

# Exploring Teachers' Role in Catering for ADHD Students in Elementary Schools in Lebanon

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## Abstract

Attention-Deficient Hyperactivity Disorder (ADHD) is a challenge facing teachers all over the world. ADHD is characterized by hyperactivity, impulsivity, and inattention. This research paper explores the role of teachers in handling ADHD students in elementary classes in Lebanon by mentioning the way of treatment and the strategies used to succeed in this mission. An exploratory convergent mixed-method approach was used in which the qualitative and quantitative data were collected in parallel and analyzed. First, an interview was done with a social health supervisor who has a diploma in behavioral cognitive therapy to explain from a scientific point of view the common symptoms of ADHD, the strategies a teacher should follow, and what a teacher should be aware of. Then, a survey was filled out by teachers working at official schools, private schools, and specialized centers. The questionnaire assessed the teacher's knowledge of ADHD, attitudes towards it, and the strategies they follow to handle students with ADHD. The obtained sample was 105 teachers. Qualitative data were triangulated with quantitative data to provide a comprehensive view of the role of teachers in handling ADHD students. The results of the analyses showed that using the right intervention techniques will help the teacher handle and control ADHD students and the students' academic and behavioral performance will develop.

**Keywords:** Attention Deficient Hyperactivity Disorder (ADHD), Classroom Management Strategies (CMS), Lebanon, Student performance, Teaching strategies

## 1. Introduction

Teachers in all schools at all levels are challenged by Attention-Deficient Hyperactivity Disorder (ADHD) which is a common disorder associated with both behavioral and academic difficulties. Students engage in excessive physical movement and chatting because they are unable to focus on tasks. They interrupt discussions constantly and act without pausing to think. Most teachers lack the necessary knowledge, skills, and experience of learners with special educational needs. Others have difficulty identifying these students. Moreover, some educators are unaware of how to modify their teaching methods to meet the needs of students with this difficulty. Students who are diagnosed at an earlier age are lucky to be treated. Teachers play a vital role in children's education. With their patience, creativity, and consistency, they can understand their students' needs and lead them to success. If a teacher has a student with ADHD in class, he or she must be mindful of the needs of this student. It is his or her responsibility to figure out teaching strategies as well as behavioral strategies that are suitable and effective and implement them in class to support this student and help him or her achieve objectives. ADHD students are affected by their parents, environment, friends, and relatives, but most of all a student is influenced by his teacher who understands his needs the most. A teacher plays the most important role in helping and assisting these students (Anderson, 2012).

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This research is significant since it highlights the strategies that influence teachers' behavior in a class with ADHD students and helps them improve the academic and behavioral achievements of the students. Knowing the appropriate strategies results in improved attention and engagement in class builds a positive teacher-student relationship that creates a sense of belonging for these students, builds a more inclusive and accepting class environment, and generates a structured and organized learning environment where all students can thrive and no one feels excluded. Teachers can tailor their instructional approaches and behavior management techniques to meet these students' needs. Teachers, ADHD students, parents, and educational institutes would benefit from this study. Teachers will excel in dealing with these students and help them achieve their goals. Students will feel more belonging and more cared for so they will give their best and experience the improvement in their academic performance. This will boost their self-confidence and well-being. They will be more motivated to learn and participate. Parents will sense the progress in their children's behavior and academic attainment which will decrease their stress and anxiety about their child's progress. Finally, educational institutions will gain a positive reputation and a competitive advantage over other institutions whose teachers are not able to deal with these cases.

The objectives of this study are as follows:

- 1) To determine the role a teacher plays in supporting ADHD students and leading them to attain knowledge and improve their academic performance.
- 2) To find out the strategies and intervention approaches that help the teacher handle ADHD students' behavior and attitude.
- 3) To explore new ways to help ADHD students overcome their problems.

The research questions of the study are as follows:

- 1) What is the impact of certain teaching strategies on ADHD students' performance?
- 2) What intervention approaches support teachers in improving ADHD students' behavior and attitude?

## **2. Literature Review**

### **2.1 ADHD: Symptoms Prevalence Impact on Learning**

According to the American Psychiatric Association (2013), ADHD is characterized by hyperactivity, impulsivity, and/or inattention that are developmentally inappropriate and detrimental. According to Merikangas (2010), ADHD is one of the most spread mental health disorders in children, with prevalence rates ranging from 3 to 9% in the USA and globally.

Numerous research studies have revealed that ADHD encourages young people to have undesirable functional outcomes, such as chronic health issues, family conflict, academic failure, delinquency, conduct issues, and behavioral disorders. When compared to their peers without ADHD, adolescents and young adults with ADHD exhibited higher rates of hazardous sexual conduct, reckless driving, personal injuries, imprisonment, unemployment, drug use disorders, and relationship problems (DuPaul & Langberg, 2014). Barkley (2014) and Wahlstedt (2009) claim that children and adolescents with ADHD show a wide diversity in the degree and timing of functional impairment as well as in the emergence of concomitant psychological illnesses.

