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Investigating Teachers' Attitudes towards EFL Learners with Attention-Deficit/Hyperactivity Disorder (ADHD): "Bakr Ibn HAMAD" and "Mihoubi Abdelkader" Middle School Learners in Tiaret as a Case Study

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Dedications

To my beloved parents.

To the source of purity my grandmother.

To my dear brothers: Adda, Benaissa and Mohamed.

I also dedicate this work to both the Bakhti and M'hamedi families.

To Adene, Nadjah, Hiba, Nebia, Ramzia, and Nawel.

Last but not least, my one and only best friend and sister Amel, also my partner in this work.

Nadjlaa...

To my beloved parents. To my siblings, Abderrahmane and Akila. To my friends. To Nadjlaa, my partner in this work.

.Amel...

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Abstract

In an effort to foster inclusive educational practices and support for learners with Attention Deficit Hyperactivity Disorder (ADHD), this research study examines the attitudes of English as a Foreign Language (EFL) teachers toward learners with ADHD in Algerian middle school classrooms. It explores the manifestations of ADHD in a classroom setting, the responses of teachers toward ADHD-diagnosed learners, and the impact of teachers' interventions on these learners. The study aims to enhance teachers' comprehension of ADHD and debunk common misconceptions associated with the disorder. Its design involves interviews with a psychologist, questionnaires for teachers and learners, and classroom observations. The study's findings reveal a limited knowledge and understanding of ADHD among teachers, leading to negative attitudes and unsupportive environments for learners with ADHD. Increased engagement of learners and interest in learning was associated with positive teacher attitudes. In addition, it emphasizes the need for teacher training programs on ADHD in Algeria to overcome knowledge gaps and provide teachers with effective learning strategies that will assist pupils with ADHD. It also points out that the importance of collaboration between teachers, parents, and school staff is paramount for providing appropriate support to students with ADHD. These findings have an impact on the promotion of inclusive practices in Algerian educational settings and empathy for ADHD learners.

Keywords: ADHD; EFL; Teachers' Attitudes; Attention-Deficit; Hyperactivity; Aggression

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List of Acronyms and Abbreviations

ADHD: Attention Deficit Hyperactivity Disorder
DSM: Diagnostic and Statistical Manual of Mental Disorders
APA: American Psychiatric Association
CHADD: Children and Adults with Attention Deficit Hyperactivity Disorder
APSARD: the American Professional Society of ADHD and Related Disorders
IEP: Individualized Education Program

General Introduction

This study aims to investigate the prevalence of ADHD in Algerian public middle schools and explore teachers' knowledge and attitudes towards learners with ADHD. ADHD is a neurodevelopmental disorder that affects learning behavior and can result in challenges in maintaining attention, task breakdown, and managing a recalcitrant mind. These challenges can lead to negative feedback from teachers and parents, resulting in self-doubt and a lack of motivation. Despite its prevalence, ADHD is often misunderstood and misdiagnosed, with prevailing myths attributing lower intelligence to individuals affected by ADHD or the need for greater discipline.

The study seeks to disprove these myths and enhance teachers' comprehension of this disorder. The aim is to create a more inclusive learning environment and equip ADHD-diagnosed learners with the appropriate tools to learn. The study will also explore the unintended mistreatment stemming from teachers' lack of training and knowledge and propose strategies for managing learners with ADHD in the classroom effectively.

Research in other countries has shown that appropriate training for teachers can lead to improved outcomes for learners with ADHD. However, the current level of recognition and understanding of ADHD in Algerian classrooms is unclear. Therefore, this study will contribute to the existing literature on ADHD and inform policy and practice in Algerian public middle schools.

In pursuit of a comprehensive understanding of teachers' attitudes towards learners with ADHD, this research was guided by the following pivotal research questions

- 1. What are the ADHD manifestations in a classroom setting?
- 2. What are teachers' responses to ADHD-diagnosed learners?
- 3. How can teachers' responsive intervention impact ADHD-diagnosed learners?
- 4. To what extent can teachers' supportive response serve ADHD-diagnosed learners

Based on the research questions mentioned above, the following hypotheses were formulated to guide the investigation

- 1. ADHD can be manifested in inattentive behaviors, excessive motor activity, and aggressive tendencies, which can affect the learner's learning behavior.
- 2. Teachers' responses could either be supportive, tolerating, or dismissive, or they could even respond with punishment toward the learners.

- 3. Teachers' responsive interventions could either help them learn how to cope with their uncontrollable behavior, how to manage it and reach their full potential, or it could break them down and make them fall into the "I am a failure" cycle, which would affect their future.
- 4. Teachers' supportive response highly serves ADHD-diagnosed learners, either by helping them realize that ADHD is not something that would stop their success, or by implicitly teaching them how to manage their behaviors by doing it with them.

With no ADHD training provided to teachers in Algeria, it is logical that it would be challenging for them to handle an ADHDer while also managing an entire classroom, for which they are not held accountable. It is well known that teachers' attitudes towards students with ADHD are one of the most important factors in their academic success. Introducing them to what ADHD is will help them better recognize symptoms of ADHD in their learners and provide appropriate interventions. It will also inform them how to better support and understand the challenges those students face, as well as how their condition affects their learning, which will help teachers develop strategies and gain insight on how to create an environment that is conducive to learning for said learners, they can even learn how to modify their teaching style to meet the needs of students with ADHD better.

To achieve the aims of this research as effectively as possible, three research tools are used including interviews, questionnaires, and classroom observation. A psychologist was interviewed to see this disorder from a professional mental health point of view and to get an overview of ADHD knowledge in Algeria, the process of the diagnosis, and the treatment needed. The middle school teachers will also be interviewed, to know about the school environment, the middle school learners, and their parents.

Teachers will be given questionnaires to consult their understanding of ADHD, their opinions about the disorder, their experiences with ADHD pupils, and how they usually deal with them in class. They will be handed rating scales to help with the diagnosis of the cases. Learners will also be given questionnaires to understand their perspective and see how their short attention span and executive dysfunction affect their EFL learning.

To confirm the results of the questionnaires and enhance the validity of the findings, this study will complement the data analysis with classroom observations. These observations will be carried out to compare the attitudes in the class and the responses provided in the questionnaires, providing a comprehensive perspective.

This investigation is divided into three chapters. The first chapter goes in depth about ADHD, its etiology¹ and symptoms, and then attempts to clear all misconceptions and myths about it. Afterward, it explains its three presentations (inattentive presentation, hyperactive/ impulsive presentation, and the combined presentation). Thereafter, it clarifies why ADHD is not regarded as a learning disability and why ADHDers are not considered special needs learners. It then discusses the link between ADHD and executive functions, which subsequently clarifies how it impacts learning and the academic journey of ADHD learners.

The second chapter explains the different types of teachers' attitudes and their impact on the classroom as a whole and on learners with ADHD in particular as well as provides an overview of ADHD in Algerian classrooms. How it is perceived and treated. After that, it talks about the difficulties teachers are facing with this disorder in their classrooms and the challenges they face when working and assessing them. Finally, it tackles the importance of training teachers about ADHD to help their learners meet their needs despite their cases.

The last chapter is the practical one as it interprets, analyzes, and discusses the collected data from our tools the observation, interview, questionnaire, and rating scale, to relate the findings to our hypothesis and come up with recommendations and suggestions that would help both teachers and ADHD learners set in class better and learn how to cope and adapt

¹ The cause, set of etiology, or manner of causation of a disease or condition.

CHAPTER ONE:

ADHD'S Presence in the Classroom

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Chapter One:

ADHD's Presence in the Classroom

1 Introduction

This chapter focuses on the presence of ADHD in the classroom setting, it begins with introducing ADHD, which is a very common disorder that affects many learners around the world, then, a detailed explanation of the reasons behind ADHD is carried out with attention to neurological, genetic and social factors, it then explores the symptoms of ADHD with a focus on the inattentive and the hyperactive symptoms, as well as it explains the 'ADHD iceberg' and the relationship between ADHD and executive functions that results in learning deficits.

The chapter then delves into the presentations of ADHD including the inattentive, hyperactive/impulsive, and combined presentations. Further on, this chapter explores the relationship between ADHD and learning disabilities "LD" explaining the similarities and differences to make it clear that ADHD is not an LD.

Finally, the chapter focuses specifically on ADHD in classrooms. The difficulties experienced by learners with ADHD are analyzed including the challenges posed by a lack of ADHD knowledge among educators. Overall, this chapter presents a broad introduction to how ADHD manifests in the classroom and it highlights the importance of addressing said disorder in Algerian educational settings.

2 Attention Deficit Hyperactivity Disorder

Minimal brain dysfunction, hyperkinetic reaction of childhood, and attention-deficit disorder with or without hyperactivity were all previous names for attention-deficit hyperactivity disorder in earlier versions of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). It was not until the latest and fifth version of the DSM that the disorder was officially renamed as "attention deficit hyperactivity disorder," reflecting its most prominent symptoms. According to the DSM-5, ADHD is

classified among neurodevelopmental disorders, which the American Psychiatric Association defines as a group of disorders characterized by developmental deficits that impact personal, social, intellectual, or occupational functioning, often emerging during the developmental phase prior to a child entering grade school (DSM-5, 2013, p. 31).

Among that collection, ADHD is defined as a pattern of inattention and/or hyperactivity-impulsivity that persists and interferes with functioning or development. Inattention in ADHD presents behaviors such as straying off tasks, a lack of commitment and consistency, trouble maintaining focus, and being disorganized, which are not related to disobedience or a lack of understanding. Hyperactivity refers to excessive motor activity when it is not suitable, as well as excessive fidgeting, tapping, or talkativeness. Furthermore, ADHD is associated with reduced academic performance, as individuals with ADHD often display cognitive deficits on tests of attention, executive function, or memory (DSM-5, 2013, pp. 59-64). On that note, Barkley (2018) explains further that ADHD is a developmental disability, which means that certain characteristics do not develop and grow in this child on time. It also means that they exhibit age-inappropriate behavior, which is not pathological but simply not appropriate for their age. Thus, a child with ADHD differs from his peers quantitatively rather than qualitatively.

Barkley believes that ADHD is a failure to develop proper inhibition of their behavior, which often manifests itself in the preschool years as a child behaving excessively and not suppressing irrelevant behavior as other children do, which affects their behavior, words, mind, and thoughts. Furthermore, there is cognitive impulsiveness, the impulsivity to do the first thing that comes to mind without proper pause and necessary attention in considering the ramifications and consequences. He goes on to explain that much of the disorder is also based on deficits in coordinating the executive functions, which most individuals use to handle their emotions and behaviors, as well as their 'internal language.' These abilities allow us to convert external events into mental internal affairs, a transition from other control to self-control, distinguish between the immediate now and the anticipated future, and transition from instant to delayed fulfillment, so children with ADHD will have issues in this area (2018).

Wender and Tomb point out that ADHD is the most prevalent chronic mental condition in children, affecting boys two to three times more frequently than girls. They suggest that ADHD is a brain disorder that is likely inherited, although the precise mode of transmission remains unknown. The authors also note that ADHD commonly co-occurs with various other conditions, including oppositional defiant disorder (ODD), conduct disorder (CD), and learning difficulties. Furthermore, they emphasize that the characteristics of ADHD are not inherently abnormal; they are only considered disordered when they are excessive (2016, pp. 3-10).

According to the Children and Adults with Attention-Deficit/Hyperactivity Disorder Association (CHADD), everyone experiences occasional difficulties with being quiet, paying attention, or controlling impulsive behavior. However, individuals with ADHD face persistent challenges that impact all aspects of their lives, including personal, professional, academic, and social domains. ADHD is estimated to affect eleven percent of children and is categorized as a neurodevelopmental disorder characterized by deficits and abnormalities in inattention, impulsivity, and hyperactivity. Furthermore, symptoms of ADHD often persist into adulthood in more than 75% of individuals (CHADD, n.d., para. 1).

