

Primary School Teachers' Knowledge of Remedial Teaching Strategies for Students with Attention Disorders and Hyperactivity

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Abstract:

This study aimed to reveal the knowledge of primary school teachers regarding therapeutic teaching strategies for students with attention disorders and hyperactivity. To achieve this, a descriptive methodology was employed, and a questionnaire was administered to a sample of 80 primary school teachers from various educational institutions in the TiziOuzou region. The results of the study indicated that the knowledge of primary school teachers about therapeutic teaching strategies for students with attention disorders and hyperactivity was moderate. Furthermore, the knowledge varied across different dimensions. Strategies related to reducing distractions, enhancing motivation, and improving listening tasks fell under the category of "I know," while strategies for improving organizational tasks, time management, and opportunities for movement and transition were classified as "I know a little

Keywords: Primary education teachers, with therapeutic teaching strategies, attention deficit and hyperactivity disorder

1-Problem Statement:

Childhood is considered one of the most important stages in a person's life, as the early years of a child's life serve as the fundamental foundation upon which their personality is later built. However, a child may face problems that lead to complications, changing the course of their life and preventing them from engaging in the usual activities their peers participate in, whether in the family or school environment. Among the disorders that children may encounter is Attention Deficit Hyperactivity Disorder (ADHD).

Attention is one of the cognitive processes that represent one of the pillars—or the foundation—upon which all other cognitive processes are built. Without it, an individual cannot be aware, remember, imagine, or innovate (Umilta, 1998). Therefore, any disorder affecting this process impacts the learning process in children. As a result, attention disorders have received significant attention at various stages of life, particularly during primary education when children are exposed to multiple school tasks that require their attention for extended periods (Al-Ja'afra, 2008, 27). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) by the American Psychiatric Association, the prevalence of Attention Deficit Hyperactivity Disorder (ADHD) ranges from 3-7% among school-age children. It manifests in various symptoms, provided they persist for at least six months and significantly affect developmental levels in negative ways (APA, 2013).

Children with Attention Deficit Hyperactivity Disorder (ADHD) face many challenges due to the symptoms of this disorder, most notably inattention, hyperactivity, and impulsivity. These are manifested through the child's inability to focus on tasks, excessive movement, and the tendency to shift from one activity or place to another without purpose, as well as difficulties in self-regulation and impulsive actions or words, which hinder the development of positive relationships with those around them (Al-Huzaimi, 2018). The manifestations of this disorder worsen if not addressed. Without multifaceted intervention, the child experiences academic, behavioral, emotional, and social difficulties. However, with intervention, the symptoms become more manageable, leading to better

success and symptom control, along with long-term treatment. This requires organizing the child's environment (home, school, etc.) and providing continuous support and reinforcement. These children can learn more effectively in regular classrooms if appropriate learning, support, guidance, and strategies are provided, with family cooperation (Al-Khreshmi, 2004). Therefore, teaching this group of children presents a challenge for those in the field of special education, as effective strategies are required to meet their needs. This disorder can lead to psychological disturbances and complex school problems, making it necessary to provide educational services and pedagogical support to help the child cope with the disorder, particularly in the school environment, which plays a significant role in guiding the child's behavior through recreational, educational, and therapeutic activities.

The therapeutic teaching strategy is considered one of the most suitable strategies that has proven effective for children with Attention Deficit Hyperactivity Disorder (ADHD). According to Al-Zayat (2006), it involves the use of all medical, educational, behavioral, cognitive, neuropsychological, and human mechanisms, both direct and indirect, to improve developmental and academic skills. This is done by applying specific mechanisms to a certain group with a particular content, for a specified period, to achieve the desired goals. Many studies have confirmed its effectiveness in teaching this group of children, such as the study by Oushaash (2016), which aimed to assess the effectiveness of an educational therapeutic program in reducing ADHD symptoms. The study concluded that the program helped reduce these symptoms among second-stage primary school students. Similarly, the study by Chattopadhyay and Ghosh (1993) showed significant improvements in academic performance and behaviors related to hyperactivity and inattention, such as disobedience, failure to complete tasks, cooperation, and social behavior. These improvements led to a reduction in hyperactivity in children (Al-Marsoumi, 2011, pp. 146-147). Teachers play a crucial role in the success of students with attention and hyperactivity disorders by modifying their learning environment, teaching methods, and implementing behavioral intervention strategies that meet their needs. Without the teacher's cooperation in applying these strategies, no program can achieve the desired results.

