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The Effectiveness of a Behavioral Training Program to Improve the Social Skills of Students with Attention Deficit Hyperactivity Disorder in Primary School

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Abstract
The study aimed to determine the effectiveness of the behavioral training program in improving the social skills of students with attention deficit hyperactivity disorder (ADHD) in the primary stage. The study sample consisted of 10 students aged between 7 and 10 years in the primary stage, who were intentionally selected and diagnosed with ADHD. The study relied on the quasi-experimental method with a one-group design, including pre-test, post-test, and follow-up measurements.
The study tools were divided into two types:
***Diagnostic tools**, which included the SNAP test for diagnosing ADHD, the Raven's Progressive Matrices intelligence test, and the Social Skills Test for Children by Riggio (translated by Mohamed El-Sayed Abdel Rahman).*
***Statistical tools**, which were used to calculate the validity and reliability of the study tools, as well as the Wilcoxon test to identify statistical differences.*
The study concluded that there are statistically significant differences for the experimental group in social skills scores between the pre-test and post-test for students with ADHD. Additionally, there are no statistically significant differences for the experimental group in social skills scores between the post-test and follow-up measurements for students with ADHD. Therefore, the behavioral training program is effective in improving the social skills of students with ADHD in the primary stage.

Keywords: *behavioral training program, attention deficit hyperactivity disorder, social skills.*

Résumé
L'étude visait à déterminer l'efficacité du programme de formation comportementale dans l'amélioration des compétences sociales des élèves atteints d'un trouble déficitaire de l'attention avec hyperactivité (TDAH) au niveau primaire. L'échantillon de l'étude était composé de 10 élèves âgés de 7 à 10 ans, scolarisés au niveau primaire, qui avaient été sélectionnés intentionnellement et diagnostiqués comme atteints de TDAH. L'étude s'est appuyée sur la méthode quasi expérimentale avec un plan à groupe unique, comprenant des mesures pré-test, post-test et de suivi.
Les outils de l'étude ont été divisés en deux types :
Les outils diagnostiques, qui comprenaient le test SNAP pour diagnostiquer le TDAH, le test d'intelligence des matrices progressives de Raven et le test des compétences sociales pour enfants de Riggio (traduit par Mohamed El-Sayed Abdel Rahman).

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Des outils statistiques ont été utilisés pour calculer la validité et la fiabilité des outils de l'étude, ainsi que le test de Wilcoxon pour identifier les différences statistiques.

L'étude a conclu qu'il existe des différences statistiquement significatives pour le groupe expérimental en termes de scores de compétences sociales entre le pré-test et le post-test pour les élèves atteints de TDAH. De plus, il n'y a pas de différences statistiquement significatives pour le groupe expérimental en termes de scores de compétences sociales entre le post-test et les mesures de suivi pour les élèves atteints de TDAH. Par conséquent, le programme de formation comportementale est efficace pour améliorer les compétences sociales des élèves atteints de TDAH au stade primaire.

Mots-clés *: programme de formation comportementale, trouble déficitaire de l'attention avec hyperactivité, compétences sociales.*

Introduction

Childhood is marked by numerous physiological, emotional, social, and motor changes, which follow a gradual developmental curve. The child begins to feel a sense of independence and self-reliance and starts performing some tasks on their own, away from their mother or caregiver. During this stage, the child is flexible, open to change, and easily influenced by those around them, especially parents and teachers, who are the most engaged with the child and provide the educational, social, and familial elements that help them pass through this stage in a healthy and balanced manner.

However, some behavioral and emotional disorders and problems may appear, resulting from deficiencies in social upbringing or in the social environment in which the child lives. Among these is attention deficit hyperactivity disorder (ADHD), which affects the course of the educational process in the classroom, as well as the child's relationship with their family members and peers. ADHD is one of the most prominent and widespread disorders among children in childhood, which is considered one of the most important stages of human life—particularly the period between the ages of 6 and 12 years. During this stage, the child begins to live more independently from their parents, expanding their relationships from the family environment to the social environment, interacting with peers and forming friendships within the school setting. School becomes the child's second home, and the teacher serves as their substitute mother.

This stage is extremely important and sensitive as it forms the foundation for the development of the child's personality. The child acquires academic skills, their

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intelligence grows, their insight deepens and broadens, and they undergo significant changes and development across all dimensions—sensory, cognitive, emotional, and social. These changes influence many aspects of the child's behavior, either positively or negatively. ADHD represents one of the most significant developmental disorders that affect children, leading to maladaptive behaviors that cause harm to both the child and their surroundings. Such children tend to be inattentive, hyperactive, and restless, showing little interest or concern for their environment.

The first signs usually appear before the child enters school. Many parents may believe their child's hyperactive behavior is normal, which delays diagnosis in most cases until after school entry. There is no doubt that ADHD is one of the behavioral problems children suffer from and a major source of distress, tension, and annoyance for those around them. Parents and teachers often struggle with the child's excessive activity, which affects their responses and ways of dealing with the child. This, in turn, impacts the child's development and future academic and social trajectory.

ADHD is defined as a developmental disorder that manifests during childhood, most often before the age of 7. Its main symptoms are inattention and hyperactive behavior. For a child to be diagnosed with this disorder, their symptoms must have had a negative impact on one or more aspects of life, such as social relationships, academic or occupational goals, as well as adaptive and cognitive functioning. This disorder may persist into adolescence or adulthood.

Some researchers attribute the causes of the disorder to biological and neurological factors, particularly functional

disturbances in the frontal lobe area, which affect the patient's executive functions. Others adopt the theory that social factors—such as poor parental treatment, poverty, and poor school adjustment—play a role. Regardless of the source of the disorder, poor understanding of its nature or failure to provide proper care at the appropriate time can have dire consequences, potentially leading the child toward criminal behavior during adolescence and adulthood, thereby harming public health and destabilizing society.

Numerous studies have confirmed that the fate of this segment of society often involves delinquency, psychological and social maladjustment, and academic failure. Many are involved in serious accidents due to their lack of focus and attentional deficits, and many resort to drug and alcohol use to escape their inability to achieve family and professional stability—especially if they do not receive proper care and treatment.

Medication is considered the primary line of treatment in most cases, particularly when symptoms have reached an advanced stage that exhausts the patient, their family, and those around them. However, the side effects of medication lead many parents to seek alternative or complementary solutions that can better improve behavior and cognitive functioning. Many specialists therefore turn to cognitive-behavioral therapy and its techniques, which have proven effective over the years.