2.1 ADHD etiology

The disorder is now recognized as a neurogenetic disorder, as the two most common confirmed etiology of ADHD are deficits in brain development and genetics and inheritance, as explained by Barkley (2018). Approximately 20 to 30% of ADHD cases are attributed to pregnancy complications or acquired brain injuries like head trauma, while nearly 70% of the remaining cases have a genetic basis. Many of the previously suggested etiology of ADHD, such as dietary contaminants, sugary foods, or poor parenting, lack robust research and reliability. ADHD is primarily heritable, as studies have demonstrated a significant likelihood of family members experiencing the same condition (Barkley, 2018).

2.1.1 Neurological etiology

Firstly, Wender and Tomb (2016) reveal that certain cases of ADHD can be attributed to prenatal brain injuries, even if these injuries are subtle, as they can disrupt the development of the frontal lobes, which constitute the front part of the brain, which is why it is named a neurodevelopmental disorder. Secondly, the authors highlight that smoking during pregnancy significantly increases the risk of having a child with ADHD by nearly threefold. Additionally, it is well-established that alcohol consumption during pregnancy also elevates the risk of ADHD in offspring. Both alcohol and smoking are recognized as toxins or neurotoxins that detrimentally affect brain development, particularly impacting the development of the sensitive frontal lobe, thus leading to structural abnormalities in the developing brain of the fetus (Wender & Tomb, 2016).

Furthermore, Barkley (2018) asserts that premature babies are at a higher risk of developing ADHD, particularly if they have spent time in a neonatal intensive care unit (NICU). The author explains that up to 45% of infants who have undergone such experiences are more likely to develop ADHD by the age of 5. Moreover, any pregnancy complications a woman encounters may increase the likelihood of having a child with ADHD. Barkley's studies even suggest that pregnant women with elevated levels of anxiety have a higher chance of giving birth to children with ADHD, and this association is not influenced by social factors. Instead, it is hypothesized that during periods of anxiety, the mother's brain releases additional hormones that cross the placenta and enter the baby's bloodstream, potentially impacting the developing brain in a detrimental manner. Barkley's research indicates that approximately 20% to 30% of all ADHD cases stem from pregnancy complications, while 7% to 10% result from postnatal brain injuries, including head trauma or brain tumors affecting the frontal lobes. Additionally, children who have experienced near-drowning incidents leading to oxygen deprivation to the brain are also at risk (Barkley, 2018).

2.1.2 Genetic etiology

On this topic, Barkley (2018) highlights that approximately 30% of all ADHD cases are attributed to acquired brain injuries. However, research spanning over 50 years has consistently demonstrated a familial pattern in ADHD. If a child has ADHD, other family members are more likely to also have the disorder, indicating a hereditary component. It is known that mothers of children with ADHD are more likely to be adults with ADHD themselves, having experienced the condition during their own childhood. Furthermore, studies reveal that 25 to 35% of siblings of an ADHD child also receive an ADHD diagnosis. Interestingly, nearly 1/5 of mothers of children with ADHD currently meet the criteria for an adult ADHD diagnosis. These findings emphasize the inheritance pattern observed in ADHD, with the prevalence of ADHD among fathers of affected children even slightly higher (Barkley, 2018).

2.1.3 Environmental Factors

Based on Barkley (2018), it was discovered that social factors are involved in ADHD as well, not as a direct cause of the disorder, but they can affect the severity of the symptoms,

so social factors related to the family, parenting, peers, relationships, school environment, and the general society, can and will influence and cause the development of other disorders that coexist with ADHD, for example, Oppositional Defiant Disorder, social aggression, antisocial behavior which can subsequently lead to the child experimenting with or using illegal substances. Finally, social factors are known to have a role in the development of depression and anxiety, this does not mean that social issues are unrelated to ADHD, but rather they are more likely to increase the likelihood of additional disorders and issues to the kid.

2.2 ADHD Symptoms

The United Kingdom's National Health Service webpage explains that symptoms of ADHD can be classified into two categories of behavioral issues: inattentiveness, which includes difficulty concentrating and maintaining focus, and impulsivity and hyperactivity. While this classification does not apply to all individuals with ADHD, many individuals with the disorder experience difficulties that fall into both categories. For example, approximately 2 to 3 out of 10 individuals with ADHD face challenges related to attention and concentration but do not exhibit significant hyperactivity or impulsivity. Additionally, attention deficit disorder (ADD) is another term used to describe this specific type of ADHD ("Attention Deficit Hyperactivity Disorder (ADHD) - Symptoms").

According to DSM-5 (American Psychiatric Association, 2013), specific criteria must be met for a diagnosis of ADHD. Firstly, the individual must exhibit at least six symptoms from each of the categories of inattention, hyperactivity, and impulsivity. These symptoms have been carefully selected after a comprehensive evaluation of the characteristics that most accurately represent the disorder. Additionally, these symptoms must be present in different settings and have a significant impact on the person's social, academic, and occupational functioning. The symptoms can be listed as follows:

2.2.1 Inattention symptoms

The following list describes common symptoms of inattention highlighting its behaviors:

- Often pays little attention to details or makes thoughtless errors when performing tasks at work, in school, or during other activities.
- Often has trouble maintaining focus on activities or play activities.

- Often seems unable to listen when directly addressed.
- Often disregard instructions and does not complete tasks, chores, or work-related responsibilities.
- Has a lot of trouble planning activities and projects.
- Often avoids, dislikes, or shows reluctance to perform jobs requiring prolonged mental effort.
- Often misplaces and loses items required for jobs or activities.
- Often distracted by irrelevant stimuli which may include unrelated thoughts.
- Often Forgets things when conducting everyday tasks.

(American Psychiatric Association, 2013, pp. 59-64).

2.2.2 Hyperactivity, and impulsivity symptoms

The following list describes common symptoms of hyperactivity and impulsivity, highlighting their behaviors:

- Often taps or moves hands or feet while fidgeting in their seat.
- Regularly gets up from their chair when it is anticipated that they stay seated.
- Often moves around or climbs in improper places. In adults or teenagers, this symptom may be manifested into restlessness.
- Often unable to play peacefully or take part in leisure activities.
- Frequently acts "on the move" and as though they are "propelled by a motor"
- Often talks excessively.
- Frequently answers a question before it has been fully phrased.
- Frequently finds it tough to wait their turn.
- Often interrupts or intrudes on others.

(American Psychiatric Association, 2013, pp. 59-64).

2.2.3 The ADHD Iceberg

According to Edwards (2023), individuals with ADHD commonly display symptoms of hyperactivity, impulsivity, and distractibility, which can be observed through behaviors such as fidgeting, interrupting others, or constant movement. However, it is important to recognize that ADHD encompasses behaviors resulting from internal experiences, a concept aptly illustrated by the analogy of an iceberg. Just as only a small portion of an iceberg is visible above the water, the visible patterns of behavior exhibited by individuals with ADHD represent only a fraction of the challenges they face which is presented in this figure.



(Psych Central The ADHD Iceberg: visible vs. Invisible Symptoms, n.d)

There are several 'hidden symptoms' of ADHD that frequently go unnoticed and lead to misunderstandings. Some of the invisible internal symptoms of ADHD, according to Edwards, include emotional dysregulation, inability to regulate one's emotions, racing intrusive thoughts, sensitivity to criticism or rejection, anxiety, choice paralysis, sleep problems, constant fatigue, restlessness, low self-esteem, feelings of guilt and shame, executive dysfunction, poor memory, information processing issues. Reif (2008) supports this notion when explaining the prevalent and overlooked characteristics among children and teenagers with ADHD including the potential for disorganization and a propensity for misplacing or losing things; Very disorganized and messy rooms, desks, bags, and closets; little or no sense of time; frequently underestimates how long a task will take to complete and procrastination; They exhibit aggressive behavior and are challenging to control. They have a high level of emotionality for example, temper outbursts, being quick to anger, getting upset, irritable, or moody; they are easily frustrated and overly reactive; they have difficulty with transitions and changes in routine or activity, their Low selfesteem, poor handwriting, fine motor skills, written expression, and motivational issues prevent them from performing or accomplishing to the degree that is expected given their apparent potential.

2.2.4 ADHD and executive functions:

According to Webster's online dictionary, "Executive Functions" are defined as:

The group of complex mental processes and cognitive abilities (such as working memory, impulse inhibition, and reasoning) that control the skills (such as organizing tasks, remembering details, managing time, and solving problems) required for goal-directed behavior.

(Webster's dictionary online, n.d.)

In this regard, Gail (2019) elucidates that many specialists have different perspectives on executive function. Nonetheless, many see it as a collection of crucial abilities, such as paying attention, planning, and organizing, getting things done and remaining on target, regulating feelings, and observing what the subject is doing. In this respect, Diamond (2013, pp. 135-168) describes the ability to mentally experiment with ideas, pause before acting, confront unique, unexpected problems, resist temptations, and maintain attention as examples of executive functions. The core executive functions include working memory, inhibition (response inhibition and self-control—avoiding temptations and resisting impulsivity), and cognitive flexibility, which involves thinking "outside the box," seeing things from different perspectives, and correctly and flexibly responding and adapting to new situations.

According to the Center on the Developing Child at Harvard University, the brain processes involved in planning, attention, memory, and multitasking are referred to as executive function and self-regulation abilities. These abilities are crucial for filtering distractions, prioritizing tasks, setting and achieving goals, and controlling impulses. An analogy can be drawn between these cognitive processes and an air traffic control system managing the arrivals and departures of multiple aircraft on different runways (Center on the Developing Child at Harvard University, n.d.).

2.2.5 ADHD and Working Memory

Barkley (2012) explains that working memory is a crucial cognitive skill involved in retaining and manipulating information in the mind for short periods of time to accomplish various cognitive tasks. It is often referred to as the mental workspace of the mind, where incoming information is temporarily held and manipulated. Working memory plays a vital role in tasks such as problem-solving, planning, comprehension, and learning (p. 17).

Working memory is considered a core component of executive functions as it enables individuals to hold their goals in mind while selecting and organizing the processes and strategies necessary to achieve them. Barkley (2012) highlights that individuals with ADHD often experience deficits in working memory abilities. These deficits may manifest as difficulties in memorizing and following multi-step directions, retaining information over extended periods, and recalling facts to complete tasks. Individuals with ADHD may also struggle with tasks that require the temporary retention and manipulation of information in working memory, such as mental math, problem-solving, and reading comprehension. According to Barkley (2012), working memory problems in individuals with ADHD are believed to result from poor activation and maintenance of working memory representations, as well as inadequate suppression of distracting information (p. 74).

Similarly, the National Institute of Mental Health (2020) states that individuals with ADHD frequently encounter challenges with working memory, which is the cognitive mechanism responsible for holding and manipulating information for short durations. These difficulties in holding information can limit their ability to learn and engage in complex activities (National Institute of Mental Health, 2020).

Given that "working memory" is one of the core functions that contribute to learning a second language, Unsworth and Engle (2007, pp. 104-132) state that working memory is

important in second language learning because it is responsible for storing new language information in memory while altering and integrating it with previous knowledge. Individuals with stronger working memory capacities have been demonstrated to outperform individuals with lesser working memory capabilities, and that explains why this issue may be particularly severe in children with ADHD.

2.2.6 ADHD and Cognitive Flexibility

ADHD also affects cognitive flexibility, which is another one of the main executive functions. According to Barkley (2012, p. 155), cognitive flexibility refers to the ability to switch attention and change tasks in response to changing demands, priorities, or rules. Martinussen and Tannock (2006, p. 1074) further describe cognitive flexibility as the ability to shift attention between multiple tasks or mental sets. Individuals with ADHD have been found to have difficulties with cognitive flexibility, which can affect their ability to respond and behave appropriately in changing environments. Moreover, Diamond (2013, p. 106) emphasizes that cognitive flexibility is an important component of executive function, is frequently impaired in ADHDers. This impairment has crucial consequences for learning, as executive functions are required for a variety of academic skills such as reading comprehension and writing expression. Diamond (2013, p. 106) points out that the cognitive flexibility dysfunction caused by ADHD can also contribute to behavioral issues in the classroom. Learners who have difficulty transferring their attention between activities or mental sets may become quickly irritated or disengaged, resulting in disruptive or agitating behavior. As a result, unfavorable social and academic consequences, such as poor peer connections and worse academic success, might occur.

