri, J. H. (2007). The effectiveness of a suggested counseling program to relieve depression among mothers of children suffering from malnutrition. Unpublished Master Thesis. Department of Psychology, College of Education, Islamic University, Gaza. <https://mobi3ath.com/upload/books/book-1427.pdf>
5. Al-Harmasi, A. (2014): The most common behavioral problems among kindergarten children. *Journal of Educational and Psychological Sciences*, Vol. 15, Issue 1. <http://search.mandumah.com/Record/508251>.
6. Al-Najmah, A. I. (2008). *The effectiveness of a psychological counseling program for alleviating depression among secondary school students*. Unpublished Master Thesis. Psychological Counseling Department. Faculty of Education. Islamic University of Gaza.
7. Al-Naubi, A. M. (2005): "Attention Deficit Hyperactivity Disorder" Test (in the field of hearing impairment and normal people). Instructions brochure, Cairo - Anglo-Egyptian Library.
8. Al-Otaibi, Z. M. (2006). *Social Competence Skills among People with Social Phobia and Depression Symptoms*. Unpublished Master Thesis. Department of Psychology. Faculty of Education. King Saud University, Riyadh.
9. Al-Shakhas, A. A. (2010). *Dictionary of Special Education and Rehabilitation for People with Special Needs*. (4th ed.). Cairo - Omrania Offset Press.
10. Al-Syed, F. A. M. (2022). *Family pressures caused by children with ADHD and the role of individual service in dealing with them*. Fayoum University - Faculty of Social Work. DOI:10.21608/jfss.2022.222145
11. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*. (5th ed.). Washington D.C: Author .doi:10.1097/NMD.0b013e3182a20ea8.
12. Brook, U. & Boaz, M. (2005). Attention deficit and hyperactivity disorder (ADHD) and learning disabilities (LD): Adolescents perspective. *Patient Education and Counselling*, Vol. 58, NO. 2, PP.187-191.<https://doi.org/10.1016/j.pec.2004.08.011>
13. Catherine, B. L. et al. (2006): "Anxiety and mood disorders in adolescents with childhood attention deficit hyperactivity disorder". *Journal of Emotional and Behavioral Disorders*, Vol. 14, Issue 3. <https://doi.org/10.1177/10634266060140030501>
14. Clestin, W. & Celestin, L. (2008). "Families' cognitive emotional adjustment processes when facing attention deficit hyperactivity disorder (ADHD)", *Annales Medico-psychologiques*, Vol. 166, No.5, pp.343-349.<https://doi.org/10.1016/j.amp.2005.06.008>
15. Ibrahim, H. (2018). *Attention Deficit Hyperactivity Disorder, A teacher's and parent's guide to dealing with it*. Cairo: Anglo House.
16. Imre, B. & Ilina, S. (2013). *Attention Deficit Hyperactivity Disorder: Improving Performance Through Brain-Computer Interface*. Holland: Bohn Stafleu van Loghum.DOI:10.1007/978-94-007-4707-4_124
17. Jad Al-Mawly, A. M. (2016): *Integrating TRIZ Program in Special Education*. Jordan: Debono Thinking Center. noor-book.com/wo3qed
18. McGillivray, J. & Baker, K. (2009). Effect of comorbid ADHD with learning disabilities on anxiety, depression, and aggression in adults. *Journal of Attention Disorder*, Vol.12, No.6, pp.525-531.<https://doi.org/10.1177/1087054708320438>
19. Mofeed, M. & Abdul-Fattah, A. M. (2015). Primary school teachers' assessment of the prevalence of Attention Deficit Hyperactivity Disorder for their students: a field study in the city of Ouargla. *Journal of Humanities and Social Sciences* - Kasdi Merbah University - Ouargla - Algeria, Issue (18). <https://www.asjp.cerist.dz/en/article/37361>
20. Mustafa, S., Eid, E., & Khidr, H. (2013). Epidemiological aspects of a sample of Egyptian children with attention deficit/ hyperactivity disorder in hospital setting. *Journal of childhood studies Apr. 2013,16 (59), 5-9.* <https://doi.org/10.1111/jcpp.12144>
21. Philip, N. B., Simon, J. W., Tom, A. S., Jane E. T., Cindy, J. H., Karen, C., Jacqueline, L. B., Rebecca, L. J., Paul, T. S. & Lucilla, P. (2009). A prospective study of micronutrient status in adolescent pregnancy, 89(4). DOI: 10.3945/ajcn.2008.27097

22. Popali, B. & Shaw-Zirt, B. (2005). Adjustment, Social skills, and Self-Esteem in College students with symptoms of ADHD. *Journal of Attention Disorders*, Vol. 8, No. 3, pp. 109-120.<https://doi.org/10.1177/1087054705277775>
23. Preedy, V. & Watson, R. (2010). *Handbook of Disease Burdens and Quality of life Measures*. New York: Springer Health care.https://doi.org/10.1007/978-0-387-78665-0_6363.
24. Sabri, A. A. & Hamed, O. A. R. (2016). *Attention and cognitive impairment disorders, diagnosis and treatment*. Cairo: The Arab Group for Training and Publishing.
25. Sulaiman, A. & Tantawi, M. E. (2015). Social skills scale for children of social skills for kindergarten children with attention deficit hyperactivity disorder. *Psychological Counseling Journal - Egypt*, Issue (41).
26. Treuting, J. & Hinshaw, S. (2001). Depression and Self-Esteem in boys with comorbid aggression and explanatory attributional mechanisms. *Journal of Abnormal Child Psychology*, Vol. 29, Issue 1.<https://doi.org/10.1023/A:1005247412221>.
27. Verreault, M. & Berthlaume, C. (2010): "Efficacy of a cognitive behavioral therapy for children with a comorbid attention deficit with hyperactivity. <https://doi.org/10.1016/j.psc.2010.04.002>