It is important to note that this group suffers from deficiencies or a lack of acquisition of several skills, including social skills. Deficiencies in social skills are among the indicators of maladjustment and psychological health problems because social skills help individuals satisfy their social needs, such as acceptance and belonging, and promote

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a positive perception of oneself and one's environment through processes of positive influence and interaction.

Hence, the importance of social skills for children lies in their role in achieving social adjustment within the groups to which they belong. Social skills also serve as a field for satisfying psychological needs and provide opportunities for creativity, self-assertion, and the acquisition of essential life experiences.

Teaching social skills to school students is a necessity because schools are important sites, and they are the unit through which it is possible to reach children who suffer from problems, including disruptive behaviors that hinder their learning, and to try to make them more social in addition to focusing on their academic achievement. For this reason, there emerged a need to design a therapeutic training program to alleviate ADHD and develop social skills. From this standpoint, the following questions can be raised:

- Is the training program effective in improving the social skills of students with ADHD in the primary stage?
- Are there statistically significant differences for the experimental group between the pre-test and post-test measurements on the social skills scale?
- Are there statistically significant differences for the experimental group between the post-test and follow-up measurements on the social skills scale?

Hypotheses

- There are statistically significant differences for the experimental group in social skills scores between the

pre-test and post-test (after applying the program) for students with ADHD in the primary stage.

- There are no statistically significant differences for the experimental group in social skills scores between the post-test and follow-up measurements for students with ADHD in the primary stage.

Study Objectives

- This study aims to determine the effectiveness of the training program in developing social skills among students with ADHD in the primary stage.
- To help this group overcome the negative effects resulting from ADHD, which is accompanied by many behavioral problems such as lack of concentration, restlessness, and failure to complete school assignments.
- To develop some social skills among this group, especially since they suffer from deficiencies in these skills. These include developing the skill of effective communication with others, developing the skill of dealing with negative feelings and emotions and controlling anger, developing the skill of dealing with positive feelings and emotions, developing the skill of social emotional regulation, and training on showing respect and appreciation for others and respecting their feelings.
- The importance of this study also lies in addressing a sensitive topic that has a clear impact on the students' academic future.
- To raise awareness among parents, teachers, and specialists about the necessity of caring for this group, how to deal with them, and methods of treatment.

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Study Significance

The significance of this study lies in providing a training program to improve social skills, as this program was designed specifically for this group. It also aims to direct the attention of specialists and educators involved in the educational process to the necessity of caring for this group and giving them their due attention and care based on the principle of equal opportunities.

Operational Definition of Study Terms

- **ADHD:** A distinct disorder not accompanied by other disorders, where the child appears unable to focus their attention on a specific stimulus for a certain period of time and has difficulty listening. They are often distracted by external stimuli, exhibit high levels of physical and motor activity, engage in aimless movements, twist and jump frequently, interrupt others while they are speaking, and are unable to carry out activities quietly.
- It is represented by the total score obtained by the examinee on the **SNAP-IV scale** for individuals with ADHD.
- **Social Skills:** A set of positive and socially accepted behaviors that the child acquires through training, guidance, and practice. These include social communication skills (within the family and school) and self-regulation skills.
- It is represented by the total score obtained by the examinee on the Social Skills Test for Children

(developed by Riggio, translated by Mohamed El-Sayed).

- **Training Program:** A specific, precise, and pre-designed plan that includes a set of sessions, activities, and techniques aimed at training, treatment, and alleviating some of the main symptoms and behaviors of ADHD, as well as developing certain social skills.

Previous Studies

Study by Suleiman Mohamed Suleiman Mahmoud (2008)

Titled *The Effectiveness of a Training Program in Developing Social Skills for Primary School Students with Learning Difficulties and Its Impact on Their Withdrawal Behavior*. This study aimed to provide a training program for fifth-grade primary school children with learning difficulties and to test the effectiveness of this program in developing their social skills and identifying its impact on reducing their withdrawal behavior. The sample consisted of two homogeneous groups of male children in the fifth grade of primary school in Beni Suef Governorate, with N = 14, divided into an experimental group and a control group, each comprising seven children with learning difficulties in Arabic language. This was evident from the discrepancies between their intelligence levels and academic achievement according to their grades in the first semester of the 2006–2007 school year. Their ages ranged from 10 years to 10 years and 10 months, with a mean age of 10.50 years and a standard deviation of 2.38.

The study used several tools, including the Stanford–Binet Intelligence Test (Fourth Edition) translated by Malika, the Developed Socioeconomic and Cultural Status Scale for

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the Egyptian Family prepared by Khalil (2000), the Neurological Screening Test for Identifying Children with Learning Difficulties prepared by Motti et al., Arabized by Abdel Wahab Kamel (1999), the Social Skills Scale for Children with Learning Difficulties prepared by the researcher, the Withdrawal Behavior Scale for Children prepared by Adel Abdullah (2002), and the training program prepared by the researcher.

The results revealed the effectiveness of the training program in developing social skills and a significant positive effect in reducing withdrawal behavior among these children in social situations and interactions (Suleiman Mohamed Suleiman, 2008, p. 77).

Study by Hiyam Al-Mahdi Abu Zaid (2013)

Titled Social Skills and Their Relationship to Attention Deficit Disorder Accompanied by Hyperactivity and Impulsivity Among Primary School Children. The study aimed to investigate the relationship between social skills and attention deficit disorder accompanied by hyperactivity and impulsivity. The sample consisted of 100 primary school boys and girls suffering from this disorder, aged between 9 and 12 years.

The tools included a diagnostic battery for attention deficit disorder accompanied by hyperactivity prepared by Abdel Rahman Suleiman and Mahmoud Al-Tantawi (2012), a Social Skills Scale prepared by the researcher, and a guidance program also prepared by the researcher. The results revealed a negative correlation between social skills and attention deficit disorder accompanied by hyperactivity. (Hiyam Al-Mahdi Abu Zaid, 2013, p. 108)

Study by Ben Shok Asmaa and Asia Abdullah (2023)

Titled A Study of Social Skills in Children with ADHD (A Comparative Study Between Children with ADHD and Typical Children). The study aimed to identify social skills among children with ADHD and typical children. The sample consisted of 60 boys and girls with ADHD and typical children aged between 8 and 9 years.