2.2.7 ADHD and Inhibitory Control

Miyake et al. (2000, pp. 49-100) explain that the capacity to suppress or postpone a proponent reaction, resist distraction, and block instinctive or inappropriate responses is referred to as inhibitory control. It is a necessary component of the executive functions for making decisions, self-regulation, and goal-oriented behavior. Inhibitory control deficits are related to a wide range of behavioral and psychiatric issues, especially ADHD (Aron et al., 2003, pp. 214-228).

Inhibitory control is also defined by Barkley (1997, pp. 65-94) as the ability to halt one's own behavior at the proper time, including the ability to suppress prepotent reactions and resist interference from distractors. Barkley (2012, p. 152) affirms that inhibitory control deficits are at the very root of ADHD symptoms such as impulsivity, distractibility, and hyperactivity. According to him, people with ADHD have a "deficit in behavioral inhibition" as well as a "weakness in the regulation of their arousal level and motor activity" (Barkley, 2012, pp. 362–363). Barkley further states that inhibitory control impairments can impede learning and academic accomplishment. Individuals with functioning inhibitory control are able to block impulsive movements and make more deliberate and goal-oriented decisions, which are critical for academic achievement. However, individuals with deficient inhibitory control struggle to avoid distractions and maintain focus, or even stay on task, which can have a detrimental effect on their learning behavior.

2.3 **Presentations of ADHD:**

ADHD affects approximately 5% of children and up to 2.5% of adults worldwide, making it a prevalent neurodevelopmental disorder (Polanczyk et al., 2014, p. 434). The disorder, as defined by the American Psychiatric Association in 2013, hinders individuals' functionality and growth through chronic patterns of inattention, hyperactivity, and impulsivity.

2.3.1 ADHD Inattentive Presentation

Those who have ADHD with predominantly inattentive presentation have notable challenges when it comes to organizing, maintaining focus, and finishing tasks (APA, 2013, pp. 59-64). Forgetfulness, being easily distracted, having difficulty following instructions, and appearing as not listening when spoken to directly are all key symptoms of inattentiveness (APA, 2013, pp. 59-64). Difficulties in grasping new concepts and maintaining focus in the classroom often lead to academic struggles for children with this presentation (Bussing et al., 2012, pp. 92-100). Children with the inattentive presentation may experience academic difficulties due to weaker language processing abilities, as observed by Chhabildas et al. (2001, pp. 529-540).

In addition, their social life may be affected as they may appear disengaged or unresponsive, leading to misunderstandings and strained relationships with their peers (Healey et al., 2011, pp. 502-510). Such learners may face long-term consequences such as a higher chance of experiencing academic underachievement, a lower probability of pursuing higher education, and difficulty maintaining stable employment (Frazier, Youngstrom, Glutting, & Watkins, 2007, pp. 49-65).

2.3.2 ADHD Hyperactive and Impulsive Presentation

The predominantly hyperactive/impulsive presentation of ADHD is characterized by excessive motor activity and impulse control problems. The American Psychiatric Association (APA, 2013) described symptoms that include the inability to sit still, excessive talking, frequent interruption of others, and engagement in potentially dangerous behaviors without considering the consequences, and incessant fidgeting (pp. 59-64).

Children with this presentation who exhibit disruptive behavior often face disciplinary actions in school, which can negatively impact their academic performance and social standing (Nigg et al., 2005, pp. 1224-1230). As noted by Healey et al. (2011, pp. 502-510), their impulsivity could result in difficulties in maintaining friendships due to their actions being perceived as intrusive or inappropriate. According to Molina et al. (2013, pp. 484-500), individuals with a primarily hyperactive/impulsive presentation during childhood are at a greater risk for developing aggressive behaviors, substance abuse, and engaging in criminal activities during their later adolescence and adulthood.

2.3.3 ADHD Combined Presentation

The combined presentation, which includes symptoms from both inattentive and hyperactive/impulsive presentations, is the most common form of ADHD (American Psychiatric Association, 2013). People with this presentation commonly experience challenges with organization, impulsivity, and hyperactivity, social interaction difficulties, poor academic performance, and other issues that may persist into adulthood (Dupaul, Weyandt, & Janusis, 2011, pp. 35-42) and can affect many facets of life.

Learners with combined presentations are more prone to comorbid psychiatric disorders, like depression, anxiety, and conduct disorder, compared to those with predominantly inattentive or hyperactive/impulsive presentations (Biederman et al., 1999, pp. 966-973).

2.4 ADHD and Learning Disabilities

ADHD and learning disabilities are both prominent issues in education, affecting the ways in which children learn and impacting their academic success. While these two conditions share some similarities, they have distinct differences, and the comorbidity between ADHD

and learning disabilities is not uncommon. They are both significant concerns in education, influencing the methods by which children learn and affecting their academic achievements. Although ADHD and lds share some similarities, they also have distinct differences, and it is not uncommon for them to coexist.

2.4.1 Similarities between ADHD and Learning Disabilities

Developmental disorders that can persist throughout an individual's life are ADHD and learning disabilities, which manifest early in childhood (American Psychiatric Association, 2013, pp. 59-64). According to Dupaul and Stoner (2014), the difficulties in achieving academic performance and social functioning are often accompanied by feelings of frustration and low self-esteem among affected learners. Research suggests that 30-50% of children with ADHD also have a comorbid LD, indicating that ADHD and lds can co-occur.

2.4.2 Differences between ADHD and Learning Disabilities

ADHD is a neurobiological condition that manifests in symptoms like inattention, hyperactivity, and impulsivity (APA, 2013). However, learning disabilities are an entire class of disorders affecting specific brain processes that relate to skills such as reading, writing, and math problems, for example, dyslexia, dysgraphia, or dyscalculia (Shaywitz, 2003).

The primary difference between ADHD and learning disabilitieslies in their underlying cognitive impairments. While ADHD hinders an individual's executive functioning, especially working memory, planning, cognitive flexibility, and inhibitory control, it also interferes with specific skills relating to the processing of language and numerical information (Barkley, 2014).

2.4.3 Comorbidity of ADHD and Learning Disabilities

The co-occurrence of ADHD and LDs is relatively common, posing unique challenges to educators and mental health professionals (dupaul et al., 2013; 43-51). When these conditions coexist, the assessment process becomes more complex, as comorbid symptoms may mask or exacerbate underlying deficits. It is essential to conduct comprehensive evaluations to differentiate between the two conditions in order to develop tailored intervention programs that address the specific needs of affected learners (Dupaul & Stoner, 2014).

While ADHD and learning disabilities share some similarities, their fundamental differences lie in the cognitive processes that they affect. Understanding the distinctions

between these conditions and effectively addressing their comorbidity is crucial to ensuring the academic and socio-emotional well-being of affected learners.

2.5 ADHDers Challenges in Class

ADHD individuals often encounter significant challenges in their academic, social, and behavioral domains, which greatly impact their learning behavior and educational outcomes, consequently affecting their long-term prospects in life (Mannuzza et al., 1998; 565). Despite the increasing awareness and acknowledgment of ADHD as a significant psycho-pedagogical concern, there is still much to be discovered regarding the specific challenges faced by individuals with ADHD in the classroom.

2.4.4 Academic Challenges

Learners with ADHD frequently encounter a range of academic difficulties that can impede their academic performance and development. Attention and concentration are among the primary challenges faced by these learners (dupaul et al., 2018; 35-42). Their inattentive nature often leads to struggles in maintaining focus during lectures and being easily distracted by external stimuli. Additionally, organization and planning pose challenges for learners with ADHD due to deficits in executive functioning (Langberg & Becker, 2012; 215-233). Difficulties in organizing materials, managing time effectively, and prioritizing tasks can significantly impact their academic progress.

Furthermore, learners with ADHD often struggle with weak working memory skills, as outlined by Martinussen et al. (2005; 377-384). These difficulties in retaining new information and following multi-step instructions can lead to frequent errors in assignments and examinations. As a result, learners with ADHD may experience poor academic performance, increased school absences, and higher rates of school dropouts (Barry et al., 2002; 259-283). The cumulative impact of these challenges underscores the importance of addressing the specific needs of learners with ADHD in order to support their academic success and mitigate the negative consequences they may face.

On the other hand, despite the rising prevalence of ADHD in classrooms worldwide, many teachers may not have received appropriate training on how to manage students with ADHD effectively (Moldavsky & Sayal, 2013; 377). As a result, teachers' attitudes and approaches toward learners with ADHD can significantly impact these students' academic

success and overall well-being. A study by Kos, Richdale, and Hay (2006; 160) found that teachers who held positive attitudes toward students with ADHD were more likely to use effective teaching strategies and provide appropriate support. Conversely, negative attitudes can lead to lower expectations, exclusion, and stigmatization, which can hinder students' progress and self-esteem (Gwernan-Jones et al., 2015; 299). Therefore, it is crucial to promote awareness, understanding, and training among educators to create inclusive and supportive learning environments for learners with ADHD.

2.4.5 Social Challenges

In addition to academic difficulties, learners with ADHD may also face various social challenges that can impact their overall well-being. Hoza et al. (2005; 411) explain that learners with ADHD may struggle to form and sustain positive relationships with their peers due to their impulsive behavior, difficulty in understanding social cues, and poor interpersonal skills. These difficulties can result in poor peer relationships, further exacerbating their social challenges. Consequently, learners with ADHD are more vulnerable to experiencing social isolation, which can contribute to feelings of loneliness, low self-esteem, and depression (Humphrey, 2010; 213–238).

Furthermore, learners with ADHD may be at a higher risk of being targets of bullying. Due to their observable differences in behavior and social skills, they can become frequent targets for bullying by their peers. This bullying experience further intensifies their feelings of isolation and distress, making it even more challenging for them to navigate social interactions (Hoza et al., 2005; Humphrey, 2010).

Addressing these social challenges requires a comprehensive approach that involves creating inclusive and supportive school environments, promoting social skills development, and fostering empathy and understanding among peers and educators. By addressing these social challenges, we can help learners with ADHD develop positive social relationships, enhance their self-esteem, and improve their overall well-being.

2.4.6 Behavioral Challenges

Behavioral challenges are indeed inherent in learners with ADHD and can significantly impact their functioning in a classroom setting. Abikoff et al. (2002; 349-359) report several common behavioral challenges experienced by these learners, including impulsive behaviors

such as blurting out answers, interrupting others, or engaging in risky activities. These impulsive behaviors can lead to conflicts with peers and teachers, as well as difficulties in following classroom rules and procedures.

Excessive physical activity and restlessness are also common challenges faced by learners with ADHD. It can be challenging for them to remain seated and engaged in learning tasks, as noted by Barkley et al. (1990; 775-789). These behaviors can disrupt the learning environment and make it difficult for learners with ADHD to concentrate and participate effectively in classroom activities.

Additionally, learners with ADHD often experience difficulties with emotional regulation. Bunford et al. (2015: 185-217) highlight that emotional dysregulation is a common characteristic of ADHD, leading to heightened sensitivity to stress, higher levels of frustration, and frequent mood swings. These emotional challenges can further impact their interactions with others and their overall learning behavior.

Addressing these behavioral challenges requires a multifaceted approach that combines strategies such as behavior management techniques, individualized accommodations, and social-emotional support. By providing a supportive and structured classroom environment, educators can help learners with ADHD better manage their behaviors, regulate their emotions, and actively engage in the learning process.

3 Conclusion

It is crucial to understand the challenges faced by ADHD learners on their daily basis, as it allows and helps teachers to adapt their teaching strategies and methods to provide the necessary support and help for said learners. On the other hand, in order to create a supportive and inclusive learning environment for students with ADHD, it is important for teachers and school administrators to have a full understanding of the challenges these learners go through. This includes fully understanding ADHD, recognizing its symptoms, and understanding how these symptoms can impact their learning behavior, academic performance, and social interactions in the classroom. The comprehensive exploration of ADHD presented in this chapter can contribute to eliminating misconceptions and providing a more accurate portrayal of this neurodevelopmental disorder.