Many studies in this field have emphasized that behavioral and academic interventions within the classroom are among the most effective therapeutic approaches to alleviate the symptoms of attention deficit hyperactivity disorder (ADHD). For example, the study by Reid, Trout, and Schartz (2005) demonstrated the effectiveness of self-management in enhancing academic productivity and attention to the curriculum for students with ADHD. However, teachers often face difficulties in recognizing and identifying symptoms, and may misinterpret children's behaviors and actions. They might perceive these behaviors as disrespect or a refusal to follow instructions, which could lead to ignoring the child's presence in the classroom, expelling them, or referring them to school administration. The teacher's lack of awareness of the child's condition and the tendency to ignore the behavior may exacerbate the issue, especially since teachers are central to the educational process and the most frequent point of contact with the student. Teachers are also a reliable source for gathering information regarding referrals and diagnoses and are responsible for creating a supportive and active environment that helps all students succeed and engage effectively in the classroom (Al-Mawjda et al., 2014). Additionally, the study by Pashnini (2020) confirmed that teachers face various challenges while applying classroom management techniques with female students with ADHD. Meanwhile, the study by Al-Maqhawi (2020) found that teachers' knowledge of effective educational interventions for students with ADHD was inconsistent.

The results of the study by Ojionuka (2016) showed that teachers have limited knowledge of the disorder and that their level of training is insufficient to implement successful educational interventions for students with ADHD. Furthermore, the level of education and years of experience did not contribute to improving their knowledge of the disorder and its interventions (as cited in Al-Maqhawi, 2020). Martinussen et al. (2011) indicated that teachers' knowledge of evidence-based educational interventions for students with ADHD improves their performance and helps change their negative attitudes toward these students. This contributes to creating positive learning situations in the classroom, thereby increasing teacher satisfaction with their performance, enhancing motivation to teach, and boosting their confidence in their ability to improve the students' condition (as cited in Al-Maqhawi, 2020, p. 420). Therefore, it is essential to evaluate their knowledge of the various strategies that have proven effective in teaching these students.

This study aims to contribute by providing additional insights into this topic, specifically by answering the following question:

What is the level of primary school teachers' knowledge of therapeutic teaching strategies for students with attention disorders and hyperactivity?

2. Study Hypotheses:

2.1 General Hypothesis:

Primary school teachers' knowledge of therapeutic teaching strategies for students with attention disorders and hyperactivity is weak.

2-1-Specific Hypotheses:

1-Primary school teachers' knowledge of the strategy to reduce/minimize distractions in therapeutic teaching for students with attention disorders and hyperactivity is weak.

2-Primary school teachers' knowledge of the strategy to increase motivation in therapeutic teaching for students with attention disorders and hyperactivity is weak.

3-Primary school teachers' knowledge of the strategy to improve organization in therapeutic teaching for students with attention disorders and hyperactivity is weak.

4-Primary school teachers' knowledge of the strategy to improve listening tasks and reduce distractions in therapeutic teaching for students with attention disorders and hyperactivity is weak.

5-Primary school teachers' knowledge of the strategy for time management in therapeutic teaching for students with attention disorders and hyperactivity is weak.

6-Primary school teachers' knowledge of the strategy for movement and transition opportunities in therapeutic teaching for students with attention disorders and hyperactivity is weak.