The tools used in the study included the DSM-5 Diagnostic Criteria for ADHD and a Social Skills Scale. The results revealed statistically significant differences at the 0.01 level between the mean scores of typical children on the social skills scale according to gender (male/female), in favor of boys. There were also statistically significant differences at the 0.01 level between the mean scores of children with ADHD on the social skills scale according to gender (male/female), again in favor of boys. (Ben Shok Asmaa, Asia Abdullah, 2023, p. 189)

Study by Amani Ibrahim (2022)

Titled The Effectiveness of a Program Based on Group Play in Developing Social Skills in Preschool Children with Attention Deficit Disorder Accompanied by Hyperactivity. This study aimed to verify the effectiveness of a group play–based program in developing social skills among preschool children with ADHD. The sample consisted of 16 children with ADHD, aged between 4 and 6 years, who had obtained the lowest scores on the Social Skills Scale and were enrolled in Al-Warda Al-Bayda Kindergarten in the village of Oweish Al-Hagar, Mansoura District, Dakahlia Governorate.

The study tools included the Vanderbilt ADHD Diagnostic Parent Rating Scale, Arabized and standardized by Fawqia Radi (2012), the Social Skills Scale prepared by

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the researcher, and the group play–based program for developing social skills prepared by the researcher.

The results indicated statistically significant differences between the mean ranks of the experimental and control groups on the post-test social skills scale, in favor of the experimental group. There were also statistically significant differences between the pre-test and post-test scores of the experimental group on the social skills scale, in favor of the post-test. However, no statistically significant differences were found between the post-test and follow-up scores of the experimental group on the social skills scale. The study also indicated a large effect size of the group play program in developing social skills in the experimental group. (Amani Ibrahim, 2022, p. 153)

Theoretical Aspect

Attention Deficit Hyperactivity Disorder:

The Concept of ADHD:

The definitions describing ADHD have varied, as it is considered a modern term. Some classify it under behavioral and emotional disorders that begin in childhood and adolescence, according to the World Health Organization. Ska Chershev considered it a dysfunction in the regulation between thought and action, which is evident through poor inhibitory control and response. Psychopathology and psychiatry scholars have given several names to this disorder, highlighting the slight brain dysfunction and motor activity. The *Comprehensive Encyclopedia of Psychology* (1999) defines it as a developmental disorder that affects children and adolescents, characterized by two main features: impaired attention span and abnormally increased

movement without goals, which makes the child face difficulty focusing on a specific task or continuing it for a long time (Halima Haji, Shawqi Hamadi, 2021, p. 43).

Hisham Ghorab (2010) indicates that it is a state of the child's inability to focus and pay attention to interact with objects, moving from one activity to another before completing any of them, accompanied by distraction and the inability to follow and execute instructions (Azza El-Sayed Mohamed Ali El-Hassanain, 2021, p. 247). In the same context, Ahmed Ghorab (2012) considers it a state meaning the child's inability to focus and pay attention to details, moving from one activity to another before finishing any of them, accompanied by distraction and the inability to follow and execute instructions (Hajar Shaaban, 2022, p. 62).

Magdy Ahmed Mohamed Abdullah considers it a set of overlapping symptoms, including the child's engagement in aimless activities, motor instability, lack of focus and attention, and impulsivity in problem-solving without concentration. This may result in the inability to communicate and build successful social relationships, as well as low academic achievement (Magdy Ahmed Mohamed Abdullah, 2005, p. 483).

According to the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5), it is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. The terms ADHD and HD are used. DSM-5 uses the same 18 symptoms as DSM-IV, divided into two domains: inattention and hyperactivity/impulsivity, requiring at least six symptoms in most cases for diagnosis (Hajar Shaaban, 2022, p. 62).

Based on the above, pathway-related interactions in ADHD with peers may prevent the child's aggressive

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behavior as a tool for appropriate social interaction skills. Meanwhile, the overlapping responses in the deficit of self-regulation skills lie in the limited knowledge of social skills and the method of executing them (Kariman Mohamed Ibrahim Zmeir, 2018, p. 19).

Diagnostic Criteria According to DSM-5

A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with developmental functioning as indicated in (1) and (2):

Inattention:

If six (or more) of the following symptoms have persisted for at least six months to a degree that is inconsistent with the developmental level and that negatively and directly impacts social, academic, or occupational activities. For older adolescents and adults (age 17 and above), at least five symptoms are required:

- Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).
- Often has difficulty sustaining attention in tasks or play activities (e.g., difficulty remaining focused during lectures, conversations, or lengthy reading).
- Often does not seem to listen when spoken to directly.
- Often does not follow through on instructions and fails to finish tasks, losing focus quickly and getting easily sidetracked.

- Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks, keeping materials and belongings in order; work is disorganized; poor time management; fails to meet deadlines).
- Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort, such as schoolwork or homework; for older adolescents and adults, this may include preparing reports and reviewing lengthy papers.
- Often loses things necessary for tasks and activities (e.g., school materials, pencils, books, tools, wallets).
- Is often easily distracted by extraneous stimuli.
- Is often forgetful in daily activities (e.g., doing chores, running errands).

Hyperactivity and Impulsivity

If six or more of the following symptoms have persisted for at least six months to a degree that is inconsistent with the developmental level and that directly affects social, academic, or occupational activities. For older adolescents and adults, at least five symptoms are required:

- Often fidgets with hands or feet or squirms in seat.
- Often leaves seat in situations when remaining seated is expected.
- Often runs about or climbs in situations where it is inappropriate.
- Often unable to play or engage in leisure activities quietly.
- Is often "on the go," acting as if "driven by a motor."
- Often talks excessively.

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- Often blurts out an answer before a question has been completed.
- Often has difficulty waiting his or her turn.
- Often interrupts or intrudes on others (e.g., butts into conversations or games). (American Psychiatric Association, 2013, p. 155)

Types of ADHD

- **Combined Presentation:** If criterion (1) inattention and criterion (2) hyperactivity/impulsivity are both met for the past 6 months.
- **Predominantly Inattentive Presentation:** If criterion (1) inattention is met, but criterion (2) hyperactivity/impulsivity has not been met for the past 6 months.
- **Predominantly Hyperactive/Impulsive Presentation:** If criterion (2) hyperactivity/impulsivity is met, but criterion (1) inattention has not been met during the past 6 months (Touati Faiza, Bougassa Omar, 2019, p. 606).

Social Skills

Definition of Social Skill:

Wanstead defines social skills as socially acceptable behaviors that allow a person to interact with others. Ahmed, on the other hand, considers them as the individual's ability to express emotions, control and regulate nonverbal expressions, understand the emotions and expressions of others, and interpret them correctly. These abilities vary among children; some have a high level of these skills, while others suffer from deficits in them.

Cuninghan defines them as skills that allow a person to interact and behave appropriately in specific social contexts and include skills of assertiveness, persistence, dealing, communication, and friendship-building skills (Kariman Mohamed, 2018, p. 12).