CHAPTER TWO:

Beyond The Labels: A Study on Teachers' Perception of Learners with ADHD

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Chapter 2:

Beyond the Labels: A Study on Teachers' Perception of Learners with ADHD

1 Introduction

The learning environment and the development of pupils' skills can be deeply affected by teachers' approaches to their job. Positive attitudes among teachers can help to create an atmosphere of acceptance and inclusion which will contribute to the achievement of pupils, as well as their motivation and academic success. On the other hand, if teachers' attitudes are negative, this can cause an environment in which learners do not feel welcomed and there may be less engagement or achievement, all of which causes lower learning outcomes. The importance of a teacher's attitude becomes particularly more complicated when it comes to learners with ADHD.

Pupils with ADHD commonly encounter some challenges that can impact their academic achievements. This chapter aims at providing a comprehensive overview of teachers' attitudes, knowledge, and perceptions of learners with ADHD. It begins by discussing attitudes in general, including the types and components of attitude, as well as the relationship between teachers' attitudes and their roles, and diversity in the classroom. The chapter then focuses on the specific topic of ADHD, including teachers' knowledge of ADHD across the world, factors influencing their attitudes toward these learners, and a comparative description of the different attitudes of teachers toward boys and girls with ADHD. The chapter also shows the difficulties faced by EFL teachers with this category of pupils, and ADHD management in Algerian classrooms.

Finally, the chapter discusses the importance of training teachers about ADHD to create an ADHD-friendly school environment.

2 Attitude:

An attitude is a mentalstate of readiness that has been organized by experience, that directs and governs the way someone react to all circumstances that are relevant to it, as it is agreed upon within the field of psychology that attitudes are defined as evaluations or judgments that individuals hold about objects, people, or events (Allbort, 1935, p.27). A central path and a peripheral route are the two ways attitudes can be developed and adjusted. The central route requires careful information processing serious and examination of arguments, whereas the peripheral route relies on the level of surface clues like the material's source or the emotions it arouses (Cacioppo & Petty, 1986, p.45).

According to Icek Ajzen Attitudes are shaped by three key factors, namely personal attitudes, subjective norms (perceived social pressure), and perceived behavioral control (perceived ability to perform the behavior). The individual's intention to engage in a specific act is determined by those factors, which then predict their actual behavior, this understanding is based on the theory of planned behavior, which states that attitudes, subjective norms, and perceived control all play a significant role in shaping human behavior, which means that they can be classified as explicit or implicit (pp.179-211). Explicit attitudes are consciously held and can be easily expressed, while implicit attitudes are unconscious and may be difficult to articulate (Greenwald & 1995. Banaji, p117). As noted by Cialdi and Goldstein (2004, pp.591-621) attitudes can spread from one person to another. Social psychology research shows that people are more likely to be influenced by the attitudes of those around them, in particular if they are perceived as credible of have a position authority. or This phenomenon is called social influence or social contagion. For example, if someone is surrounded by people who have positive attitudes towards a particular product or idea, they may also react the same way towards it. In contrast, a negative attitude of another person can also influence one's opinion. However, in order to determine whether attitudes are contagious or not, different factors such as power of the attitude and susceptibility to social influence must be taken into consideration (Asch, p.32).

Attitudes can be thought of as mental pictures or maps that summarize the overall assessment, as Cacioppo et al (1984) stated "Attitudes are mental and neural representations that summarize an individual's evaluation of an object with some degree of favor or disfavor." (p. 31)

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2.1 Types of attitude

There are three main types of attitude: positive, negative, neutral attitude.

2.1.1 Positive attitude

It is a mental concept where an individual has a liking, approving and favorable evaluation or perception towards an object, person, or concept. It represents a psychological state where an individual has a constructive and optimistic outlook towards a particular subject (Fishbein & Ajzen, chapter 7).

Pupils who possess optimistic attitudes towards education tend to exhibit proactive learning behaviors, actively explore new knowledge and overcome obstacles and challenges. As Abdelrahman and Al-Khawaldeh (2021, pp.1-24) explain that a positive attitude is a broad approach towards learning that involves motivation, enthusiasm, and interest.

2.1.2 Negative attitude

A negative attitude refers to a state of mind characterized by negative or pessimistic views of themselves, others and their environment. Negative people tend to experience or feel negative emotions such as anger, frustration and hopelessness and focus more on problems and challenges, sometimes they even fear taking chances and opportunities and they usually don't look for solutions in times of pressure. Negative attitudes effect a person's mental health and social connections, leading to a number of psychological consequences such as depression, anxiety and social isolation, leaving them in cycle of negative overthinking (Barkway, 2015, p.228), and even physical health problems such as: cardiovascular disease, decreased immune system function, and chronic headaches (Segerstrom & Sephton, p.101).

2.1.3 Neutral attitude

A neutral attitude can be defined as a psychological state where a person remains impartial and emotionally detached towards a specific situation or individual. This involves the intentional suppression of personal biases, emotions, and opinions, and the adoption of an objective and unbiased approach. A neutral attitude is commonly linked to cognitive empathy, which is the capacity to comprehend and empathize with the emotions and perspectives of others without being influenced by one's own biases or judgments, as described in a study by Dziobek et al. (2008, p.464-473). This type of attitude is important in many areas of psychology, such as psychotherapy, where
therapists need to remain neutral and non-judgmental in order to establish a therapeutic alliance with their clients (Wampold & Imel, 2015).

2.2 Components of attitude

The psychological understanding of attitude considers it as a tri-component model consisting of three components interrelated: affective, cognitive, and behavioral. All three components are interdependent and necessary for comprehending an individual's attitude towards an object, in other words, they have a mutual influence on each other and they work together to form attitudes (Hogg & Vaughan,2017, p.153), since individuals tend to act and react (behavior) according to the way they feel (affect) and what they know (cognition). If there is any mismatch between them, it is called cognitive dissonance (Festinger).

2.2.1 Cognitive component

The cognitive component pertains to an individual's beliefs and thoughts about the attitude object. It is determined by an individual's awareness, familiarity, and anticipations regarding the object. Studies indicate that cognitive functions such as perception, memory, and reasoning have a crucial impact on shaping and upholding attitudes (Cacioppo et al. P.306). The impact of the cognitive process on the effectiveness of different learning strategies was explored in the study of Kistner and colleagues (2020, pp.375-392), It was proved that learners who used elaborative processing like relating their background knowledge to the new information they receive, were more likely to achieve higher outcomes and they were able to remember and use the knowledge acquired.

2.2.2 Affective component

The affective component is associated with the emotional aspect of an attitude. A study was carried out by Wicker et al (2021), in order to investigate the relationship between affective and cognitive attitudes and behavioral intentions. Participants were asked to rate their cognitive and affective attitudes towards recycling and whether or not they plan to recycle in the future. The study revealed that affective responses were more influential in predicting behavioral intentions than cognitive evaluations. Thus, individuals who had a stronger emotional connection to recycling were motivated to recycle in the future more than those who had a

cognitive understanding of its benefits. This study suggests that affective attitudes have a significant role in identifying future behaviors (Wicker et al., 2021 pp.283-298).

2.2.3 Behavioral component

The behavioral component involves the actions taken by the individual towards the object, it is a critical component in comprehending how attitudes influence behavior. Recent research have emphasized the significance of taking into account the surrounding conditions and situational factors that could impact the correlation between attitudes and actions (Cameron & Rutland, 2022 p.106). As Martin Fishbeinet al (2005, pp.173-221)confirmed that attitudes are more likely to influence behaviors than any other factors, which means attitudes are the best predictors of behaviors and reactions of any individual.

2.3 Teachers' attitude

Teacher's attitude is the emotional evaluation and reactions that a teacher adopts towards a particular student or group of students or even a situation, which in turn can impact the way they interact with and instruct those students" (Brophy & Good, 1986, p.155), it also effects the way they approach their job and it includes their expectations, motivation, communication skills and teaching strategies" (Henderson & Mapp, 2002, p.4). According to Dovidio & Fiske (2014 p.184) teachers' attitude is shaped by a complex combination of cognitive and affective processes to form perceptions, judgments, and reactions to learners' behavior and academic performance. Which means the subjective evaluations they hold toward the teaching/learning journey. Pupils spend 3/4 at schools with their teachers so, it is only logical to say that teachers' attitude has a huge effect on them (Elliot & Julian p.15). Despite the fact that most learners in middle and secondary schools show a negative attitude toward the following subjects: mathematics, geometry, physics...ect;

Therefore, teacher training programs should emphasize not only the teaching of mathematics content but also the promotion of an optimistic attitude towards the subject among future teachers. In other words, teachers with positive attitudes are more likely to create an atmosphere where all learners feel included, supported and they promote a growth mindset (Henderson & Mapp, 2002). Pupils tend to perform better when their teachers have high expectations for them and believe that all of them have the potential to succeed, and vice versa (Hattie, p.84).

2.3.1 Teachers' attitudes in Relation with teachers' Roles

To motivate and inspire learners, teachers should act as positive role models by exhibiting, moral principles, and enthusiasm for education. When teachers demonstrate such behaviors, their students are more likely to respond positively (Martin & Dowson, 2009, pp.327-365).

In any event, young children will remember that situation and will keep thinking about how their teachers reacted to it, and when exactly their teacher showed emotional or social support. Eventually, they start adopting the same reactions, which means there will be an improvement in their social skills, emotional regulation, and resilience (Sabia & Applegate, 2018, p. 8-16).

Creating an environment enabling students to explore and understand their own knowledge, while providing guidance and feedback, is a teacher's role as facilitator This approach promotes student centered learning, critical thinking and problem solving, resulting in improved academic results. The students become active learners through their ownership of education, and teachers provide support to the learning process (Al-Tamimi & Shuib, 2015, p.9-14).

2.3.2 Teachers Attitude and its Impact on the Classroom

A study by Brown and Jones (2018, pp.382-393) found that students with a poor academic performance, have lower self-esteem and may even struggle with anxiety, are the ones who their teacher show no interest in what they say or do and take their efforts for granted. In contrast, it is more likely that students feel motivated and participate in the learning process which lead to better academic results when they perceive teachers as genuinely concerned with their well-being and success.

The research findings of Martin and colleagues (2021, pp.327-365) states that teachers who consistently reinforce their students in a positive way, e.g. By cheering for good behavior and effort, are more inclined to have pupils that behave positively in the classroom: participate in discussions, ask questions or even be willing to take on learning tasks. Over 1800 students from different backgrounds were involved to examine the different outcomes of teachers support and feedback on the learner's performance. The study found that teachers who use positive feedback, emotional support and validation. This includes verbal praising pupils when they work hard by saying things like:

"Great job on your essay! I'm sure you've put in a lot of effort to study and organize your ideas."

"I noticed that you have improved your math skills since the beginning of the year. Keep up the good work!",

"I am proud of you" Or even if they fail or don't do well in their assignments " do you think you need help in understanding this lesson ? ",

"Do you need more time to redo your work?"

"I will give you an extra-credit homework in order to catch up, i know you will do better this time"

This type of support also incorporate non-verbal cues by using their body language, such as smiling, nodding and thumbs up. The findings of this research has proved that the majority of those students succeeded.

2.3.3 Teachers Attitude and Diversity

When it comes to the differences between humans, for instance those of race, gender, sexual orientation, religion and socioeconomic status, as well as their knowledge styles and abilities, this is what diversity means (Joo Lim & Kim, 2018, pp.131-155). And as mentioned previously teachers' attitude can either help them prosper or break them down, that is why it is upon the teacher's responsibilities to establish a safe, inclusive environment where they feel respected and valued despite their differences. And even if those differences do not align with their own principles and backgrounds, in this case teachers can either remain a neutral attitude, in order not to offend anybody unintentionally, or try to understand and get familiar with their cultures and beliefs (Maslow, 1943).

According to Banks (p.24), the best way to promote for diversity is to incorporate it within the different aspects of the curriculum, for instance: they can select texts written by authors from different backgrounds, exposing to learners various cultural and historical events in order to raise their awareness about the importance of acceptance.