3-Objectives of the Study:

-To identify the level of primary school teachers' knowledge of therapeutic teaching strategies for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy to reduce/minimize distractions in therapeutic teaching for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy to increase motivation in therapeutic teaching for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy to improve organization in therapeutic teaching for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy to improve listening tasks and reduce distractions in therapeutic teaching for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy for time management in therapeutic teaching for students with attention disorders and hyperactivity.

-To identify the level of primary school teachers' knowledge of the strategy for movement and transition opportunities in therapeutic teaching for students with attention disorders and hyperactivity.

4-The Importance of the Study:

The importance of the current study lies in the significance of the topic it addresses, which is the knowledge of primary school teachers about therapeutic teaching strategies for students with attention disorders and hyperactivity. This group is one of the most prevalent categories of students with special needs in Algerian educational institutions. Attention deficit and hyperactivity disorders impact students' performance across all educational stages, particularly in primary education, which is a critical phase for learning basic skills such as reading, writing, and arithmetic. Mismanagement of this disorder by teachers can exacerbate the problems these students face. Therefore, this study aims to raise teachers' awareness of the importance of addressing the weaknesses of students with attention disorders and hyperactivity through the use of therapeutic teaching strategies, which have proven highly successful in teaching them, as they focus on diagnosing and addressing weaknesses. This is particularly important as the teacher plays a pivotal role in the success of any therapeutic program designed for these children. The study also provides information on teachers' knowledge of therapeutic teaching for students with attention disorders at the primary education level, which can guide those involved in the educational process to the need for training programs before and during their experience to enhance teachers' knowledge of these disorders and the strategies used in their teaching.

5- Operational Definition of Study Concepts:

5-1-Primary school teachers' knowledge: Refers to the theoretical knowledge possessed by the teachers assigned to teach in the primary educational institutions included in the study, regarding therapeutic teaching strategies, their nature, stages, steps of implementation, objectives, and mechanisms, as defined by Zayaat (2006) in the *Therapeutic Teaching Guide for Students with Learning Difficulties*. In this study, it is expressed as the final result of the teachers' responses on the scale developed for this purpose and its dimensions.

5-2-Therapeutic teaching strategies: Refers to a set of procedures, educational activities, and teaching practices that a primary school teacher must follow when teaching students with attention disorders and hyperactivity in their classroom, to address their weaknesses. In this study, these strategies are defined by a set of goals and mechanisms for achieving them, as outlined in the *Therapeutic Teaching Guide for Students with Learning Difficulties* (2006), which include six main objectives:

-Reducing/minimizing distractions, increasing motivation, improving organization, improving listening tasks, time management, and providing opportunities for movement and transition.

5-3-Students with attention disorders and hyperactivity: Refers to primary school students in various stages of education, enrolled in several primary schools in the TiziOuzou province, who have been diagnosed by screening and follow-up units.

6- Scope of the Study:

-Spatial scope: The study was limited to primary educational institutions in TiziOuzou province, which include classrooms with students diagnosed with attention deficit and hyperactivity disorders.

-Temporal scope: The study was conducted during the second semester of the 2022-2023 academic year.

-Human scope: The study focused on primary school teachers who indicated, through their responses to the first section of the questionnaire, that they were familiar with attention deficit and hyperactivity disorders and had previously worked with students diagnosed with this disorder.

7-Subject matter scope: The study is limited to assessing the level of knowledge that primary school teachers, at all levels, have regarding therapeutic teaching strategies for students with attention deficit and hyperactivity disorders, as measured by the scale developed for this study.

-Successfully determining the study variables and formulating the hypotheses.

-Verifying the validity of the tool used for application, as its items were clear and accessible to the teachers.

-Ensuring the availability of the research sample for the first section of the questionnaire, which included information about the disorder and their experience in dealing with it.

-Confirming the validity of the questionnaire by recalculating its reliability using Cronbach's alpha coefficient. As the data, as we will discuss later, meet the appropriate statistical criterion at a high level, indicating its reliability.