Researchers such as Wright and Masten (2015) who investigate resilience look at dynamic processes that lead to both positive and negative consequences. Building positive assets and enhancing environments that support good outcomes are two ways that research on protective factors and resilience in the context of ADHD can help to enhance the effective management of the disorder. However, because research has focused on risk factors, we currently know relatively little about what separates resilient and non-resilient trajectories among youth with ADHD. A lower priority has been paid to explaining how protective factors work to prevent or change how ADHD develops. Understanding protective factors for positive adjustment in the setting of ADHD may give a window into the processes that could be improved in prevention or beneficial efforts to promote resistive development among this high-risk population (Dvorsky & Langberg, 2016).

### **2.2 The Role of Teachers in Supporting and Managing ADHD Students**

Greene (1995) and Sherman & Baydala (2008) have contended that teachers' knowledge and views surrounding ADHD are likely to have an impact on their responsibilities and the ensuing behavioral and academic outcomes for children.

Despite the paucity of empirical research on the impact of a teacher's qualities on a student's outcomes, numerous authors explain how a teacher's knowledge and skills might improve student outcomes. For instance, it has been argued that educators who are not aware of ADHD might not recognize behaviors that point to a child's need for assistance or they may mislead medical experts about the negative effects of medication (Ohan et al.,2008).

Similarly, it proposed that teachers' perspectives on ADHD may affect their choice of a teaching strategy, their willingness to put interventions into practice, their preferred behavioral management techniques, and their students' perceptions of the ADHD-afflicted child. Given these connections between teachers' knowledge, attitudes, and roles, it is crucial to thoroughly assess teachers' understanding of and attitudes toward ADHD.

Teachers' opinions have not been adequately measured yet, and no research provides a theoretical explanation of their attitudes and knowledge of ADHD in the educational system (Anderson, 2012).

### **2.3 Teachers' Strategies for Accommodating Students with ADHD**

Teachers are the most influential people in students' lives. They play a salient role in developing their students academically, socially, and emotionally through support and reinforcement. But what if their students have special needs and require additional effort? Teaching students with ADHD is a real challenge. It is not that these students are not willing to learn, it is their brains are not incapable of grasping the same teaching methods as regular students. The best teacher uses effective strategies to show ADHD students that they are capable. With proper strategies, these children will get the education they deserve. The teacher uses different intervention techniques to teach a student a skill.

Intervention techniques fall into four categories: cognitive-behavioral interventions, antecedent manipulations, subsequent manipulations, and drugs. Antecedent task adjustments focus on the task's distinctive characteristics such as color, texture, and novelty, whereas antecedent learning environment manipulations focus on the classroom's setting and arrangement (Zentell & Dwyer, 1989).

By giving the ADHD students a daily plan and posting the classroom rules, the classroom must have a set structure. The rules of the classroom should be clearly expressed, succinctly described, and frequently revisited. The physical layout of the classroom should be carefully considered (Marten & Kelly, 1993). By putting the ADHD student near the teacher when giving important instructions, it is possible to foster and maintain his /her attention and facilitate positive behavior throughout transitions.

According to Zentell and Dwyer (1989), students pay attention better when there is more task structure, novelty, and greater utilization of stimuli. In addition, structured environments make hyperactive kids less active, supporting the idea that structure can make kids less active. It is also suggested to teach material efficiently to grab and hold the attention of ADHD students.

Another method to motivate students with ADHD to complete their assignments is to schedule a preferred activity right after a less preferred one. This approach allows ADHD students to effectively manage their energy by alternating between active and passive tasks.

According to Marten and Kelly (1993), boosting student achievement is linked to faster lesson delivery, the use of signals or cues to highlight important information, maintaining eye contact, and proximity to the teacher, and offering ample opportunities for student engagement. These techniques have been proven to be effective in fostering appropriate classroom behavior. Given that students with ADHD may benefit from periodic feedback during tasks rather than just at the end, it's advisable to keep academic assignments concise and provide timely feedback on their accuracy.

Another beneficial strategy for enhancing attention is peer tutoring, which can be especially helpful for academically struggling students with ADHD. According to Rosenfield et al. (1985) desk arrangement research was done to determine how it affected students' classroom behavior. The findings indicated that desk placement did not affect a student's ability to listen, participate in a class discussion on a shared issue or problem, or engage in disruptive behavior.