2.3.4 Teachers' Attitude and ADHD

According to Barkley (2014), the academic and social outcomes of students with ADHD can be significantly influenced by the attitudes of their teachers. Teachers who have a positive attitude and use effective teaching strategies that can support these students in thriving academically and socially. Conversely, the ones who hold negative attitudes and use inadequate methods can lead to these pupils' failure (dupaul & Stoner, 2014). According to studies of Singh et al (2014), 50% of learners with ADHD repeat grades by adolescence, 35% eventually drop out of schools and only 5% of them complete college. In this context Pelligrini and Horvat

(2016) believe that the problems experienced by kids with ADHD at school are not entirely due to biological factors that constitute this disorder but rather by a lack of compatibility between the school environment and the child's needs.

A study conducted by Lee and colleagues (2021, pp.507-520) indicates that a certain group of people considered ADHDers as disruptive and poorly behaved. As a result of this perception there has been an increase of disciplinary action and even requests to remove them completely from the classroom. Another study also proved that teachers who hold negative attitudes towards ADHD learners were more likely to use punishment and criticism as a strategy to manage their classes. These methods were found to be a consequence of the lack of knowledge about the disorder (mcmahon et al, 2014, pp.453-467). This unfamiliarity with ADHD, makes teachers attribute the behaviors of the pupils with ADHD to factors such as lack of efforts, low academic ability, laziness, poor self-control (Barkley). In another research by Khademi et al., where 250 teachers were included. The research goal was to investigate teachers' attitude towards ADHD learners in primary schools, and it turned that 65.1% have a neutral attitude about this developmental disorder. However; the teachers who were provided with Positive Behavior Support (PBS) training program has actually resulted in an improvement in the students' academic performance and built positive relationships with their caregivers (Power et al, 2012, pp.1-18). In Norway 59 teachers and 406 students with ADHD were included in a study; in order to assess the effectiveness of the training program on ADHD and Behavior management techniques. Two groups were assigned, an intervention group that received the training and a control group.

The findings of this study indicate that the trained group considered themselves able to provide a supportive environment for students with ADHD, and also reported improvement in their behaviors and educational outcomes (Skogli et al, 2013). Teachers who have positive attitudes towards learners with this condition, believe that these students can succeed academically and socially with the right support (Prasad & Shrivastava, 2018).

a) Teachers' knowledge about ADHD worldwide

The extent to which teachers are aware of ADHD and the factors that influence their attitudes and perceptions of learners with ADHD needs to be explored (Pfiffner et al, 2011, pp.31-41). Nevertheless; many studies has indicated that teachers have a limited understandings of ADHD and they are mostly just misconceptions. In Qatar, a research conducted by Bener and colleagues (2013, pp.159-163), found that from a total of 357 teachers;

54.8% of the teachers had poor knowledge, due to a lack of familiarity with the disorder's symptoms, prevalence, and treatment options. Moreover, the average knowledge among teachers is 30.3% and it indicates a degree of familiarity with ADHD but not sufficient to make informed decisions. The good knowledge of ADHD was shared by only a small percentage of teachers, 14.9% (657). The findings of a similar study in Australia states that about 10% of the teachers were satisfied with their knowledge about ADHD, while 42% believed that they knew an average amount of information about it and 48% did not have any at all (Humphreys & Mullins, p. 492). Also, an online survey has been conducted in which 2198 teachers from Canada were asked about their understanding of ADHD and whether they would be able to support students with ADHD. The results demonstrated that most teachers had some knowledge about ADHD but only 11% felt confident in their ability to support learners with this condition. And this confidence was mainly thanks to the training programs that they have received (Daley et al. 2018). In a study conducted in Greece discovered that although many teachers had a basic understanding of ADHD, they lacked comprehensive knowledge about the condition and its related issues. The study also found that teachers with more years of experience (16-20 years), perceived ADHD as a deliberate misbehavior and lack of discipline (Bakou et al., 2017, pp.99-107). Other findings in South Africa showed that most teachers were able to identify the symptoms of ADHD, hyperactivity (94%), inattention (87%) and impulsivity (55%), which means they had knowledge about ADHD but they reported that they didn't know the appropriate interventions and accommodations to deal with it (Singh et al. 2020, pp.1-8).

In a study conducted in China, teachers' attitude and knowledge were investigated to explore the management strategies they use. The research findings indicated the limited knowledge Chinese teachers had about ADHD, and that they tend to rely on negative and punitive approaches such as scolding, yelling or physical punishments (Sun et al., 2016, pp.639-655).

Although these studies took different settings; however, they all highlight the necessity of providing teachers training about this Disorder.

b) The Different Teachers' attitudes about boys and girls with ADHD

It is important to take into consideration gender when studying the teachers' attitude towards ADHD students.

According to Rucklidge and Tannock (2001) teachers tend to use negative disciplinary measures as time-outs and reprimands when dealing with boys with ADHD, because they are

seen as more disruptive and hard to manage due to their hyperactivity. On the other hand girls with ADHD are seen mainly as depressed or anxious which results in teachers showing little concern for them (Quinn & Wigal, p24). And this perception is compelled by the actual symptoms the two genders show in the classroom, as teachers reported that boys exhibit more externalizing behaviors such as not being able to stay calmly seated, and girls exhibit internalizing behaviors such as daydreaming and fidgeting which is also known as ADD (Anastopoulos et al. 2011).

Teachers generally recognize and refer boys with ADHD to therapy, comparing to girls, they may remain undiagnosed and untreated even if they have the same symptoms (dupaul et al. 2012). But it is not always the case, because the gender roles imposed on both girls and boys, play an essential role in forming teachers' attitude towards them, for example girls are expected to be quiet, calm and passive and boys as hyperactive, competitive and noisy. This leads teachers to see hyperactivity and impulsivity of boys as normal male behaviors while seeing the same symptoms in girls as abnormal (Nadeau et al., 2017), besides girls may get punished More strictly than boys for being hyperactive as they are not obeying the societal stereotypes (Quinn and Wigal, 2004).

c) Trainings for teachers about ADHD

There are many associations and organizations that offer training programs for teachers about ADHD such as CHADD (Children and Adults with Attention Deficit Hyperactivity Disorder), APSARD (the American Professional Society of ADHD and Related Disorders) and even some specific programs developed by universities or individual experts in ADHD. These programs generally include:

- General ADHD Awareness: Introduction to ADHD
- Behavioral Intervention Training
- Individualized Education program (IEP)

d) General ADHD Awareness: Introduction to ADHD

The aim of this introduction is to provide a general understanding about ADHD, its symptoms and how it effects the learners in the classroom, it also corrects all the misconceptions and stereotypes related to this disorder; it deals with topics like the neurobiological roots of ADHD, the common behaviors related to it and the strategies to manage the classrooms (American Academy of Pediatrics, 2019). The teachers who received this program succeeded in supporting their learners with ADHD and in managing their classrooms using evidence-based interventions (Power et al., 2012).

e) Behavioral Intervention Training

This program is designed to provide teachers with specific methods to handle and understand challenging behaviors in students with ADHD, for the purpose of de-escalating situations, addressing non-compliance and promoting positive behavior. It usually includes a wide variety of effective behavioral interventions such as positive reinforcement, self-monitoring and token economies (American Academy of pediatrics, 2019). Research of Dupaul and colleagues (2013, pp.247-266), Found that teachers who received this training program stopped the use of punishment strategies and reported less behavior issues among ADHD students.



Figure 2: Token economy cycle

(Family Centered Practices group, 2020)

f) Individualized Education program (IEP)

This training program is supposed to help teachers learn how to implement and develop appropriate accommodations and modifications for learners with ADHD. This includes extended time for tests and assignments, help the students break big tasks into small ones, assistive technology, help them set learning objectives...etc. This training ensures that ADHD learners are definitely meeting their needs (American Academy of Pediatrics, 2019).

2.4 The difficulties EFL teachers face with ADHD learners

Children and adolescents with ADHD are likely to have learning difficulties, especially in reading, due to poor working memory, difficulty storing and retrieving knowledge (Lauth, 2014; Liebrand, 2007, pp.1-14). Learning a foreign language like English is even more challenging for them because of their impaired working memory and chemical messenger function in the brain (Niehage, Schäfer, 2012, pp.206-221). Learners with ADHD often have difficulty comprehending texts, particularly those with multiple causal connections, due to their short attention span and superficial style of perception. They may also struggle to decode letters and words and become easily distracted in noisy, crowded classrooms (Neuhaus, 2007, p16). Inattentive behavior in ADHD students may be triggered by their immediate environment. This reading problem makes it challenging and time consuming for teachers to modify the text and divide it into sections to help them understand and retrieve the key events from it (Coyne et al. 2009).

According to a study by Zentall and colleagues (2013, pp.507-520), children with ADHD face more challenges than their non-ADHD peers when it comes to organizing and planning their written work, resulting in incoherent essays full of errors, sometimes even incomplete or out of topic. This problem can be demanding for teachers, as they may find themselves constantly repeating grammar rules and vocabulary, and they have to devote more additional time and extra sessions to help them improve their writing skills.

Due to the inattentiveness, pupils with ADHD may struggle with their listening and response skills, this means that they may not be able to pay attention to what the teacher is saying and have hard times processing complex instructions (Raggi & Chronis-Tuscano, 2013, pp.1-12).

Teachers in this case can provide their ADHD learners with some fidget toys such as squishy stress balls; in order to keep their hands occupied and brains focused on the lesson (Raz et al., 2018, pp. 596-602).

When it comes to speaking and participating in the class, this can lead most of the times to some impulsive behaviors such as blurting out answers without raising their hands, interrupting the teacher and peers. This might cause a disruption and distraction for other learners. In this case teachers need to figure out some strategies to manage their impulsivity, such as using visual cues to signal the speaking time of each student (Zental & Lee, 2012, pp.484-492).

2.5 The role of school culture towards ADHD learners and their teachers

The responsibility of ADHD learners does not fall on teachers' shoulders only but all the members of the school community as well, because the school culture itself has a huge effect on this kind of pupils (Langberg et al., p.151).

Negative attitudes towards students with ADHD may exist in schools where ADHD is stigmatized or viewed only as a behavioral issue rather than a neurodevelopmental condition. Such perceptions can block teachers from fully understanding and fulfilling the needs of these students (Power et al., 2010).

Studies showed that the school culture and atmosphere can predict the academic achievement for student with ADHD (Reinke et al.2013, pp.39-50), also found that teachers' attitude towards ADHD are influenced by school culture because when the school culture supports ADHD learners and prioritizes their needs, all the necessary means of accommodations should be already in place to help them reach their potential and teachers do not have to resort any more extra efforts to provide individualized support (Power et al. 2010). In fact, a school culture of Empathy, Cooperation and Inclusion can benefit all students, including those who suffer from ADHD. It can help improve their self-esteem and sense of belonging when they feel appreciated and supported, as defined by (Kokkotas & Dinis, 2020, pp. 199-214).

Which means schools that promote understanding and advocate for acceptance of the disorder have a positive impact on both students with ADHD and their teachers (Raggi & Chronis-Tuscano, 2015, pp. 521-562).

2.6 Overview of ADHD in the Algerian Classrooms

In Algeria, teachers, parents, and specialized healthcare professionals frequently have misconceptions regarding ADHD, which contributes to the lack of awareness and stigma around this disorder (Benboubker & Lakhdar, 2020, pp.34-38); as it's is not taken seriously in

Algeria which can have an impact on the teaching/ learning journey, especially with the huge lack of knowledge and awareness about it, as the results of Hani and Allouane (2020, pp.51-54) shows that the majority of teachers (81%) think that the Algerian educational system lacks knowledge of children with ADHD. However, the rest of them think the opposite. And according to their findings, teachers were only familiar with some of ADHD symptoms, but few of them who have ever heard the word "attention deficit/hyperactivity disorder" and the majority of them confused it with Autism.

A study conducted in Algiers found that a huge number of teachers held an unfavorable attitude towards pupils with ADHD, claiming that it is caused by poor parenting and considering ADHD as a matter of the child's character rather than a neurodevelopmental disorder. Other teachers even suggest segregating these children from their peers. The authors recommended raising urgent awareness about ADHD, otherwise these students will keep getting excluded from schools (Guechi et al., 2019, pp. 1-9). Which contributes to some misunderstandings and mistreatment.