Abdel Fattah views social skills as a set of learned verbal and nonverbal behaviors that enable the child to engage in positive interaction, whether within the family environment, school, with peers, or strangers, and lead to achieving his goals that are approved by and satisfactory to society (Amina Saeed, 2016, p. 15).

Therefore, social skills are a set of positive and socially acceptable behaviors acquired by the child through learning, training, guidance, and practice. They require several stages to become part of the individual's personality, developing their ability to establish successful social relationships and to express their emotions in social situations appropriately according to the context.

Elements and Components of Social Skills

Spence (1991) believes that social skills are primarily determined by a set of cognitive components and the individual's ability to translate these components into appropriate behaviors and performances for the situation, since merely possessing knowledge does not mean that the individual can perform the appropriate behavior in the appropriate situation. Therefore, it is necessary to distinguish between communication problems resulting from deficiencies in cognitive aspects and the ability to translate knowledge into forms of skillful behavior. From this perspective, it is clear that social skills have two main components: cognitive components and performance

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components. Safia Mohamed (1997) sees that social skills are determined by cognitive components and the ability to translate them behaviorally. However, some students do not act efficiently in most social situations despite possessing sufficient cognitive knowledge that enables them to perform behavior skillfully. (Boudjelal Said, 2009, p. 40)

Theories Explaining Social Skills

- **Behavioral Theory:** This theory generally revolves around the learning process in acquiring new behavior. It views it as a set of habits that the individual learns and acquires during the various stages of growth. Riggio indicated that social skills are not innate or inherited but are learned skills acquired through social interaction, and that the child acquires social values and skills through conditioned learning, which is reinforced by rewards. (Kroum Mouafak, 2017, p. 25)
- **Cognitive Theory:** Proponents of this approach argue that responses do not occur automatically but are the result of a series of cognitive processes that take place through sequential stages of processing, ultimately leading to the coordination and application of information to various situations. Therefore, it is assumed that deficits in social skills are the result of cognitive factors such as negative expectations. (Nazier Soltani, 2022, p. 60)
- **Social Learning Theory:** Bandura believes that most human behavior is acquired through observation. Therefore, failure or deficiency in social performance is viewed as behavior acquired through observation,

and modifying these behaviors is achieved through training. Hamed Zahran (2000) adds that social learning experiences play an important role in the development and modification of a person's social behavior. The psychological and social methods used by the family in the process of socialization contribute to changing children's behavior, either negatively or positively. (Hamed Zahran, 2000, p. 38)

Study Field Methodology and Procedures

Exploratory Study

The researcher conducted an exploratory study to collect theoretical information and data on the subject of the study, as well as to verify the validity of the measurement tools that would be used in the main study. A pilot sample consisting of 30 children with ADHD was selected in order to check the validity and reliability of the study tools.

Study Limits

- **Temporal Limits:** The study began on October 15 and continued until December 10, 2023.
- **Spatial Limits:** The study was conducted at several primary schools affiliated with the first district "Omar Ibn Abdelaziz" in Adrar.
- **Human Limits:** The study involved male children with ADHD, aged between 7 and 10 years, at the primary education level.
- **Practical Limits:** This study relied on several diagnostic tools, including the SNAP-IV test for ADHD, the Progressive Matrices Test, Riggio's Social Skills Test, medical examination, and the training program to improve social skills (prepared by the

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researcher). Interview and clinical observation techniques were also used, and the Statistical Package for the Social Sciences (SPSS) was employed to process the statistical data.

Study Method

The nature of the research required reliance on the quasi-experimental method due to its suitability to the subject. The researcher adopted a one-group design with pre-test, post-test, and follow-up measurements.

| Experimental Group | Pre-test | Therapeutic Intervention | Post-test | Follow-up Test |

Study Variables

- **Independent Variable:** The training program prepared by the researcher, which aims to improve the social skills of this group.
- **Dependent Variable:** The variable affected by the independent variable, represented by behaviors of inattention and hyperactivity.
- **Experimental Design:** The researcher used a single experimental group design with pre-test, post-test, and follow-up measurements.

Study Sample

The study sample consisted of a group of male students with ADHD, totaling 10 students aged between 7 and 10 years. They were intentionally selected according to the characteristics illustrated in the following table:

Table (01) shows the characteristics of the sample

Number	Gender	Age	Intelligence Level	Social Status	Category
10	Males	From 7 to 10 years	From average to above average	Moderate	Individuals with ADHD without any accompanying disorders

Study Tools

SNAP-IV Test for ADHD:

This test is considered one of the most important diagnostic tools. Swanson considers the SNAP-IV scale among the key measures used by researchers to conduct studies related to ADHD. Its items are consistent with what is stated in the *Diagnostic and Statistical Manual of Mental Disorders DSM-III*. It is characterized by statistically significant psychometric properties, as well as the ease of its application, scoring, and interpretation. The original version contains 90 items, while the modified version consists of 18 items: 9 items for hyperactivity and impulsivity, and 9 items for inattention. A single version is designed for both parents and teachers, and it follows the Likert scale method, where one of four responses is selected.

Test Description

This scale includes 18 statements designed to measure symptoms of inattention, hyperactivity, and impulsivity in children aged 6 to 12 years. These statements describe behaviors characteristic of the disorder both at home and in the school environment. The Likert scale is used for scoring, as shown in the following table:

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Table (02) illustrates the scoring scale of the SNAP-IV test

Alternatives	Never	Rarely	Sometimes	Often
Score	0	1-	2-	3-

Test Correction:

We sum the scores of the 18 items and then divide by the number of items (18). If the result is greater than 2 for the teacher's version and greater than 1.67 for the parent's version, it can be concluded that the child suffers from ADHD.

Test Dimensions:

The test consists of two dimensions: the inattention dimension and the hyperactivity/impulsivity dimension, distributed as follows:

Table (03) shows the distribution of the test items according to dimensions

Dimension	it belongs to Items
Attention Deficit Dimension	(09) ,(08) ,(07) ,(06) ,(05) ,(04) ,(03) ,(02) ,(01)
Hyperactivity and Impulsivity Dimension	(18) ,(17) ,(16) ,(15) ,(14) ,(13) ,(12) ,(11) ,(10)

Test Duration:

The duration ranges between 15 and 20 minutes.

Psychometric Properties of the SNAP-IV Test

Validity

- **Internal Consistency Validity:** Internal consistency was calculated by computing Pearson's correlation coefficient between the raw score of each item and the total score of the scale. The overall internal consistency score among the items reached (0.88), which indicates that the items enjoy a good degree of coherence and consistency.