According to research by Pfeffer and Barkley (1990) forceful, concise, and consistent reprimands are most effective when given soon after the conduct starts. In the absence of a history of unfavorable outcomes, Pfeffer and O'Leary (1987) investigated the effectiveness of an all-positive management approach. Children's actions were observed and classified as either on-task or off-task. Additionally, teachers' actions were noted as

either good (physical, such as hugs), or negative (verbal reprimands or escorting a child from the room). Regular positive reinforcement alone, when the instructor only improved positives, increased the frequency and fineness of the positive impacts but not the negative ones. The findings of this study demonstrated that the improved positive approach without adverse effects was ineffective. The student's conduct was very bothersome when no harsh penalties were applied. These findings suggest that youngsters need to experience unpleasant consequences when learning new rules. The use of mostly enhanced positives is sufficient once incorrect behavior is managed by negative consequences.

Some children with ADHD may face challenges in maintaining appropriate behavior unless they have effective contingency plans in place. Several strategies fall under the umbrella of contingency management, including token reinforcement systems, response cost measures, group contingencies, emergency contracts, home-based interventions, and the use of time-outs from positive reinforcement.

Research conducted by Robinson et al. in 1981 demonstrated that token reinforcement systems led to significant increases in on-task behavior and enhanced academic performance. This was evident in higher rates of task completion and improved weekly reading assessments, ultimately contributing to improved academic performance. Response cost systems, which encompass both mild punishment and positive rewards, have been shown to effectively shape desired behaviors. They are employed in classroom settings to manage a child's behavior by reinforcing positive actions and removing privileges for negative ones.

DuPaul's research in 1992 indicated that combining a response cost system with a token reinforcement system significantly improved the accuracy, productivity, and on-task behavior of students with ADHD. Contingency contracts, group contingencies, and home-based interventions are additional valuable approaches for modifying classroom behavior. Temporary breaks from positive reinforcement should be implemented in conjunction with sustained positive behaviors. Teachers can exert effective control over the behavior of students with ADHD by employing various consequence-based techniques. They should offer frequent and specific positive reinforcement following good behavior and promptly and consistently administer penalties for undesirable behavior. Both academic performance efforts and positive social behaviors should be acknowledged by teachers.

Additionally, peer-mediated interventions, as suggested by Barkley et al. in 1980, can be beneficial for students with ADHD, utilizing peer influence through modeling and reinforcement. In certain cases, teachers may need to employ minor penalties such as warnings, loss of privileges, response cost systems, and time-outs to manage inappropriate and disruptive behavior in students with ADHD. Cognitive-behavioral therapies are another method for treating ADHD in students. Cognitive-behavioral therapies place a strong emphasis on the development of self-control and problem-solving skills. The application of cognitive-behavioral approaches for ADHD students, such as self-monitoring, self-reinforcement, and self-instruction, is supported by the findings of multiple studies. Because of this, it takes a lot of time and money to successfully conduct these treatments. Early research conducted by Eastman and Rasbury in 1981 investigated the impact of cognitive problem-solving training with a focus on task-oriented behavior. In this training, children with ADHD were taught how to manage their impulsivity when engaging in cognitive tasks. However, controlled studies using this approach did not show significant changes in the behavior of students with ADHD.

Drawing from this concept, several researchers have explored alternative techniques, such as interpersonal or social problem-solving training, which have shown promise in modifying behavior. This model emphasizes teaching students how to identify and define interpersonal problems when they arise, generate multiple potential solutions, assess the consequences of these solutions, plan for the implementation of the chosen solution, and then put that solution into practice to ensure its effectiveness.

Additionally, researchers have proposed that self-monitoring and self-reinforcement techniques can be effective in helping ADHD children exhibit more appropriate behavior while engaged in tasks. It's important to note, however, that the improvements in on-task behavior observed in these techniques may not always translate to real-world settings. For students with impulsive ADHD tendencies, self-evaluation and teacher-matching strategies can be beneficial in modifying their behavior. In this approach, children rate their own behavior on a predefined scale, and teachers also provide ratings. Points are awarded to the child based on the comparison of these ratings. Over time, the need for teacher support gradually decreases until it is no longer necessary. Self-monitoring strategies can also be implemented in the classroom to encourage desired responses or discourage disruptive behavior, with students documenting instances of the desired behavior on

paper. Self-reinforcement can also be utilized in addition to self-monitoring (Hinshaw, Henker, & Whalen, 1984). When a youngster exhibits the appropriate behavior within a certain time limit, they are instructed to reward themselves by giving themselves praise or a token. Finally, setting goals and tracking progress toward them is a highly effective method for motivating and entertaining kids with ADHD. Together, the teacher and the student set the goals, which are then updated as needed after tracking the student's progress daily on a chart. Although ADHD cannot be cured, an individual with ADHD can learn to manage the condition with the help of education and treatment.