According to the observations in a study conducted by Zakia Kouloughli (2019, chapter 3), teachers' attitudes and classroom management skills differ from one teacher to another, depending on their age, gender and years of experience. There was a teacher who reacted with anger, when learners forgot their school supplies such as books and copybooks; which is a common symptom of ADHD. However; other teachers permitted them to borrow books from their peers in other classes. The researcher reported that another male teacher was so strict and severe with his student, to the point where even if they had the right answers, none would volunteer to answer, because they were too afraid.

3 Conclusion

It is important for teachers to have a positive attitude towards students with ADHD in order to create a supportive learning environment that caters to the diverse needs of all learners in general and ADHD learners specifically.

This cannot be achieved unless teachers gain knowledge about ADHD and its impact on learning, develop empathy and patience towards them, and adopt their teaching strategies according to their requirements. It is important for the ministry of education to encourage school cultures that supports both the learners with ADHD and plan training programs for their teachers. While providing all the necessary equipment for them. If teachers, administration, therapists and parents work all together, they can definitely help ensure the success of students with ADHD in the classroom and beyond.

CHAPTER THREE:

Data Collection and Analysis

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Chapter three: Data Collection and Analysis

1 Introduction

This chapter provides an in-depth examination of the data collected through interviews, questionnaires, and classroom observations, with the aim of gaining a comprehensive understanding of EFL teachers' attitudes, knowledge, and management practices related to students with Attention Deficit Hyperactivity Disorder (ADHD) in Bakr Ibn Hammad and Mihoubi Abdelkader middle schools, it sheds light on the teachers' perceptions of ADHD, their understanding of its impact on students' educational journey, and the strategies they employed. The implications of these findings are discussed, highlighting the potential effects on students' academic achievement, behavioral outcomes, and overall well-being. It demonstrates how these factors affect learners' educational journey and behavior and also identifies the behavioral challenges and barriers faced by these learners and their teachers, with the ultimate goal of interpreting their implications for supporting and helping them achieve their best potential.

2 Research Design

For the validity of the research data, both quantitative and qualitative research tools are used including classroom observations that aim at observing teachers' behavior toward ADHD learners, teacher's interview for an in-depth understanding of their opinions and beliefs on ADHD 'patients', and teacher's questionnaire to assess their knowledge and attitudes on ADHD. Moreover, data collection includes the use of ADHD rating scales under the supervision of a psychologist Dr. Ahmed BOUZOUINA² whose specialized knowledge helped in spotting ADHD cases and providing a scientific diagnosis.

2.1 Research setting and population

2.1.1 Schools

The middle schools where the research will be conducted were chosen based on their reputation and results. The reason for selecting middle schools with contrasting characteristics is to examine the potential impact of the environment on the perception of ADHD, teachers' knowledge and experience with ADHD, and its effects on individuals with ADHD and their symptoms. The first middle school, known as "Bakr Ibn Hamad middle school," is located in the city center and has a reputation for being a rigorous institution that primarily admits students with good grades. This school will be referred to as 'School (A).'

The second middle school is called "Mihoubi middle school" and is also situated in Tiaret's center. It belongs to a working-class neighborhood¹ and is commonly attended by students with a reputation for being undisciplined. This school will be referred to as 'School (B).'

2.1.2 Teachers

In the chosen middle schools, 5 females teachers accepted to collaborate with us, 2 from school A, and 3 from school B, they all differed in age, level, specialty, and years of experiences

² Dr Ahmed Bouzouina, Ph.D in clinical psychology, Teacher in the department of English language, Ibn Khladoun University Tiaret,Djillali Liabes University-Sidi-Bel-Abbes, Faculty of humanities and Social Sciences

| School | Teacher | Age | Academic degree | Specialty | Professional experience |
|--------|---------|-------|-----------------|--------------|----------------------------|
| А | T1 | 40-49 | License | No specialty | 17 |
| А | T2 | 30-39 | License | No specialty | 10 |
| В | Т3 | 30-39 | Master | Didactics | 7 |
| В | T4 | 40-49 | License | No specialty | 4 |
| В | Т5 | 50-60 | License 's | Literature | 29 |

Tab 1: teachers' Personal and Professional Information

The interpretation of Table 1 provides an overview of the teachers' age, academic degree, specialty, and professional experience in the chosen middle schools.

2.1.3 Learners

School A and School B were observed, and the pupils belonging to them, aged 11 to 17, were examined. Based on the utilized observation sheet, their behavior was observed, including the manifestation of symptoms such as inattention or the inability to maintain focus, lack of motor control or hyperactivity, impulsivity, aggression, as well as their social interactions with peers and superiors. Attempts were made to identify cases that could be diagnosed using a rating scale. Eventually, 20 pupils with ADHD-like symptoms were identified, with 14 males and 6 females among them.

| SCHOOL A | | | | |
|----------|--------|-----|----------|--|
| Learners | Gender | Age | Level | |
| L1 | Male | 16 | 3rd year | |
| L2 | Male | 14 | 4th year | |
| L3 | Male | 15 | 4th year | |
| L4 | Female | 13 | 3rd year | |
| L5 | Male | 13 | 3rd year | |
| L6 | Male | 13 | 3rd year | |
| L7 | Male | 15 | 4th year | |
| L8 | Male | 15 | 4th year | |
| L9 | Male | 15 | 4th year | |
| L10 | Female | 14 | 4th year | |

Tab 2: Study of possible ADHD cases School A

| SCHOOL B | | | |
|----------|--------|-----|----------|
| Learners | Gender | Age | Level |
| L11 | Female | 13 | 2nd year |
| L12 | Male | 13 | 3rd year |
| L13 | Female | 11 | 1st year |
| L14 | Male | 14 | 1st year |
| L15 | Male | 15 | 2nd year |
| L16 | Female | 13 | 3rd year |
| L17 | Male | 12 | 2nd year |
| L18 | Male | 14 | 2nd year |
| L19 | Male | 17 | 4th year |
| L20 | Female | 15 | 4th year |

Tab 3: Study of possible ADHD cases School B

3 Data collection tools

The chosen data collection tools are classroom observations, interviews, and a questionnaire, facilitating the triangulation of results to obtain the most accurate outcomes. The process began with classroom observations, followed by interviews conducted with the teachers. They were asked about their pupils, teaching techniques, methods, and approaches used in managing challenging learners.

3.1 Classroom observation:

In-class observation was utilized as the primary method for data collection. It provided insights into the teachers' methods, techniques, classroom environment, interactions and relationships with learners, as well as their management of various behaviors and provision of reinforcement or support. The observation also aimed to identify potential cases of ADHD-like symptoms in pupils, based on the symptoms outlined in the DSM-5. Attention was given to the level of physical activity and impulsivity exhibited by students during classroom tasks, including noting signs of fidgeting, excessive movement, difficulty remaining seated, and impulsive responses. Additionally, the ability of pupils to maintain attention and focus during instructional activities was observed, with attention to instances of distractibility, daydreaming, or difficulty staying on task. Moreover, the observation sought to identify any signs of cruelty in their interactions with others, such as mocking, embarrassing, arguing, disrespecting, attempting to intimidate, or using inappropriate language towards peers or superiors. This approach allowed for the identification of potential cases for subsequent diagnosis using a rating scale, as well as an examination of the teachers' methods in addressing such behaviors;

The information obtained under this method relates to what is currently happening; it is not complicated by either the past behaviour or future intentions or attitudes. Thirdly, this method is independent of respondents' willingness to respond and as such is relatively less demanding of active cooperation on the part of respondents

(Kothari 96; 2014)

At school (B), the headmaster was approached and introduced to us, and the official request acquired from our university's administration (see Appendix 1) was presented to him, granting us the legal right and protection for data collection and research purposes. Subsequently, we were introduced to the teachers by the headmaster, where it was explained that their classes would be observed. However, as our observation was conducted in a nonparticipant covert manner, the teachers were informed only about the observation of pupils with ADHD-like symptoms for diagnosis purposes, without disclosing the observation of their responses and attitudes towards these pupils. The teachers' schedules were obtained to facilitate the planning of observations, without informing them about the specific visit dates, ensuring an authentic observation of classroom dynamics. In this school, the observation took place in five different classrooms, taught by three different teachers, including a first-year class, two second-year classes, a third-year class, and a fourth-year class. The observation period lasted from February 12th 16th. to

School (A) did not exhibit the same level of welcoming as the first one. While the headmaster initially welcomed us and acknowledged the purpose of our study, he refused to provide us with the teachers' schedules and instructed us to plan everything directly with them.

Upon introducing ourselves to the teachers, they displayed hesitancy and repeatedly attempted to avoid discussions regarding the scheduling of classroom observations. One notable difference in this school was the presence of a special class for fourth-year learners who had behavioral issues and had repeated at least one year. We were able to conduct our observations with two teachers, involving two third-year classes and two fourth-year classes, with one of them being the special class. The observation period for this school took place on February 20th, extending two weeks longer than the first middle school due to the lack of provided teachers' schedules and the teachers' attempts to evade our presence.

3.2 Teachers' interview

Our second chosen investigation tool is conducting interviews with teachers;

This sort of interview may be in the form of direct personal investigation or it may be indirect oral investigation. In the case of direct personal investigation the interviewer has to collect the information personally from the sources concerned. He has to be on the spot and has to meet people from whom data have to be collected. This method is particularly suitable for intensive investigations.

(Kothari, 2014, p. 97)

The purpose of the interviews was to gain an understanding of the teachers' knowledge about ADHD, including whether they had heard about it, dealt with it, received training on it, or were educated about it during their degree completion. Similarly, an assessment was made regarding their understanding of working with pupils who have ADHD. Additionally, information was sought on the behavior management techniques utilized by the teachers when learners misbehave, how hyperactive children are typically addressed, how attention issues are managed, and how aggressive and inappropriate behavior in the classroom is handled. Each interview was conducted either prior to or following the classroom observation in their respective classes.

3.3 Teachers' questionnaire

A questionnaire was used (see appendix 2) as the third investigation tool to complete the triangulation;

"This method of data collection is quite popular, particularly in case of big enquiries. It is being adopted by private individuals, research workers, private and public organisations and even by governments"

(Kothari, 2014, p. 100).

In the first part of the questionnaire, the teachers' personal information was requested. In the second part, four questions were included to collect factual data and understand their familiarity with ADHD. The third part consisted of 18 close-ended questions focused on behavioral data, aiming to gain insight into their understanding and beliefs about ADHD and identify any misconceptions that might be affecting their teaching methods. The final and fourth part of the questionnaire included three open-ended questions that focused on attitudinal data. These questions inquired about the teaching strategies and techniques used by the teachers when working with students with ADHD, how they handle behavior issues related to ADHD, and whether they have ever collaborated with a professional to assist students with ADHD.

3.4 The rating scale

After conducting a search for already diagnosed ADHD cases, it was encountered that many teachers claimed they had never heard of it, and even psychologists informed us that ADHD cases not comorbid with autism or another learning disability would not be found. As a result, the psychologist who provided us with a rating scale (see appendix 3) for hyperactivity, inattention, and aggression, based on the Diagnostic and Statistical Manual of Mental Disorders, was reached out to. The rating scale, developed by Algerian psychologist Dr. Fakih El Eid³ enabled learners with ADHD-like symptoms to be identified so that their behaviors on the scale could be assessed by teachers based on the last 6 months. Subsequently, the learners were clinically diagnosed by the psychologist.

The rating scale was divided into 3 main dimensions and 28 different behaviors: inattention, which had 9 behaviors, hyperactivity and lack of motor control, which also had 9 behaviors, and aggression which had 10 behaviors, the scale wouldn't only show if the learners have ADHD but also its severity and which type of ADHD it is.

³Dr. El Eid Fakih, Ph.D in clinical psychology, University of aboubakr Belkaid-Telemcen, Faculty of Humanities and Social Sciences.