8-Methodological Procedures of the Study:

8-1--Exploratory Study:

An exploratory study was conducted on a sample of 30 primary school teachers from TiziOuzou province. The purpose of the exploratory study was to:

-Collect a large amount of field data on attention deficit and hyperactivity disorder that would help refine the study's hypotheses.

-Identify a research sample that meets the criteria and standards set in the study.

-Calculate the psychometric properties of the questionnaire.

-Ensure the appropriateness of the questionnaire in terms of language, time, clarity of instructions, and ease of understanding the items.

The findings from the exploratory study were as follows:

-Successfully determining the study variables and formulating the hypotheses.

-Verifying the validity of the tool used for application, as its items were clear and accessible to the teachers.

-Ensuring the availability of the research sample for the first section of the questionnaire, which included information about the disorder and their experience in dealing with it.

-Confirming the validity of the questionnaire by recalculating its reliability using Cronbach's alpha coefficient. As the data, as we will discuss later, meet the appropriate statistical criterion at a high level, indicating its reliability.

8-2--Research

Method:

In line with the nature, objectives, questions, and hypotheses of the study, we chose the descriptive method, which involves collecting data from the real world and describing it quantitatively, relying on appropriate statistical techniques.

Here is the translation of the paragraph into English, following the APA style:

8-3- Study Population and Sample:

The study population consisted of all male and female teachers working in primary educational institutions in the TiziOuzou province, which included a total of 10 schools. A sample of 80 teachers was purposively selected based on their responses to the first section of the questionnaire regarding their knowledge of attention disorders and hyperactivity.

8-4- Study Tool:

To collect the data for the study, a questionnaire was developed to assess primary school teachers' knowledge of therapeutic teaching strategies for students with attention disorders and hyperactivity. The questionnaire was based on the *Therapeutic Teaching Guide for Students with Learning Difficulties* by Zayyat (2006). The dimensions of the questionnaire reflected the therapeutic teaching goals, while the means to achieve those goals were represented by the questionnaire items. The final version of the questionnaire consisted of two parts:

-Part One: This part includes 5 items about the teachers' demographic information and their knowledge and experience in dealing with students who have attention and hyperactivity disorders.

-Part Two: This part consists of 30 items distributed across 6 dimensions as follows:

-Dimension 1: (Reducing/Minimizing Distractions) includes five items.

-Dimension 2: (Enhancing Motivation) includes five items.

-Dimension 3: (Improving Organization) includes seven items.

-Dimension 4: (Improving Listening Tasks) includes four items.

-Dimension 5: (Time Management) includes three items.

-Dimension 6: (Movement and Transition Opportunities) includes six items.

For each item, respondents were asked to choose one of three alternatives: (I know), (I know a little), or (I don't know). The scoring system was as follows: a score of 3 for (I know), a score of 2 for (I know a little), and a score of 1 for (I don't know).

To assess the reliability of the scale, it was administered to a pilot sample of 30 teachers. The Cronbach's alpha coefficient was calculated using the SPSS statistical software (version 23), yielding a value of 0.89. This indicates the stability of the scale's scores, confirming its applicability to the study sample.

8-5- Statistical Processing Methods:

-Cronbach's Alpha Equation: Used to extract the internal consistency reliability of the questionnaire applied in the study.

-Mean and Standard Deviation: Used to calculate the average scores of the sample participants on the questionnaire assessing primary school teachers' knowledge of therapeutic teaching strategies for students with attention disorders and hyperactivity.