Reliability

- **Split-Half Reliability:** The reliability coefficient between the even and odd items was 0.69. After correcting the split-half reliability coefficient using the Spearman–Brown corrective formula, the reliability coefficient between the even and odd items was 0.807, which is a high reliability coefficient that reassures the use of the scale.
- **Reliability Using Cronbach's Alpha:** The reliability coefficient between the even and odd items was 0.60. To ensure the reliability of the questionnaire, Cronbach's Alpha was calculated for the study tool, and its value was 0.74, which is a high and significant value. Accordingly, the questionnaire enjoys reliability.

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Raven's Progressive Matrices Intelligence Test

Description of the Test:

Raven's Progressive Matrices Test by John C. Raven is considered one of the non-verbal group intelligence tests. It emerged as a result of the efforts of the English scientist Raven and his assistant, scientist Penrose, who were greatly interested in measuring non-verbal intelligence. Initially, they designed an experimental version of the matrices test consisting of nine figures, drawing their main idea from the scientist Spearman, who used boards with geometric shapes and asked the examinee to describe the rule governing the relationship between them. However, instead of asking the examinee to state the rule, they asked them to identify the missing part of the shapes to measure the ability to infer relationships.

The Progressive Matrices appeared for the first time in the form of a test in 1938 under the name **Raven's Progressive Matrices Test**, which was considered the main tool used to classify soldiers in the British Army during World War II.

Age Group:

This scale is applied to children aged (5.6 to 11.6) years, both normal and mentally delayed, as well as elderly individuals aged 65–85 years. The time for application should be sufficient and appropriate according to the examiner's judgment.

Scoring System:

- After the examinee finishes answering the questions, the test booklet and answer sheet are collected.

- Each correctly answered question is given a score of (1), and questions that are not answered are given a score of (0).
- To determine the correct answers, there is a scoring key sheet for the examiner, attached to the booklet.
- The correct scores obtained by the examinee are summed to find the total score in this test.

Calculating the IQ Score:

After determining the examinee's total score, the percentile norms list is consulted, ensuring the score is checked under the age category to which the examinee belongs. After identifying the percentile score corresponding to the examinee's age, it is then matched with the corresponding level description and IQ score. (Ibrahim Mustafa Hammad, 2008, p. 3)

Psychometric Properties of the Scale:

- **Internal Consistency Validity:** Internal consistency was calculated by computing Pearson's correlation coefficient between the raw score of each matrix and the total score of the scale. The overall internal consistency score among the matrices reached (0.80), indicating that the matrices enjoy a good degree of consistency.
- **Test Reliability:** To ensure the reliability of the questionnaire, the following methods were used:
    - **Split-Half Reliability:** The reliability coefficient between the even and odd matrices was 0.57. After correcting the split-half reliability coefficient using the Spearman–Brown corrective formula, the reliability

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coefficient between the even and odd items reached 0.72, which is a significant value.

- **Cronbach's Alpha Reliability:** To ensure the reliability of the questionnaire, Cronbach's Alpha was calculated for the study tool, and its value was 0.886, which is a high and significant value. Accordingly, the test enjoys reliability.

From the above, it is clear that the questionnaire enjoys a high degree of validity and reliability, which gives confidence in its use for this study.

Social Skills Test for Children (Prepared by Riggio, translated by Mohamed El-Sayed Abdel Rahman):

This scale was designed by Matson, Riggio, and others under the title Matson Evaluation of Social Skills for Youngsters, then translated and adapted into Arabic by Mohamed El-Sayed Abdel Rahman, who made some modifications to suit the Egyptian environment. The final version consisted of 57 items, where the first part dealt with the student's personal data, and the second part included the dimensions of social skills, which numbered four.

Table No. (04) shows the dimensions of the Social Skills Scale for Children

Dimension	Items	Numbers
Initiating Interaction	13	,25 ,28 ,25 ,28 ,31 ,33 ,39 ,43 ,51 ,52 11 ,12 ,17 ,20 ,21
for Dealing Skills with Emotions and	21	,27 ,34 ,35 ,37 ,44 ,45 ,49 ,50 ,56 ,57 1 ,6 ,10 ,13 ,14 ,16 ,18 ,19 ,22 ,23 ,26

Feelings		
for Dealing Skills with Positive Emotions and Feelings	12	,15 ,24 ,29 ,36 ,38 ,40 ,42 ,46 ,48 ,54 8 ,9
Emotional Social Regulation	11	2 ,3 ,4 ,5 ,7 ,30 ,32 ,41 ,47 ,53 ,54

Table No. (05) shows the scoring of the Social Skills Scale

Alw ays	Someti mes	/ Rarely *Sometimes
2	1	0

Psychometric Properties of the Social Skills Scale

Validity:

The validity of the Social Skills Scale for Children was calculated through internal consistency validity:

- Calculating the correlation coefficient between each item in a dimension and the total score of that dimension.
- Calculating Pearson's correlation coefficient between the items of the Initiating Interaction dimension and the total score of the dimension.

Table No. (06) shows Pearson's correlation coefficient between the items of the Initiating Interaction dimension and the total score of the dimension

Item	Sample Size	Correlation Coefficient	Significance Level	Item	Sample Size	Correlation Coefficient	Significance Level
11	30	**0،821	Statistically Significant	28	30	**0،901	Statistically Significant
12		**0،908		31		**0،763	
17		**0،722		33		**0،803	

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20		**0،742		39		**0،943	
21		**0،778		43		**0،725	
25		**0،741		51		**0،802	
				57		**0،722	

**Correlation is significant at the 0.01 level **Correlation is significant at the 0.05 level

It is evident from the table that the correlation coefficient values for the items of the dimension indicating skills in dealing with negative emotions and feelings and the total score of the dimension were all statistically significant at the significance level α = 0.01.

- Calculating Pearson's correlation coefficient between the items of the Skills in Interacting with Positive Emotions and Positive Feelings dimension and the total score of the dimension.

Table No. (07) shows Pearson's correlation coefficient between the items of the Skills in Interacting with Positive Emotions and Positive Feelings dimension and the total score of the dimension

Item	Sample Size	Correlation Coefficient	Significance Level	Item	Sample Size	Correlation Coefficient	Significance Level
8	30	**0،681	Statistically Significant	38	30	**0،781	Statistically Significant
9		**0،612		40		**0،674	
15		**0،701		42		**0،604	
24		**0،892		46		**0،771	
29		**0،701		48		**0،881	
36		**0،772		54		**0،802	

**Correlation is significant at the 0.01 level **Correlation is significant at the 0.05 level

It is evident from Table (07) that the correlation coefficients between the items of the Skills in Interacting

with Positive Emotions and Positive Feelings dimension and the total score of the dimension were statistically significant at the significance level α = 0.001.