Medication is a treatment that targets ADHD's ostensible organic foundation. Ritalin, Dexedrine, or Cylert are common drugs taken by kids with ADHD (Carlson & Dixon, 1992). For many kids, medication improves impulsivity, hyperactivity, and inattentiveness in the short term. However, this therapy has not been associated with any long-term benefits, such as improved academic performance, social adjustments, or higher-order mental processes. The US Department of Education cautions that utilizing instructional tactics to improve learning and performance does not replace taking medication. Whether or not they use medicines, children with ADHD benefit most from proper education, changes, and interventions. Most ADHD kids become more focused, less impulsive and disruptive, and less overactive when they need to manage their behavior after taking medication. Additionally, when given stimulants, ADHD children's academic performance improved and their interactions with parents and instructors improved. These children can remain in regular courses and do not require special education placement due to the huge improvements brought on by medication.

The combination of behavior treatment and stimulants has some evidence to support it. According to Gittelman and Abikoff (1980), this combination appears to be more effective than either treatment by itself at controlling the ADHD child's classroom conduct. Due to the lack of maintenance effects following the end of therapy, this treatment's overall therapeutic usefulness is constrained. Additionally, it ignores all the cognitive, social, and emotional issues that come with ADHD. The value of cognitive-behavioral therapies in combination with medicine was also investigated (Hinshaw & Erhardt, 1991). The outcomes were again unsatisfactory. Cognitive functioning, academic achievement, or conduct have not improved because of combining medication with cognitive-behavioral treatment (Owen, 2001).

#### **2.4 Teachers' Training and Skills Needed**

According to the American Psychiatric Association (2013), ADHD is a chronic neurodevelopmental condition that affects roughly 5% of school-aged children. Students with ADHD are more likely to experience severe school-related problems, such as increased rates of grade retention, poor academic performance, placement in special education programs, suspension, and school dismissal. On the other hand, effective classroom management strategies (CMS) like moving a student's seat, daily report cards, praise, and ignoring disruptive behavior have been shown to effectively enhance children with ADHD's classroom behavior and, to a reduced extent, their academic achievement (Van der Oord et al., 2008). Thus, one of the best long-term strategies to assist ADHD teenagers in managing their academic difficulties and consequently improving their quality of life is to implement evidence-based therapy in schools. An approach that maps the elements influencing teachers' plans to utilize effective CMS was recently proposed by Strelow et al. (2021). The study found that the intention of in-service teachers to apply effective CMS was related to awareness of ADHD.

The teaching process is challenging and stressful when dealing with students with ADHD since they frequently engage in excessively disruptive activities in the classroom. Educators who are more knowledgeable about ADHD are more willing to adopt CMS because they hold more optimistic ideas about its efficacy. However, knowledge was both directly and indirectly correlated with the desire to use CMS, it is well-recognized that specialized training programs are effective in raising in-service teachers' awareness of ADHD. Another element that affects the use of effective CMS is the type of school, with primary and special education needs (SEN) school teachers using it more frequently than secondary school teachers. First of all, the former is typically better informed on ADHD. Additionally, they reportedly received additional training on working with pupils who have special needs (Strelow et al., 2021).

Class size is another element that might be influencing how frequently different school types employ CMS. When it comes to using an effective CMS, teachers realize that larger courses present unique challenges. The ability of teachers to accommodate students with ADHD has been positively correlated with higher rates

of self-study on the subject of ADHD, higher rates of ADHD knowledge, and more self-study on the topic (Gaastra et al., 2020).

The majority of psychological studies on ADHD in the classroom setting to date have neglected to take teachers' perspectives into account. Including the teachers' viewpoint can reveal new details regarding the reasons why teachers could believe that an effective CMS is unsustainable in their classroom (Szep, 2021).

### **2.5 Teacher's Perspective on ADHD**

Teachers' awareness of ADHD is an important aspect. Knowledge can be characterized as an individual's level of accurate information. Instructors with intermediate and high levels of awareness of ADHD favored home and educational support. These instructors also saw more benefits from adjustments in the classroom than those with limited knowledge (Ruhmland & Christiansen, 2017).

Sadly, evidence from numerous studies has indicated that instructors' knowledge of ADHD is typically incomplete and based on inaccurate details, which, in turn, contributes to negative impressions of students with ADHD and prevents the implementation of appropriate interventions. Some educators attend knowledge-based training sessions, but it doesn't appear that this has led to a rise in the use of successful classroom interventions (Ajzen et al., 2011). The kind of knowledge that is delivered may be a contributing factor in this situation. According to Ajzen, general knowledge does not predict a particular behavior. Consequently, information about the behavior of interest must be shared. Although it is likely the most useful knowledge-related classroom intervention, proper information about ADHD treatment has frequently been insufficient (Dort, 2022).

### **2.6 The Impact of Teacher-Student Relationship on ADHD**

Studies have shown that the student-teacher relationship is crucial for all kids, but more so for kids who have elevated levels of inattentiveness and hyperactivity. Evidence from multiple research projects suggests that positive student-teacher connections increase behavioral, emotional, and cognitive engagement in school (Quin, 2017).