9-Presentation of Results and Discussion:

To test the validity of this hypothesis, the means and standard deviations of the participants' performance on the items of the first dimension of the questionnaire were calculated. Since a three-point scale was used, the response categories were determined by calculating the range between the highest (3) and the lowest (1) values, then dividing the result by the number of response categories, which is 3. The category length used was 0.66. The results were as follows:

- From 1.00 to 1.66: "I don't know"
- From 1.67 to 2.33: "I know a little"
- From 2.34 to 3.00: "I know"

9-1-Presentation of the Results for the First Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding the strategy of reducing/distraction reduction in remedial teaching for students with attention disorders and

hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 1: Mean Scores and Standard Deviations for the Responses of the Sample on the First Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Reducing/Reducing Distractions for Students with Attention and Hyperactivity
01	Making eye contact with the child repeatedly	2.45	0.76	Know
02	Seating the child near the teacher	2.82	0.56	Know
03	Gaining the child's attention by following their responses	2.80	0.60	Know
04	Seating the child away from noisy areas	2.95	0.31	Know
05	Seating the child next to their classmates	2.60	0.49	Know
Total		2.70	0.54	Know

From the table above, it is clear that the mean scores of the teachers' responses to the items of the first dimension of the questionnaire range from 2.45 to 2.95, all of which fall within the "Know" range. The overall mean for the first dimension was 2.70 with a standard deviation of 0.54, which also falls within the "Know" range. This indicates that the knowledge of primary school teachers regarding the strategy of reducing/distraction reduction in remedial teaching for students with attention disorders and hyperactivity is high. Therefore, the first partial hypothesis is not supported.

9-2- Presentation of the Results for the Second Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding the strategy to enhance motivation in remedial teaching for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 2: Mean Scores and Standard Deviations for the Responses of the Sample on the Second Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Enhancing Motivation for Students with Attention and Hyperactivity
06	Assigning short tasks and breaking them into smaller parts	2.97	0.15	Know
07	Homework should be short, simple, direct, and interesting	2.76	0.42	Know
08	Using distributed practice (many short sessions)	2.35	0.53	Know
09	Selecting tasks or assignments that motivate the child and capture their attention	2.38	0.53	Know
10	Increasing the number of new tasks that spark the child's curiosity	1.93	0.29	Know a little
Total		2.48	0.38	Know

From the table above, it is evident that the mean scores for the teachers' responses to the items in the second dimension of the questionnaire range from 1.93 to 2.97, all of which fall within the "Know" range, except for the last item (number 10), which falls within the "Know a little" range. The overall

mean for the second dimension was 2.48 with a standard deviation of 0.38. This indicates that the knowledge of primary school teachers regarding the strategy to enhance motivation in remedial teaching for students with attention disorders and hyperactivity is high. Therefore, the second partial hypothesis is not supported.

9-3- Presentation of the Results for the Third Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding the strategy to improve organization in remedial teaching for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 3: Mean Scores and Standard Deviations for the Responses of the Sample on the Third Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Improving Organization for Students with Attention Disorders and Hyperactivity
11	Providing clear rules and guidelines for acceptable behavior in the classroom	1.93	0.29	Know a little
12	Defining expectations for the student in precise terms	2.77	0.42	Know
13	Establishing specific routine locations for items in the classroom	1.52	0.50	Don't know
14	Providing complete lists of materials needed for each task	2.16	0.40	Know a little
15	Reviewing student performance on assignments daily before the end of the school day	2.22	0.47	Know a little
16	Using folders to organize work for each student	2.22	0.47	Know a little
17	Using different colors for folders representing different subjects	2.61	0.49	Know
Total		2.20	0.43	Know a little

From the table above, it is clear that the mean scores for the teachers' responses to the items in the third dimension of the questionnaire range from 1.16 to 2.77, showing varied responses. Some fall within the "Know" range, some within the "Know a little" range, and others within the "Don't know" range. The overall mean for the third dimension was 2.20, with a standard deviation of 0.43, which falls within the "Know a little" range. This indicates that the knowledge of primary school teachers regarding the strategy to improve organization in remedial teaching for students with attention disorders and hyperactivity is moderate. Therefore, the third partial hypothesis is not supported.