- Calculating Pearson's correlation coefficient between the items of the Social Emotional Regulation dimension and the total score of the dimension.

Table No. (08) shows the correlation coefficient between the Social Emotional Regulation dimension and the total score of the dimension

Item	Sample Size	Correlation Coefficient	Significance Level	Item	Sample Size	Correlation Coefficient	Significance Level
2	30	**0،702	Statistically Significant	32	30	**0،782	Statistically Significant
3		**0،713		41		**0،680	
4		**0،673		47		**0،872	
5		**0،782		53		**0،903	
7		**0،781		55		**0،831	
30		**0،603					

**Correlation is significant at the 0.01 level **Correlation is significant at the 0.05 level

It is evident from Table (08) that the correlation coefficient values for the Social Emotional Regulation dimension and the total score of the dimension were statistically significant at the significance level α = 0.001.

- Calculating the correlation coefficient between the total test score and its dimensions.

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Table No. (09) shows the correlation coefficient between the total test score and its dimensions

Dimensions Scale	Correlation Coefficient	Significance Level
for Dealing with Negative Skills Emotions and Feelings	884،0**	Statistically Significant
for Interacting with Skills Positive Emotions and Feelings	893،0**	
Interaction Initiating	801،0**	
Emotional Regulation Social	832،0**	

It is evident from Table (09) that all correlation coefficients of the dimensions of the Social Skills Scale for Children were statistically significant at the significance level α = 0.001. This indicates strong internal consistency as an indicator of the validity of the Social Skills Scale.

Reliability:

Reliability of the scale was calculated using the split-half method, where the items of the dimensions were divided into two halves: one containing the even-numbered items and the other containing the odd-numbered items. The Spearman–Brown correction coefficient was then calculated.

Table No. (10) shows the correlation coefficient for the split-half reliability of the Social Skills Scale for Children

Statistic	Value
Correlation Coefficient Split-Half	0.891
Correlation Coefficient Spearman	0.905
Formula Guttman	0.912

It is evident from Table No. (10) that the correlation coefficient between the two halves was estimated at 0.891, indicating a high correlation. The reliability coefficient for the total test using the **Spearman–Brown correction formula** was estimated at 0.905, and using the **Guttman formula**, it reached 0.912. This indicates the reliability of the scale.

The Training Program Prepared by the Researcher:

It is a set of specific and organized steps that include a series of training sessions, activities, and various tasks, arranged in the form of sessions over a specific period of time. The program aims to develop the social skills of children with ADHD.

Program Objectives

General Objective:

The main objective of the training program is to improve the social skills of primary school children with ADHD.

Specific Objectives:

- Developing the ability to communicate and interact effectively with others.
- Developing the skill of managing negative emotions and feelings, particularly controlling anger.
- Developing the skill of handling positive emotions and feelings (helping others, avoiding fights, thanking others, following instructions and rules).
- Developing the skill of social emotional regulation (self-control and managing emotional reactions in situations of provocation).
- Training in showing respect and appreciation for others and respecting their feelings.

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Program Significance:

- The importance of the program lies in helping children achieve social adjustment and develop their social skills, which in turn reflects positively on their psychological well-being and quality of life.
- Raising awareness about the importance and necessity of developing social skills among children, especially in primary school, and encouraging parents and educators to pay attention to this.

Program Implementation Procedures:

Program Planning: After reviewing the theoretical and psychological literature and previous studies that focused on psychological support, social care, and training and therapeutic programs, a general framework for the program was designed by defining the objectives, boundaries, methods, and strategies used. The researcher took into account several foundations for the program:

Theoretical Basis:

One of the theories on which the training program was based is Behavioral Theory.

Behavioral Therapy:

Behavioral therapy emerged and took shape through the work of several psychologists, including Joseph Wolpe and Lazarus. Its roots go back to the scientific work and experiments carried out by behaviorist researchers on animals in the field of learning theory, such as Watson, Skinner, Bandura, Thorndike, and Pavlov.

Thus, the initial attempts at behavioral therapy were linked to the emergence of learning theories by these scholars. However, the results showed that behavioral therapy is not limited to learning theories alone, but also extends to other aspects of scientific assessment found in personality theories, as well as behavioral, cognitive, and social theories in psychology.

This therapeutic method relies on the concepts of behavioral theories related to the shaping and acquisition of behavior, as they consider both normal and abnormal human behavior to be learnable — meaning that behavior can be shaped and acquired by individuals, as well as erased or extinguished. It views behavior directly without searching for its underlying causes, and it deals with it based on the key principle in behavior modification put forth by Skinner: **"Behavior is governed by its consequences."**

Assumptions of Behavioral Therapy:

Psychological disorders are learned behaviors in their formation, and their removal follows the same laws and theories that govern normal behavior. Psychological disorders may arise from an individual's failure to learn adaptive behaviors. Any psychological disorder arises due to the conflict experienced by the individual when faced with two goals and is required to choose one and bear the responsibility of that choice.

Program Boundaries:

Spatial Boundaries:

The program was implemented in the Screening and Follow-Up Unit located at Omar Ibn Abdulaziz Middle

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School. The unit is equipped with offices and isolated from any stimuli that could distract the study sample.

Temporal Boundaries:

The program lasted for three months, with two sessions per week. Each session lasted between 45 and 50 minutes.

Human Boundaries:

The study sample consisted of 10 children who formed the training group. They were diagnosed with ADHD, scored low on the social skills scale, and were selected intentionally.

Techniques Used in the Program:

- **Reinforcement:** Reinforcement is a behavioral therapy technique that involves rewarding the individual each time they perform the desired behavior. It depends on conditioning and includes two types: tangible reinforcers and intangible reinforcers.
- **Modeling:** Modeling is one of the most commonly used behavior modification techniques. It is based on the idea that humans can learn through observing others' behavior. The person is regularly exposed to models, given the opportunity to observe, and then asked to perform the same behavior as the model. We used modeling as an instructional method to correctly demonstrate desired behaviors such as verbal communication, self-control, and interaction with others.