4 Data analysis and Discussion

4.1 Classroom Observation:

4.1.1 School B

4.1.1.1 Class 1

On February 12th at 10 am, the first observation was conducted with T5, in a third-year class. The class environment was observed to be messy, with almost 50 learners accommodated in a small classroom, and it was challenging to find a place to put the table and chairs. It was informed by the teacher that the learners would be more active on that day, as a test they were supposed to have was canceled, and it was advised to expect them to be loud and overactive. However, despite the overall activity and noise in the class, ADHD-like symptoms were still observed in two learners, namely L12 and L16.

L12 was excessively chatting, moving a lot in his seat, fidgeting and cracking his fingers all the time. The teacher kept trying to ask him questions to bring his attention back to the lesson but he kept drifting away and unable to maintain his focus with her. The teacher kept tolerating his behavior until the moment he showed aggression and disrespect through blurting out an inappropriate word, so what seemed to be her only solution was to kick him out of class sending him to the administration. Despite his showing regret and apologizing immediately after she still refused to allow him back to class and asked to see his parents.

L16, on the other hand, was not paying attention to the teacher at all, daydreaming most of the time, and doodling on the table, and when we checked her copybook to see whether she was on track with the lessons, most of her courses were incomplete with a lot of empty pages in between. However, the teacher did not show any response towards that, because according to her, the pupil was just going through a phase and her behavior was not disruptive, so that did not require any response.

4.1.1.2 Class 2

The second class attended with T5 was at the second-year level. It was noted for a significant number of complaints and reports filed with the disciplinary panel, not only by the teachers but also by the administration staff. The learners in this class exhibited highly disruptive behaviors. One notable observation was that it took approximately five minutes for the teacher to successfully establish a calm seating arrangement for all the pupils.

The first case in this class involved L17, who was positioned at the far end of the classroom. At the commencement of the lesson, L17 displayed talkative and hyperactive behavior. Additionally, signs of aggression were exhibited, such as throwing pens at classmates. Despite repeated warnings and requests from the teacher to concentrate on the lesson, L17 was unable to maintain focus. It was mentioned that N.A had previously exhibited good behavior and achieved an average level of performance in prior years. However, there was a sudden decline in his interest in studying. The teacher expressed having invested significant effort in understanding him but without yielding any positive outcomes.

The next case was a boy L16, who seemed to be attentive at first but slowly got distracted and bored. He started moving a lot in his seat, checking his schoolbag, and flipping the book pages. When the teacher noticed that he was completely absent-minded, she requested him to erase the board. At the end of the hour, the teacher gave them a task to do which he failed to understand, so she approached him to re-explain the assignment.

4.1.1.3 Class 3

The third class was attended with T3 in another second year. An initial observation revealed that the classroom had a much quieter atmosphere compared to the previous one. The teacher maintained a strict approach and demonstrated effective classroom management skills.

The first pupil who caught attention was a boy sitting in the back of the classroom referred to as L18, who is a bit older than his classmates. He was constantly talking and distracting his peers by frequently whispering jokes and making funny facial expressions. He had no copybook and no school supplies; claiming that he forgot them at home. The teacher kept calling out his name now and then, to redirect his attention back to the lesson and even repeated it more than one time to make sure he understood.

The second case that was spotted was a girl sitting in the front, referred to as L11. She appeared to be an excellent pupil with an impressive level of English language proficiency. However, what was noticed was her tendency to frequently stand up from her chair, particularly when the teacher posed a question. She would eagerly and loudly participate by repeatedly calling out "Miss, Miss, Miss..." and impatiently raising her hand while jumping. Sometimes, even when the question was directed to another student, she would blurt out the answer. When the teacher was asked about her, she explained that L11 had always been enthusiastic about studying and participating, attributing it to a habit she had developed since primary school. The

teacher emphasized that what mattered was that L11 was one of the top-performing students in the school.

4.1.1.4 Class 4

A fourth-year class was also attended with T3. It was observed that the teacher's approach to this class was notably different compared to the previous year. She appeared to be more relaxed and easygoing with the students. This observation did not come as a surprise, as the pupils in this class exhibited less hyperactivity and displayed a greater level of calmness and interactivity compared to the previous class.

The first case that was initially spotted was L19, a 17-year-old boy who was seated next to the window. As the instruction began, he was observed to be daydreaming and easily distracted by the activities of other pupils playing handball in the school playground. The teacher eventually noticed his lack of focus and engagement in the class. She instructed him to close the window and change his seating position, while also making an effort to explain the current topic to him in order to increase his involvement. Later, during a 10-minute reading activity assigned by T3, L19 began exhibiting symptoms of hyperactivity and impulsivity. He engaged in excessive talking with his peers and used inappropriate language. Furthermore, he started to mock and make fun of his classmates.

Next to L19, there was his friend L20. Who was concentrating on the teacher and participating. Until L19. Moved next to her. She started chit-chatting and losing interest in the lesson; she even stopped taking notes. However every time the teacher called out her name, she tried to redirect her focus to the lesson as a consequence she completed the task successfully. The teacher claimed that she gave more attention to L20. Simply because she feels that she has more desire to study than L19. And that L19. Was such a bad influence on her?

4.1.1.5 Class 5

In the first-year class attended with T4, the classroom observation took place on a Thursday afternoon. Upon entering the classroom, it was evident that the atmosphere was chaotic, making it challenging for the teacher to establish silence and begin the teaching session. Gradually, the pupils settled down to some extent. The teacher commenced the lesson by presenting pictures and introducing new vocabulary to the class. During the interaction

between the pupils and the teacher, our attention was drawn to L13, an 11-year-old girl. Throughout the lesson, she appeared to be completely zoned out, engaging in sketching on the table and displaying a lack of focus. The teacher did not address her by name or make any effort to involve her, focusing solely on those seated at the front of the classroom. At the end of the class, we inquired about L13 from the teacher, surprisingly, she was unaware of the student's name and mentioned that L13 showed disinterest in English.

Another spotted case was a 14 years old boy L14, who is considered a lot older than his classmates. He was highly impulsive, he tended to make fun of his peers, throw pieces of paper on them, and make weird noises. The teacher tried many times to alert him but he spoke back to her disrespectfully. So she ended up punishing him by having him stand beside the wall on one leg for the rest of the session, even with the punishment in place he still kept misbehaving. The teacher claimed that the current state of the class was not always that noisy and it was due to the end of the week and that they were exhausted from studying.

4.1.2 School A

4.1.2.1 Class 1

The second middle school observation was initiated on February 20th, and due to the unavailability of teachers' schedules, a decision was made to attend a class on Sunday morning with T2. A 3rd-year class was chosen for observation. In contrast to the previous middle school, the school environment exhibited a more favorable condition with walls painted in clean white. Politeness was observed among all learners, and the teachers adhered to stricter disciplinary measures. The teacher who was observed demonstrated thoroughness in engaging with the learners, ensuring the inclusion of everyone. Visual aids were employed, and efforts were made to deliver clear instructions and explanations, catering to the different learning styles of the students.

Two learners with ADHD-like symptoms were identified in this class. L9 exhibited difficulties in maintaining attention, easily getting distracted by his surroundings. He demonstrated a tendency to become bored with tasks, frequently shifting from one activity to another without completing them. He displayed a preference for avoiding tasks that required sustained mental effort. L9's organizational skills were lacking, as evidenced by his unfinished lessons in his copybook. Moreover, L9 exhibited poor motor control, remaining in constant motion throughout the lesson. He frequently sought excuses to leave his seat, engaging in disruptive chatter and distracting others. L9 consistently spoke out without raising his hand,

displaying impulsive behavior. Additionally, he displayed aggression in his interactions with both peers and the teacher. He took pleasure in bullying and mocking others, often instigating arguments seemingly out of nowhere. Despite these challenges, the teacher demonstrated great patience in working with L9. She employed strategies such as frequent check-ins after giving instructions and assigned him a seat at the front of the classroom, allowing for close monitoring.

The second possible ADHD was his classmate L6, he seemed to be having a hard time trying to focus, as he would easily lose attention and focus on other things around the class any conversation that did not even involve him, and even gazing out of the window daydreaming, for his hyperactivity it was noticed that he could not stay seated, kept turning around to his classmates and was talking loudly, he is a learner with a good level in English and most of his answers were right but whenever the teacher asked questions he would blurt out the answers without even allowing her to finish, furthermore, he showed a lot of aggression when dealing with peers by impulsively throwing things at them and he was spotted jokingly but harshly hitting his classmate who was sitting right next to him, he was also very argumentative with his teacher and always tried to challenge and argue with her for trivial reasons, with L6 too the teacher was patient, she tried to make him feel included and focus on the fact that he had a good level, gave him constant positive feedback whenever he gave correct answers in order to keep him motivated and interested, whenever he lost focus she would explain to him all over again in different ways until she makes sure he understood his lessons.

4.1.2.2 Class 2

In the special class taught by T2, a potential case was observed in L7, who displayed behaviors consistent with ADHD symptoms. L7 exhibited difficulties with organization, attention, and following instructions from the teacher. Forgetfulness was also evident in his behavior. Hyperactivity was another notable aspect, as L7 struggled to remain seated and frequently engaged in disruptive behaviors such as being chatty, interruptive, and impatient. Additionally, L7 demonstrated aggression and harshness in interactions with peers and even the teacher, using a loud and passive-aggressive communication style and challenging authority. Despite these challenges, L7 showed a strong proficiency in English and had consistently performed well in previous years. The teacher made significant efforts to involve L7 and encourage improvement, demonstrating patience and closely monitoring his behavior. Reminders were provided to speak quietly, stay seated, and pay closer attention.

Another possible case that caught attention in the same class was L3, he had a good level of the language and was attentive but he faced problems with moving constantly, tending to be chattery while talking fast moving from one topic or talking about many topics and ideas all at once, very quick to answer questions before fully hearing them and very interruptive with the teacher, he did not show any signs of aggression despite his hyperactivity, the way the teacher dealt with him was by giving him tasks that would require him to move from his seat, like cleaning the board, helping her out with distributing papers, reading out loud, and even asking him to bring things or papers from other classes or the administration when needed, in attempt to give him a space where he could project his hyperactivity.

In the same class, the attention was drawn to L10, a girl who appeared highly distracted and lost in daydreams throughout the entire lesson. It was later revealed by the teacher that L10's parents were going through a divorce, which explained her lack of focus and absentmindedness. The teacher demonstrated understanding towards L10's situation and made efforts not to add additional pressure on her. The teacher took extra measures to accommodate L10's needs by providing repeated explanations of instructions and checking on her progress between tasks. This approach aimed to support L10 in staying engaged and keeping up with the class despite the challenges she was facing.

4.1.2.3 Class 3

The second teacher whose class was observed in this school was T1. Similar to T2, only 3rd and 4th-year classes were taught by T1. In her 3rd-year class, tasks and instructions were explained only a few times before moving on. The students in the class were not very interactive with the teacher and did not actively seek clarification or assistance. No specific strategies or tools were employed by T1 to encourage student interaction or ensure their understanding. T1 seemed to rely on the assumption that students would grasp the instructions with minimal repetition.

Three potential cases were observed in this class. The first case was L4, who displayed significant inattentiveness. She exhibited impatience by frequently switching tasks without completing them, and was easily distracted by external stimuli. Her tools and materials were consistently disorganized or lost. Although she was talkative and quick to respond to questions by getting up from her seat, she did not exhibit any aggressive behavior. The teacher seemed indifferent to her hyperactivity and inattentiveness, as her behavior did not disrupt the class, and therefore did not warrant a response from the teacher.

The second possible case spotted was L5, he seemed to be trying to pay attention but he was drifting away now and then, and he was also easily distracted, his hyperactive behaviors showed more than the other ones, he was too quick to blurt out answers and talks very fast and very often. Again, since his behaviors were not disruptive, the teacher was not responsive to him either, she did not pay much attention to his inattentiveness and hyperactivity, tried to provide accommodations, or applied any behavioral management strategies to help him out.