According to Roger et al. (2015) in their research, children with ADHD are more likely than usual classmates to have weaker teacher-student relationships and show less collaboration between teachers and students. To construct student-teacher interactions, it is frequently necessary to focus on two aspects conflict and closeness. Conflict perfectly expresses negativity in this connection and the lack of chemistry between the educator and the student. The warmth and good vibes between the teacher and pupil are captured through closeness.

Higher levels of impulsivity and lack of attention have been linked to both increased conflict and decreased closeness in student-teacher relationships. It is crucial to directly assist both the student and instructor in learning how to relate in a more helpful and less conflictual style (Portilla et al., 2014). Children with ADHD find the school atmosphere to be quite difficult. Intervention to increase positive emotional engagement with school in the primary years is a solution. Helping children with ADHD have more good classroom experiences and the opportunity to form supportive, non-conflicting connections with instructors will probably help them feel better about their education and the school they attend. By stepping in to increase emotional engagement with school in the early years, this technique may help persons with ADHD achieve better educational and occupational outcomes throughout their lives (Rushton, 2020).

Numerous research studies have explored the significance of positive interactions between educators and students, with contributions from scholars like Camp, Graziano, Hattie, Murray, and many others. Establishing a healthy student-teacher relationship is widely recognized as a fundamental prerequisite for fostering effective learning (Graziano et al., 2007; Hattie, 2009; Murray, 2002). However, research findings indicate that a significant number of teachers lack awareness about ADHD and how it can impact their students' social and academic success.

To effectively address the unique behaviors and requirements of each student within the classroom environment and in their interpersonal interactions, as well as to make informed attributions about ADHD symptoms, teachers need to possess a foundational understanding of ADHD (Gwernan-Jones et al., 2016). This understanding of individual student needs is vital for educators to appropriately manage them within educational settings. Among the various student behaviors, hyperactivity and inattention are often cited as

the most challenging by teachers. Consequently, teachers tend to engage in more conflicts with these students and may find them less appealing compared to those who do not exhibit such behaviors. The discomfort associated with such behavior often leads to the implementation of disciplinary measures.

Murray & Greenberg (2006) further emphasize that for those students, peer rejection is more likely because of teacher rejection. When kids are expected to sit still, be quiet, and concentrate, ADHD symptoms are frequently brought on in these environments. Students' symptoms may worsen as a result of their attempts to do so, which may harm their self-perception, self-esteem, and relationships with classmates and teachers. Additionally, hyperactivity and inattentiveness are more evident in less structured environments like lunch and recess. Given that they usually include a lot of physical activity, which feeds the students' hyperactivity and inattentiveness, these settings make it difficult for ADHD students to retain self-control. Prolonged verbal instructions, negative behavioral punishments, and punitive measures are all inefficient ways to control behavior. Thus, these antagonistic interactions with the students often backfire against their intended effect while also catalyzing intense feelings in interpersonal connections, especially for people with ADHD. Instead, students tend to live up to higher expectations when professors connect with such students sympathetically and responsively, which helps to assist their achievement.

Røkenes & Krumsvik (2014) offer teachers who are interested in and active in the lives of their students access to emotional support, as well as norms and expectations for academic accomplishment and appropriate behavior. To create accessible learning, teachers must understand how their interactions with their students impact their behavior and academic performance. Students do better when they have relationships built on mutual trust, understanding, and respect (Ewe, 2019).

## **2.7 Challenges Faced by Teachers**

Due to their disruptive behavior in class, teachers face a variety of difficulties with ADHD students, including taking away their stationery, making noise, participating in peer discussions or debates while the teacher was giving instructions, speaking out of turn, making irrelevant comments, trembling, wandering the classroom, acting aggressively, talking back to the teacher, breaking classroom rules, complaining when given feedback, and crying.

In addition to the academic challenges such as difficulty in resolving a dispute, slow writing rate, not up to class standards, gaps in understanding of fundamental ideas, problems with writing, spelling, and math, and current proficiency levels that are below those of the average student in the class (David, 2013).

## **3. Methodology**

### **3.1 Research Approach**

This research paper is exploratory descriptive since it explores and describes the role of teachers in handling ADHD students in elementary classes from a specialized people's point of view and how to deal with them. In addition to knowing the problems the teachers are facing with ADHD students and how they can change their lives and help them in attaining education. It is exploratory since it indicates the elements and causes of this problem and how it is affecting students and teachers. It is also descriptive since it describes the ADHD students, the role of teachers, and their role.

In this study, the mixed methods approach was used as a triangulation to increase credibility and trustworthiness and to help explore and explain human behavior to offer a more balanced explanation to readers (Noble & Heale, 2019). To confirm and verify qualitative results from interviews with quantitative findings from questionnaire surveys when the questions asked during the interviews were different from those on the questionnaire, the objective was to supplement the questionnaire results in those cases. As part of a mixed-methods strategy, the study was divided into two primary sections.