- **Role Playing:** Role playing is a method of social learning where the child is trained to act out aspects of social skills they are mastering. The researcher trained the children to play roles that would develop their social skills in an encouraging environment that highlighted strengths and reinforced them while identifying weaknesses and correcting them. Repetition was required to master and acquire these skills.
- **Homework:** During the training of the group members on program activities, homework was assigned at the end of each session. It was reviewed and evaluated in the following session, giving children the opportunity to practice new social skills outside the training environment. (Attaf Mohammed Abu Ghali, 2014, p. 284)
- **Continuous Positive Reinforcement:** This was done through praise, encouragement, and participation in activities using appropriate material incentives. (Review definition)
- **Prompting and Cueing:** This involves presenting additional stimuli that increase the likelihood of the individual performing the desired social behavior, with the suggestion that the behavior will be reinforced. Prompting takes various forms, including direct verbal instructions ("Do this, don't do that") or gestural cues from the trainer indicating approval or disapproval, with the gesture carrying the same communicative meaning for both parties.
- **Shaping:** Shaping involves reinforcing the desired behavior so that it gradually approaches the target behavior, starting from the participant's current level

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at the beginning of training and progressing in small, successive steps while reinforcing improvements and addressing errors and obstacles. (Al-Nazir Sultani, 2022, p. 89)

- **Corrective and Improving Feedback:** Used to help improve social skills during training.
- **Drawing:** Drawing is a means of expression using lines, where the line plays a fundamental role in design. Children's drawings are a language through which they communicate many feelings and experiences to those around them. Drawing is a way to express inner emotions and reveal the depths of the psyche. It provides an opportunity to release internal tensions, and the child's psychological state can be detected and diagnosed. We used drawing as a therapeutic tool. Edith Kramer (1979) indicated that drawing plays a role in treating behavioral problems and emotional disorders in children. (Slimani Hussein, Touati Ibrahim Issa, 2014, p. 152)
- **Muscle Relaxation:** Relaxation can be used as an independent technique or in combination with other therapies. It is used when there is a need to create a response opposite to anxiety and tension. Relaxation relies on a well-known physiological principle: anxiety, fear, and strong emotions are usually expressed through physical and muscular tension. In states of fear and emotion, the child responds with increased muscular activity and tension of external muscles, resulting in involuntary movements. (Slimani Hussein, Touati Ibrahim Issa, 2014, p. 152)

- **Play:** Play is a guided activity that children engage in for fun and entertainment. It was employed in the program to develop the child's behavior and to nurture their personality across cognitive, physical, and emotional dimensions.
- **Program Services**
- **Therapeutic Services:** The program aims to provide services focused on improving and correcting social skills through the proposed activities in the program.
- **Educational Services:** The program offers educational services for children with ADHD by developing certain social skills that enhance their participation in the teaching and learning process with effectiveness and positivity. It also helps them manage their emotions and participate in school activities with a positive spirit by practicing self-control, following instructions in the school environment, and preserving both private and public property. It also involves guiding the educational staff on the importance of developing the social skills of this group and clarifying methods for dealing with them.
- **Counseling Services:** Providing guidance and counseling to parents, teachers, and children.

Program Sessions:

The program consists of 24 sessions, with two sessions per week. It is made up of a series of sessions through which the program's objectives are pursued. The program was also reviewed and validated by several specialists and university professors in the field of psychology.

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Session	Objective	Duration	Techniques
Session (01) & (02)	Getting acquainted and building trust among group members	45 min	Dialogue and discussion, corrective feedback
Session (03)	Developing self-regulation skills	50 min	Material and moral reinforcement, corrective feedback
Session (04)	Controlling emotions and the ability to express appropriately	50 min	Discussion, material and moral reinforcement, role exchange, homework
Session (05)	Developing active listening skills	50 min	Educational activities, reinforcement, dialogue and discussion, behavior observation, feedback
Session (06)	Developing active participation skills	50 min	Group play, discussion, corrective feedback, reinforcement
Session (07)	Developing adherence to rules and instructions	50 min	Corrective feedback, modeling, reinforcement, behavioral contracting, shaping good behavior
Session	Developing	50 min	Group play,

(08) & (09)	group play skills and following instructions and rules		reinforcement, praise and encouragement
Session (10)	Developing adherence to good morals	50 min	Group play, corrective feedback, behavioral contracting, praise and encouragement
Session (11)	Developing effective communication skills with others	50 min	Token reinforcement, corrective feedback, muscle relaxation
Session (12)	Developing cooperative play skills and responsibility	50 min	Group play, reinforcement, praise and encouragement
Session (13)	Developing interaction skills with others	50 min	Group play, role exchange, encouragement
Session (14)	Developing team spirit and enhancing sense of responsibility	50 min	Group play, role exchange, encouragement
Session (15)	Developing sense of competition	50 min	Storytelling, material and moral reinforcement
Session (16)	Developing effective communication skills with others	50 min	Group play, corrective feedback
Session	Emotional	50 min	Muscle relaxation

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(17)	ventilation and reducing anxiety and tension		
Session (18)	Retraining and developing behaviors related to self-regulation	50 min	Material and moral reinforcement, corrective feedback
Session (19)	Retraining and developing behaviors of following instructions and rules	50 min	Corrective feedback, modeling, reinforcement
Session (20)	Retraining and developing effective communication skills with others	50 min	Group play, corrective feedback
Session (21)	Emotional discharge	50 min	Muscle relaxation
Session (22)	Retraining and developing group play	50 min	Group play, reinforcement, role play
Session (23)	Post-measurement	50 min	–
Session (24)	Final ceremony	–	–

Presentation of the Study Results:

Presentation of the First Hypothesis Results:

There are statistically significant differences for the experimental group in the level of social skills between the pre-test and post-test measurements (after applying the program) for elementary school students with ADHD at the significance level ($\alpha = 0.05$).

To verify the validity of the hypothesis, the Wilcoxon Signed Ranks Test was used to measure the performance of the experimental group on the social skills scale in both the pre- and post-tests, and the following table illustrates how the Wilcoxon test is calculated.

First: Finding the differences between the scores of the pre-test and post-test applications.

Table No. (11) represents the differences between the pre-test and post-test scores for the experimental group

Participants	1	2	3	4	5	6	7	8	9	10
Scores Before Program Implementation	50	47	52	54	35	40	53	50	47	52
Scores After Program Implementation	60	50	55	62	40	50	51	56	52	60
Differences Between Them	-10	-3	-3	-8	-5	-10	-2	-6	-5	-8

Second: Ranking the differences from the smallest to the largest, ignoring the negative sign.

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Table No. (12) shows the ranking of differences from the smallest to the largest

Differences	2	3	3	5	5	6	8	8	10	10

Third: Arranging the differences in ascending order from smallest to largest.

Table No. (13) shows the ranking of differences in ascending order from smallest to largest

Differences	2	3	3	5	5	6	8	8	10	10
Scores	1	2،5	2،5	4،5	4،5	6	7،5	7،5	9،5	9،5

Fourth: Assigning each difference the rank it obtained, while restoring its original sign.