9-4- Presentation of the Results for the Fourth Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding the strategy to improve listening tasks in remedial teaching for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 4: Mean Scores and Standard Deviations for the Responses of the Sample on the Fourth Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Improving Listening Tasks for Students with Attention Disorders and Hyperactivity
18	Providing simple and concise instructions	2.38	0.53	Know
19	Asking the student to repeat the	2.98	0.11	Know

No.	Items	Mean	Standard Deviation	Knowledge of Improving Listening Tasks for Students with Attention Disorders and Hyperactivity
	instructions aloud to themselves			
20	Attracting the student's attention by using words such as "pay attention" or "stay with me"	2.12	0.66	Know a little
21	Using visual aids such as maps, transparencies, and drawings	2.21	0.86	Know a little
Total		2.42	0.53	Know

From the table above, it is clear that the mean scores for the teachers' responses to the items in the fourth dimension of the questionnaire range from 2.12 to 2.98, showing varied responses. Some fall within the "Know" range, and others fall within the "Know a little" range. The overall mean for the fourth dimension was 2.42, with a standard deviation of 0.53, which falls within the "Know" range. This indicates that the knowledge of primary school teachers regarding the strategy to improve listening tasks in remedial teaching for students with attention disorders and hyperactivity is high. Therefore, the fourth partial hypothesis is not supported.

9-5- Presentation of the Results for the Fifth Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding time management strategies in remedial teaching for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 5: Mean Scores and Standard Deviations for the Responses of the Sample on the Fifth Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Time Management Strategies for Students with Attention Disorders and Hyperactivity
22	Dividing lesson time into specific intervals and adhering to these divisions	2.15	0.99	Know a little
23	Preparing a list to help students organize their assignments	2.15	0.99	Know a little
24	Using behavior contracts that involve completing tasks within a specific time frame	2.17	0.99	Know a little
Total		2.15	0.99	Know a little

From the table above, it is clear that the mean scores for the teachers' responses to the items in the fifth dimension of the questionnaire range from 2.15 to 2.17, all of which fall within the "Know a little" range. The overall mean for the fifth dimension was 2.15, with a standard deviation of 0.99, also falling within the "Know a little" range. This indicates that the knowledge of primary school teachers regarding time management strategies in remedial teaching for students with attention disorders and hyperactivity is moderate. Therefore, the fifth partial hypothesis is not supported.

9.6 Presentation of the Results for the Sixth Partial Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding the strategy of providing movement and transition opportunities in remedial teaching for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 6: Mean Scores and Standard Deviations for the Responses of the Sample on the Sixth Dimension of the Questionnaire.

No.	Items	Mean	Standard Deviation	Knowledge of Providing Movement and Transition Opportunities for Students with Attention Disorders and Hyperactivity
25	Allowing students to move and transition within the classroom to complete their tasks	1.91	0.69	Know a little
26	Preparing alternatives for activities and movement, such as standing, sitting, and transitioning	2.61	0.66	Know
27	Allowing students to leave their seats to locate places on maps or shapes	2.08	0.87	Know a little
28	Allowing students to work while standing or leaning on desks	1.85	0.73	Know a little
29	Making the classroom environment centered around work and activities	1.90	0.77	Know a little
30	Using computers and allowing students to go to the computer during work time	1.60	0.49	Do not know
Total		1.99	0.70	Know a little

From the table above, it is evident that the mean scores for the teachers' responses to the items in the sixth dimension of the questionnaire range from 1.60 to 2.61, with varying responses. Some responses fall within the "Know" range, others in the "Know a little" range, and some in the "Do not know" range. The overall mean for the sixth dimension was 1.99, with a standard deviation of 0.70, which also falls within the "Know a little" range. This indicates that the knowledge of primary school teachers regarding the strategy of providing movement and transition opportunities in remedial teaching for students with attention disorders and hyperactivity is moderate. Therefore, the sixth partial hypothesis is not supported.