First, the qualitative data was collected through an interview with a social health supervisor who has a diploma in behavioral cognitive therapy. The interview was done to gain a deeper understanding of the ways of treatment, strategies used with these students, and what teachers should be aware of. Thematic analysis was used to identify the patterns and themes that emerged from the data.

Second, the quantitative data was collected through questionnaires filled out by teachers working at official schools, private schools, and specialized centers to discover their perspectives on ADHD, the strategies they use in instructing these students, and the challenges they face. The questionnaire survey was adopted

from the Vanderbilt Assessment Scale (NICHQ) (2014) which is used by healthcare professionals to help diagnose ADHD children. The survey was divided into 5 parts. Demographics, teachers' points of view and perspectives on ADHD, academic hyperactivity assessment, behavioral hyperactivity assessment, and strategies used by teachers with students suffering from ADHD. SPSS was used for descriptive statistics, custom tables, and Pearson's correlation.

By using both qualitative and quantitative methods, the study triangulates findings from multiple sources of data, thereby enhancing the validity and reliability of the study's results (Crosswell, 2016).

Furthermore, the mixed methods approach provides a more delicate understanding and rich explanation of the symptoms, treatment, and strategies while the quantitative data provides statistical evidence to support the relationship between strategies used and students' achievements.

### **3.2 Population and Sample Selection**

The emphasis of this study is on the teachers teaching elementary classes in Lebanon. A voluntary sample design was chosen for the sample. It is selected from volunteered and qualified potential respondents in the target population. Teachers decide whether to participate or not in the survey. In this type of sampling, they choose to respond because they have a strong opinion about the subject of the survey or due to their convenience to participate. It is considered a type of non-probability sampling technique because participants are self-chosen and not selected by the researcher (Murairwa, 2015). These teachers provide the groundwork for this study.

Several strategies are used to collect the data to understand and explain the importance of applying these strategies and their result. A survey was sent as a part of the research technique used to collect data. It was distributed via WhatsApp as a Google form to capture a diversity of experiences and perspectives present in different educational institutions in Lebanon.

Due to the important value of in-depth investigation, the research goes beyond survey results by interviewing a specialist in ADHD cases who has a high educational level in this field in addition to a long experience in working with these students. This choice was made to enrich the study with the viewpoints of a specialist who depends on science and experience to give trusted information.

The study seeks to highlight the different strategies used to allow ADHD to attain knowledge as any other normal student although the treatments and strategies used to cure symptoms do not cure ADHD. The research seeks to offer useful information to teachers to face all the challenges with ADHD students and excel in their mission to change the lives of these students and help them succeed.

105 teachers who teach elementary classes working at public and private schools and specialized centers participated in completing the survey.

### **3.3 Ethical Considerations**

When conducting research, ethical considerations that come to mind are those that deal with respect for people, goodness, privacy, confidentiality, and consequently, by association, anonymity. Research participants were given informed consent before involving them in the study (Le Roux, 2015). These ethical guidelines are supposed to make sure that research is planned, evaluated, and conducted following the highest levels of reliability, honesty, ethical propriety and regulation, and legal compliance (Dube et al., 2014).

The research's objectives and other details, such as the anonymity of the answers provided by the participants, were explained to the respondents in a cover letter that was included with the questionnaire. The names of the study participants or the titles of the institutions where they are employed were not requested. Additionally, they did not have to reveal the ADHD student's name or the identities of his parents. Regarding the interview's ethical protocol, the interviewee was not required to reveal her name or any other details establishing her identity or the identification of any cases she dealt with.

## **4. Results**

### **4.1 Qualitative Results**

The qualitative results from the interview with a specialized social health supervisor, who possesses a diploma in cognitive behavior therapy and significant experience working with ADHD students, provided valuable insights. The interviewee emphasized that while handling ADHD students is challenging, it is not

insurmountable. She highlighted that teachers, armed with an understanding of symptoms and appropriate strategies, can significantly enhance the academic and behavioral outcomes of these students.

The interviewee outlined common symptoms observed in ADHD students, including inattentiveness, difficulty concentrating, lack of visual communication, constant movement, inability to stay seated, unfinished tasks, and anxiety. The causes of ADHD were identified as genetic factors, brain anatomy, function, and prematurity. Treatment options encompass medication, behavioral and cognitive behavioral therapy, social skills training, counseling, and educational support. However, medication only alleviates symptoms and doesn't cure the condition, necessitating supervision by specialists like behavioral cognitive therapists and doctors.

Assessment tools like Ford's scale, Conner scale (school-specialized), and ACTRC scale for teachers were recommended by the interviewee. Clinical neurological examinations and psychological tests were also deemed essential.

Regarding strategies, teachers were advised to implement positive reinforcement, utilize visual aids, simplify tasks and instructions, grant extra time for tests, and allow movement breaks and physical activities. Teachers should maintain a conducive classroom environment by eliminating potential hazards and being mindful of their tone and behavior. Patience and creativity were highlighted as crucial for managing ADHD students effectively.