Table No. (14)

Differences	2	3	3	5	5	6	8	8	10	10
Rank of Differences	1	2.5	2.5	4.5	4.5	6	7.5	7.5	9.5	9.5
Rank of Differences with Sign (+/−)	1	-2.5	-2.5	-4.5	-4.5	-6	-7.5	-7.5	-9.5	-9.5

Fifth: Dividing the difference ranks into two groups: positive difference ranks and negative difference ranks, then calculating the total of each group. (w) = 1, and thus the calculated Wilcoxon value is (w) = 01.

Table No. (15) shows the arrangement of positive and negative differences

Positive Rank Sums (+W)	1									Σ = 1
Negative Rank Sums (−W)	-9.5	-2.5	-2.5	-7.5	-9.5	-9.5	-6	-4.5	-7.5	Σ = 59

The tabulated Wilcoxon value at α = 0.05 is (w) = 08. Since the calculated (w) value is less than the tabulated (w) value, we reject the null hypothesis and accept the alternative hypothesis. Therefore, there are statistically significant differences between the pre-test and post-test measurements of the experimental group in the level of social skills for elementary school students with ADHD.

Presentation of the Second Hypothesis Results:

There are no statistically significant differences for the experimental group in the level of social skills between the post-test and follow-up measurements for elementary school students with ADHD at the significance level (α = 0.05).

To verify the validity of the hypothesis, the Wilcoxon Signed Ranks Test was used to measure the performance of the experimental group on the social skills scale in both the post-test and follow-up tests, and the following table illustrates how the Wilcoxon test is calculated.

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First: Finding the differences between the scores of the post-test and follow-up applications.

Table No. (16) shows the differences between the post-test and follow-up application scores

Participants	1	2	3	4	5	6	7	8	9	10
Post-test Scores	60	50	55	62	40	50	51	56	52	60
Follow-up Scores	60	51	55	61	41	50	50	55	50	60
Differences Between Them	0	-1	0	1	-1	0	1	1	2	0

Second: Ranking the differences from the smallest to the largest, ignoring the negative sign.

Table No. (17) shows the ranking of differences from smallest to largest

Differences	1	1	0	0	0	0	1	1	1	2

Third: Arranging the differences in ascending order from smallest to largest and eliminating the zero differences.

Table No. (18) shows the ranking of differences in ascending order from smallest to largest

Differences	1	1	1	1	1	2
Scores	1	2،5	2،5	4،5	4،5	6

Fourth: Assigning each difference the rank it obtained, while restoring its original sign.

Table No. (19) shows the ranks with their signs assigned

Differences	1	1	1	1	1	2
Rank of Differences	1،5	1،5	3،5	3،5	5	6
Rank of Differences with Sign (+/−)	-1،5	1،5	-3،5	3،5	5	6

Fifth: Dividing the difference ranks into two groups: positive difference ranks and negative difference ranks, then calculating the total of each group. (w) = 5, and thus the calculated Wilcoxon value is (w) = 5.

Table No. (20) shows the positive and negative difference ranks

Positive Rank Sums (+W)	1،5	3،5	5	6	Σ = 16
Negative Rank Sums (−W)	-1،5	-3،5			Σ = 5

The tabulated Wilcoxon value at α = 0.05 is (w) = 0. Since the calculated (w) value is greater than the tabulated (w) value, we accept the null hypothesis and reject the alternative hypothesis. Therefore, there are no statistically significant differences between the post-test and follow-up measurements of the experimental group in the level of social skills for elementary school students with ADHD.

Discussion of the Study Results

The study results confirmed the first hypothesis, which states that there are statistically significant differences for the

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experimental group on the social skills scale between the pre-test and post-test measurements, attributed to the variable of the training program. This finding confirms the effectiveness of the training program in favor of the post-test measurement. It indicates that psychological intervention and the implementation of behavioral therapy training sessions with members of the experimental group had a significant and clear effect, as reflected in the statistically significant differences between the pre- and post-tests. This improvement is due to the positive role of the program, which is based on behavioral therapy and behavior modification through the therapeutic techniques on which the training program relies.

According to Boutros Hafez, modeling is a technique that plays a major role in improving social skills. It is an instructional method that depends on performing the desired behavior. Bandura also highlighted the importance of modeling, as a child can acquire behavioral patterns through observing appropriate models (Boutros Hafez, 2010, p.166).

The training sessions also included the shaping technique, which is one of the social learning methods. It is an important technique in learning social skills, as it is used to reinforce the skill to be learned and gradually approach the desired skill (Al-Nadheer Soltani, 2022, p.89). The sequencing of session activities, their training, and their gradual application enabled members of the experimental group to interact with and benefit from them.

Additionally, the prompting technique used in the program acted as a stimulus that increased the individual's learning of the social behavior or skill to be learned, with the

implication that their social behavior would be reinforced. Role-playing is another technique drawn from social learning methods, through which the child is trained to act out aspects of social skills they have mastered.

The therapeutic techniques used in the training program were among the key factors that contributed to its success and produced a positive effect on the experimental group.

In the same context, the study results supported the second hypothesis, which showed no statistically significant differences at the 0.05 significance level for the experimental group between the post-test and follow-up measurements. This is attributed to the fact that the experimental group received a training program consisting of 24 sessions that used therapeutic training techniques efficiently and flexibly, resulting in improved social skills among the study sample. Consequently, the obtained results remained stable without change, as evidenced by the consistency between the post-test and follow-up measurements and the continued effectiveness of the program after its completion.

The present study aligns with several previous studies whose findings concluded that social skills training for children with ADHD leads to a reduction in the symptoms associated with ADHD and improves their social adaptation. These programs also contributed to increased social behaviors such as participation, helping, initiating interactions, and maintaining eye contact, as well as a decrease in negative social behaviors.

Many studies have addressed educational and social programs for children with ADHD, applying important educational programs aimed at developing social skills. Among these are the studies of Ahmed (2017), Al-Muaiqil (2010), Martinez et al., Corkum et al. (2010), and Wilkes-

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Gillan et al. (2014). These studies focused on improving social skills and fostering cooperation between students, parents, and teachers. Intensive behavioral therapy techniques were used to shape more appropriate behaviors. The studies concluded that there was significant improvement and positive outcomes among children with ADHD, including a reduction in socially unacceptable behaviors such as aggression and social withdrawal, as well as secondary outcomes like improved academic performance.

Our study also aligns with the findings of Amani Ibrahim's study, which similarly found statistically significant differences for the experimental group on the social skills scale between the pre-test and post-test, and no statistically significant differences between the post-test and follow-up measurements.

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