9-7- Presentation of the Results for the General Hypothesis:

This hypothesis states that: "The knowledge of primary school teachers regarding remedial teaching strategies for students with attention disorders and hyperactivity is weak." After statistically analyzing the data, the results shown in the following table were obtained:

Table 7: Mean Scores and Standard Deviations for the Responses of the Sample on the Dimensions of the Questionnaire.

No.	Dimensions	Mean	Standard Deviation	Knowledge
01	Reducing/distraction minimization	2.70	0.54	Know
02	Increasing motivation	2.48	0.38	Know
03	Improving organization	2.20	0.43	Know a little
04	Improving listening tasks	2.42	0.53	Know
05	Time management	2.15	0.99	Know a little
06	Movement and transition opportunities	1.99	0.70	Know a little
Total		2.33	0.54	Know a little

From the table above, it is clear that the mean scores for the teachers' responses across the dimensions of the questionnaire range from 1.99 to 2.70, with varying responses. Some dimensions fall within the "Know" range, such as the dimensions of Reducing/Distractioin Minimization, Increasing Motivation, and Improving Listening Tasks. Others fall within the "Know a little" range, such as Time Management, Movement and Transition Opportunities, and Improving Organization. The overall mean score for the questionnaire was 2.33, with a standard deviation of 0.54, which also falls within the "Know a little" range. This indicates that the knowledge of primary school teachers regarding remedial teaching strategies for students with attention disorders and hyperactivity is moderate. Therefore, the general hypothesis is not supported.

8.8 Discussion of the Results:

The results of this study showed that primary school teachers' knowledge of remedial teaching strategies for students with attention disorders and hyperactivity was moderate. This outcome was contrary to our expectations and conflicted with several studies, such as the study by Suleiman (2015), which found that teachers' knowledge of attention deficit and hyperactivity disorder (ADHD) was largely weak. Similarly, Saidi and Harbi (2017) showed that general education teachers had a low level of knowledge about ADHD. The study by Poznanski et al. (2010) concluded that there was a significant weakness in the knowledge of teachers trained during pre-service education, especially regarding classroom management strategies for students with attention deficit and hyperactivity disorder. Likewise, Melhem's (2020) study found that teachers' awareness of the disorder was moderate, ranking as follows: characteristics and diagnosis, treatment, and general knowledge of the disorder.

This result can be attributed to the fact that attention deficit and hyperactivity disorder (ADHD) is a well-known and widespread disorder in schools. Teachers find themselves confronted with the reality of dealing with and teaching students with this disorder, despite the absence of specific educational programs for these students. As a result, teachers make efforts to understand the disorder by expanding their knowledge of various teaching strategies that have proven effective for students with attention disorders. Moreover, many educational websites provide valuable electronic resources on learning methods, strategies, and psychology, which teachers can use to develop and expand their knowledge and address the classroom challenges they face. Although pre-service and in-service teacher training does not include specific programs for teaching students with ADHD, it does offer training on different teaching methods and strategies, how to implement them in the classroom, as well as content related to psychology and developmental psychology. All these materials can help teachers adapt strategies for the specific cases they handle.

In light of the results of this study, the following recommendations can be made:

- Developing training programs for teachers that include updated knowledge on various modern strategies that have proven effective with students with attention deficit and hyperactivity disorders.
- Remedial teaching should be considered as a strategy that focuses on diagnosing strengths and weaknesses, and it has proven effective for teaching various special needs groups. Therefore, those responsible for teacher training should include it in their programs and training days.
- There is a need to give attention to attention deficit and hyperactivity disorders at the primary education stage, which represents a critical phase in education, in order to prevent the worsening of the issues students face.
- Preparing individualized educational plans involving a multidisciplinary team (speech therapist, special education specialist, psychiatrist, doctor, teacher) to determine the mechanisms for intervention and therapeutic and educational support for students with attention deficit and hyperactivity disorder.

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