The interviewee underscored the severe consequences of untreated ADHD, including academic struggles, social difficulties, low self-esteem, depression, and vulnerability to exploitation. In conclusion, the qualitative findings emphasized the significance of employing appropriate strategies to support and manage ADHD students effectively.

## **4.2 Quantitative results**

### **4.2.1 Sample Profile**

The survey included three demographic variables, which are gender, type of school, and the subjects taught. 86.7% of the respondents were females and 13.3% were males. The respondents work at different schools in Lebanon 50.5% at official schools, 43.8% at private schools, and 5.7% at specialized centers. This shows that the sample was varied. They teach different subjects 31.4% English, 24.8% Arabic, 18.1% Math, 13.3% socials, 9.5% Science, and 1.9% sports. These results show the diversity of the sample. All subjects taught at schools are included in the sample.

### **4.2.2 Teachers' Points of View and Perspectives About ADHD**

Out of the 105 teachers, 87 teachers (82.9%) taught or dealt with an ADHD student before while 18 teachers (17.1%) did not. This result shows that these 18 teachers filled out the survey depending on their knowledge, perspective, or background and not on experience and observation.

When asked about the most prominent symptoms of hyperactivity the answers varied between lack of focus and concentration (38.1%), inability to stay seated (23.8%), excessive movement (25.7%), and dispersion and chaos (7.6%), while 4.8% did not answer the question. The results show that the teachers know the most known symptoms of ADHD and can recognize them. However, the five teachers who did not answer did not recognize these symptoms due to a lack of experience with these students.

In addition, most of the teachers who filled out the survey confirmed that practicing sports decreases hyperactivity and helps reduce the symptoms of ADHD.

Furthermore, when asked about their opinion about the treatment of ADHD 47.6% answered behavioral therapy, 38.1% psychotherapy, and 14.3% family therapy. This result coincides with the specialist's point of view that ADHD needs behavioral therapy since it is a genetic problem.

### **4.2.3 Academic Assessment**

In this part, teachers were asked about the academic assessment of ADHD students. The results indicated that the percentages differed between reading, mathematics, and written expression. 41.9% said that they were good at math, 18.1% said that they were good at reading, and only 6.7% said that they were good at written expression. 46.7% said that they are acceptable in reading, 45.7% said they are acceptable in written expression, 27.6% said they are acceptable in mathematics, and 47.6% said that they get confused in written expressions.

#### 4.2.4 Behavioral Assessment

The teachers were asked to assess the behavior of ADHD students. The results showed that ADHD students are annoying to their teachers and friends and they rarely follow instructions or finish their work. Besides they are not organized. 66.7% always annoy their friends and teachers, 31.4% sometimes, and only 1.9% never. Moreover, 51.4% sometimes follow instructions, 45.7% never do, and 2.9% always do. When asked about finishing their work 60% answered sometimes, 31.4% never, and 8.6% always do. And if they were organized 64.8% said never, 32.4% sometimes, and 2.8% always are. These results show that these students need help to improve their behavior which assures the need for teachers to know the strategies used to control the behavior of ADHD students. As mentioned in the literature review the student-teacher relationship and student-peers connections increase behavioral, cognitive, and emotional engagement in school. And helps ADHD students face the challenges at school since for him school is a very difficult environment to stay at.

#### 4.2.5 Correlation between Academic Assessment and Behavior

To determine how the behavior is linked to the academic assessment, the Pearson correlation was used. As indicated in the Table 1, ( $r=0.202$ ,  $p=0.039$ ), there is a positive, strong, and significant association between academic assessment and the behavior following instructions. It means that the more the students behave well and follow instructions the more they get better academic results.

**Table 1** Correlation between academic assessment and the behavior

	Correlations	Academic assessment	Follows instructions
Academic Assessment	Pearson Correlation	1	.202*
	Sig. (2-tailed)		.039
Follows Instructions	Pearson Correlation	.202*	1
	Sig. (2-tailed)	.039	

\*. Correlation is significant at the 0.05 level (2-tailed)

b. Listwise N=105

#### 4.2.6 Strategies Used

The final part of the survey is about the strategies used in class to help ADHD students achieve their academic goals. The results show that (25.3%) of the teachers found that the most used and effective strategy is replacing fixed activities with motor activities, (18.1%) chose diversification in explaining, (13.3%) breaking tasks into small parts, (12.0%) preferred repeating, rephrasing, and (12%) selected clarifying instructions, (9.6%) chose giving rewards, (8.4%) went to encouragement, (6%) selected giving the fairest time and length of the assignment, (4.8%) preferred setting goals to be achieved, and only (1.2%) went for ignoring unwanted behavior and diversification in the physical environment in the class.

It means that replacing fixed activities with motor activities is the most used and effective, and ignoring unwanted behavior and diversification in the physical environment are the least, according to the teachers' point of view.

### 5. Discussion

Effective teaching strategies are crucial for fostering engagement and learning in classrooms, with teachers tailoring approaches to each student's abilities and needs. In the context of ADHD students, both the insights from an interview with a specialist and responses from surveyed teachers highlight essential strategies for improving their academic performance and behavior.

The interviewee emphasized strategies such as positive reinforcement, praise, visual aids, simplified tasks, extended test times, movement breaks, and sports activities. Similarly, teachers shared strategies like varying the classroom environment, flexible seating, diverse presentation methods, rest periods, cues and prompts, motor activities, task segmentation, and clear instructions. These strategies align with previous research findings. Marten and Kelly (1993) emphasized daily planning and clear objectives, while Zentell and Dwyer (1989) advocated for structured tasks with sensory stimuli. Robinson (1981) supported token systems, reinforcement, and encouragement for academic improvement.

The interview highlighted that ADHD, though not a psychological issue, requires medical and cognitive behavioral treatment. Teachers need professional development to differentiate ADHD students and apply

appropriate strategies effectively. Additionally, surveyed teachers shared strategies like peer modeling, behavior modification plans, communication with parents, and reward systems.

Earlier research validates these strategies, demonstrating that a combination of proper treatment and effective teaching strategies significantly improves ADHD students' behavior and attitudes. Self-monitoring strategies were found effective in reducing unwanted behaviors (Hinshaw and Henker, 1984), while medication combined with suitable strategies led to better performance (Carlson and Dixon, 1992). However, the US Department of Education underscores that instructional methods complement, but do not replace medication.

In conclusion, the integration of suitable treatment and effective teaching strategies is essential for enhancing the outcomes of ADHD students. Awareness within society, including teachers and parents, about the consequences of untreated ADHD and the positive impact of proper management is crucial.

## **6. Conclusion and Recommendations**

### **6.1 Conclusion**

This study aims to determine the role a teacher plays in supporting ADHD students and leading them to attain knowledge and improve their academic performance. In addition to finding out the strategies and intervention approaches that help the teacher handle ADHD students' behavior and attitude. And finally, exploring new ways to help ADHD students overcome their problems. Besides answering the question of the impact of certain teaching strategies on ADHD students' performance and intervention approaches to support teachers in improving ADHD students' behavior and attitude. Following a thorough study of the data gathered from surveys and the interviews made found the answers to these questions and achieved the goals of this study in mentioning the strategies a teacher should use to handle students with ADHD in her class.

### **6.2 Limitations of the Study**

The study has several restrictions that should be taken into account when evaluating the findings:

- 1- Limited generalizability due to the limited sample size (105) teachers. Drawing results that may be considered typical to all the teachers is difficult since there are few.
- 2- Limited cultural and geographic relevance: The study was made in Lebanon in elementary schools only. The sample is homogeneous since it is of teachers teaching in Lebanese schools so what is applicable in Lebanese schools may not be applied in schools abroad. Other countries or higher grade levels may not find the results applicable or relevant.
- 3- The surveys were filled according to the teachers' background, perspectives, knowledge, and experience which may lack scientific reasoning and results may change if the sample was changed.
- 4- Some school administrations deny the truth that they are not providing sufficient professional training to their teachers to deal with ADHD students.

It is so important to take into consideration these limitations, to avoid overgeneralization. Future research should work on larger samples, different school cycles, and different countries.

### **6.3 Recommendations**

For future research, there are several recommendations

- 1- Comparison between different grade cycles if these strategies could be applied and their effectiveness
- 2- Classroom observations: Classroom observations would enable researchers to understand the classroom environment and the ways students behave in the class better.
- 3- Behavioral cognitive therapist: Each school should employ a behavioral cognitive therapist who is ready to diagnose and treat ADHD students.
- 4- Professional development of teachers in the field of dealing with ADHD students and the strategies followed and applied in class.
- 5- Further research in other countries to test if what is applicable in Lebanon would be applied in other countries.

If researchers follow these recommendations and put more effort into discovering more effective strategies that will help teachers as well as ADHD students. This will help educators achieve their goals in life and succeed in the mission they were founded for which is educating kids and building successful society members ready to face all life challenges.

Finally, the research study can be significant for teachers, students, parents, and schools. The study highlighted the intervention techniques the teacher should use to satisfy the needs of these students. Besides, it emphasizes that the teachers should have a clear understanding of ADHD symptoms and follow special training programs that empower them and help them face this challenge. As for students, it reveals that they can improve and develop to achieve their goals and learn as any other student if they cooperate with their teachers and follow instructions. Parents will feel comfortable that their children will be able to gain knowledge and improve as any other students. Schools will take into consideration the needs of these students, enroll their teachers in special training programs, and set policies specialized for these students which will give them a better reputation and more competitive advantage.

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