The third possible case in this class was L1, he was 16 so he had already redone two years beforehand, despite not showing any aggressive tendencies and barely any hyperactivity other than being loud and chattering a lot, he had issues with maintaining his attention, he gave up in the middle of some tasks because he got bored, he was very disorganized and easily distracted which is why he was considered one of the possible cases due to his issues with attention and other ADHD-like symptoms. However, since his behavior did not disrupt the teacher or the class, he did not receive much attention or support from her to improve his focus.

4.1.2.4 Class 4

In the 4th-year class attended with this teacher, two learners with ADHD-like symptoms were observed. The first learner, L2, exhibited difficulties in following instructions and being easily distracted. Additionally, he displayed disruptive behaviors such as being loud, interrupting the teacher and peers, and engaging in teasing and embarrassing behavior. Due to the disruptive nature of his hyperactive tendencies, the teacher did not display patience with him and was easily bothered by his behavior. As a result, she responded negatively by being dismissive and punishing him for his aggression and loudness.

The second and last case spotted was L3, also in the same class, he showed difficulties paying attention, listening when spoken to, and making continuous efforts in doing tasks. On the hyperactive and motor control side, he did show symptoms like leaving his seat often, always fidgeting, chattering a lot, and being impatient when waiting for his turn. Not many aggressive tendencies were seen in him except for making fun of his peers and being argumentative with his teacher. The teacher responded to his behavior through punishments more than tolerance, she saw him as a disruptive pupil who just refuses to learn which led to her negative responses toward him.

4.2 Classroom Observation discussion

Our classroom observation findings reveal a range of different teachers' attitudes towards ADHD-like symptoms, in both school A and B which have two different environments and school management styles. In school A, most of the pupils were not as polite and well-behaved as in school B. That makes it only logical that the teachers' methods and approaches are distinct; in teaching and dealing with all learners' behaviors generally and ADHDers specifically. However, despite this fact, common points between them were identified.

When most of the teachers notice 'attention symptoms', they always tend to insist on their pupils to focus and patiently repeat the instructions to them and even check their understanding of the tasks, providing them with positive feedback which results in redirecting back their attention to the lesson and completing the tasks successfully. This aligns with the study of Khadimi⁴and colleagues that teachers who use positive behavior support (PBS)⁵ are most likely to build a positive relationship with their learners and improve their performance and interaction. On the other hand, in cases like L18 and L1 where teachers did not show any response towards their inattentiveness, lack of participation, daydreaming, distractibility, and poor note-taking simply because these behaviors were not deemed disruptive by teachers. Some attributed it to the lack of effort and laziness and another teacher dismissed it as "a passing phase". According to Barkleybeing left out and ignored by their teachers may lower their motivation and excitement to learn⁶.

For learners who have motor control and impulsivity symptoms, only a minority of teachers tend to assist them in order to help them manage and regulate their hyperactivity. This could be observed through instances where T2. Always managed to keep her classes an inclusive environment for hyperactive pupils, handling their disruptive behaviors without relying on punitive disciplines, negative feedback, and criticism; however, she was so supportive and familiar with all her pupils' living situations. T2. Built a strong relationship with her learners; created a welcoming and trusting environment for them which had a huge effect on their engagement in class, and this effect manifested itself even in hyperactive learners, in having more self-control. Unlike the other learners who got uncontrollable when having a negative attitude towards them like 'threatening and yelling'. Some learners even showed aggression signs.

⁴Chapter 2, title 2.3.4, para 3 ⁵Chapter 2, title 2.3.4, para 2

⁶Chapter 2, title 2.3.4, para 1

T5. Tended to help hyperactive learners by giving them small tasks to do during the class, so they would not project it otherwise, which is considered a coping mechanism and this supports the third research hypothesis which is 'Teachers' responsive interventions could either help ADHDers learn how to cope with their uncontrollable behavior, how to manage it and reach their full potential; or it could break them down and make them fall into a failure cycle that would affect their future.

T3 viewed motor control symptoms in two different ways. When a pupil with hyperactive behaviors but has a good academic performance or at least tries to show interest in studying, then they should receive appropriate support and guidance but she considered hyperactivity in the struggling ones as a potential disruption. T4 and T1 on the other hand, have common responses towards hyperactive pupils. They believe that to maintain order and discipline in the classroom, 'troublemakers' as they mentioned should be punished in order to teach them that boundaries and expectations in the classroom are not to be stepped on and this aligns at some level with our second hypothesis Given that students with ADHD require more effort and patience from teachers, how teachers react to them varies. It can be positive, especially if the teacher knows how to help and support them, but it can also be negative, more so if the teacher lacks knowledge about ADHD, making the learner appear disruptive and not well-behaved.

4.3 Teachers' Interview

The interviews were supposed to be structured asking about teachers' knowledge of ADHD, their experience with it, whether they can recognize ADHD symptoms in learners, and whether they use any specific strategies when dealing with such behaviors.

• Item 1: Do you know ADHD?

Four out of five of those teachers answered with a 'no' on whether they know ADHD and the only one that answered yes was T2, she explained that she had heard of it but never had any experience with it, and her definition of ADHD was limited to only lack of attention and being disruptive, so despite hearing about it she didn't have a full understanding of it. After explaining ADHD symptoms to them and asking if they have had experiences with learners who showed those symptoms they agreed, T5 told us that this year alone she had 2 learners with all the exact symptoms, and halfway through the year they ended up getting excluded from the school because of their behavior and their refusal to learn.

• Item 2: Could you recognize ADHD symptoms in learners?

On whether they could recognize ADHD symptoms in learners, all of them answered that they do notice such behaviors but they never relate them to a disorder. They were also asked if they had received any training or had studied neurodevelopmental disorders⁷ before, and they

Collectively answered 'no', T1 told us that even in her last year of university and despite studying psychopedagogy, those sorts of disorders were never mentioned or talked about. They were asked about how they usually manage behavioral issues related to hyperactivity or lack of attention, and if they have any specific teaching strategies to use with those types of learners. T5 explained that she tries to be patient with them when it comes to inappropriate behavior but if the behavior becomes too much to handle she could residue to punishment, kicking them out of the class, explaining that she tried calling for their parents several times, but they could never help seeing how they live in a middle-class neighborhood that is always problematic and the parents do not show much of care to their kids and their studies. T3 agreed with her on the same point explaining that she manages those behaviors by being extra strict with them and making boundaries and limits clear, and setting punishment with each boundary stepped on explaining that this does help with behavior management for her.

• Item 3: Do you use any strategies when dealing with learners who exhibit such behaviors?

As for the teaching strategies they both explained that they do try to be as thorough as possible, going through points again and again, using visual and audiovisual aids trying to give learners breaks between each task, T5 explained to us how she implicitly divides her hour with her learners into 3 parts, 20 to 25 minutes for the main lesson, 5 to 10 minutes of a break where she either lets them talk to "spend their extra energy in it" she said and then she goes back to the left 20 to 25 minutes for doing the tasks and practice of the lessons. While T4 explained that when it comes to behavioral management, she always goes to punishment, because "it is what teaches them that they are no longer in primary school". For the strategies used to support the learners, she explained that since she teaches mostly first years, any issues related to having a hard time getting organized or paying attention, or following instructions are always related to The fact that learners just need to adjust to the middle school program since they're just coming out of the primary school learning program. At the second school, Dr. T2 was the one responsible for the special 4th year class, none

⁷Chapter one, title 2.1.1, para 1

of the learners in that class were clinically diagnosed with ADHD before our diagnosis, but she did see the manifestation of ADHD in their behaviors and learning patterns, she explained that she tried to understand each learner and their learning behavior so she could individually help anyone facing a problem based on what exactly need, and for behavioral management she explained that instead of using punishments and violence, she tried to figure out where that behavior is coming from so she can understand better and that she always tries to pull the learners closer to her and show them understanding rather than pushing them away, explaining that once she started doing that their years and interaction in class became so much better. On the other hand, T1 explained that she uses the behavioral approach with her learners, meaning that she tries to show them the right and wrong ways to behave based on positive and negative punishments or rewards and that when it comes to using specific teaching strategies or techniques to help said learners, she explained that she does not have any experience with ADHD and she believes that all of her learners are neurotypical so she doesn't need any specific strategies or techniques

4.4 Teachers' interview discussion:

The data collected from the interviews provided valuable information on teachers' knowledge and attitude towards learners with ADHD as well as their approaches to managing learners with ADHD-like symptoms.

The interviews confirm to some extent our hypothesis which explains that teachers' responses could either be supportive, tolerating, or dismissive, or they could even respond with punishment toward the learners. Most teachers showed a lack of knowledge about ADHD initially, with only T2, having heard of it before. This lack of awareness is what resulted in a potentially dismissive attitude towards the disorder. However, after being given information about ADHD symptoms, all teachers acknowledged noticing such behaviors in their learners, indicating a shift from dismissive to a more tolerant stance. It is important to note that the teachers' lack of awareness does not indicate a dismissive attitude, but rather a lack of exposure to information about neurodevelopmental disorders.

Regarding the responses to learners' behaviors associated with ADHD, teachers' approaches varied. T5 and T3. Mentioned resorting to punishment and strictness, indicating a potentially punitive response. T4 also emphasized the use of punishments, linking it to the

transition from primary to middle school. These responses align with the hypothesis, as they suggest a more punitive approach to behavior management.

On the other hand, T2, who was responsible for a special 4th-year class, applied a more supportive approach. She tried to understand each learner individually and their specific needs, focusing on building a closer relationship with them. This approach indicates a more supportive and understanding response to learners with ADHD behaviors, contrary to the hypothesis.

The data partially support our third hypothesis: Teachers' responsive interventions could either help ADHDers learn how to cope with their uncontrollable behavior, how to manage it and reach their full potential; or it could break them down and make them fall into a failure cycle that would affect their future. The punitive responses mentioned by T5, T3, and T4. Have the potential to negatively impact learners by reinforcing negative self-perceptions and feelings of failure. Additionally, it was seen that in the way those responses made the learners' behavior become worse and more challenging, these approaches may not provide the necessary support for learners to reach their full potential. Punishment-based strategies may also lead to exclusion or expulsion from the school, as seen in the case mentioned by T5.

On the other hand, T2's supportive approach, focusing on understanding learners and building a closer connection, shows a more positive and empowering response. This approach may improve the learners' self-esteem, motivation, and overall well-being. It has the potential to help them cope with their behaviors, manage them, and achieve their full potential.

Overall, the data reveals a mixture of responses from teachers, ranging from dismissive and punitive to supportive and understanding. The findings show the crucial need for increased awareness and knowledge about ADHD among teachers to ensure more consistent and positive responses.

4.5 Teacher's questionnaire

The questionnaire was designed to gather valuable insights and feedback from the participating teachers.

4.5.1 Respondents' Profile

In the "Respondents' Profile" section, there were questions about teachers' age, educational qualifications, areas of specialization, and professional experience within the selected middle schools.

| Demographics of the participant teachers | | | |
|--|--------------|------|--|
| Characteristics | Participants | % | |
| Gender | | | |
| Male | 0 | 0% | |
| Female | 5 | 100% | |
| Age group | | | |
| 30-39 | 2 | 40% | |
| 40-49 | 2 | 40% | |
| 50-60 | 1 | 20% | |
| School | | | |
| A | 3 | 60% | |
| В | 2 | 40% | |
| Degree | | | |
| License 's degree | 4 | 80% | |
| Master's degree | 1 | 20% | |
| Experience | | | |
| 0-10 | 2 | 40% | |
| 11-20 | 2 | 40% | |
| 21-30 | 1 | 20% | |

Tab 4. Demographics of the participant teachers

The demographics of the participant teachers in the study were as follows. In terms of gender, there were no male participants, accounting for 0% of the total, while all participants were female, representing 100%. Regarding age groups, 40% of the participants fell into the 30-39 and 40-49 age ranges, with 2 participants each, while one participant (20%) was in the 50-60 age group. In relation to the schools they belonged to, 60% of the participants were from School A, and the remaining 40% were from School B. In terms of educational background, the majority (80%) held a Bachelor's degree, while 20% had a Master's degree. In regard to teaching experience, 40% had 0-10 years of experience and another 40% had 11-20 years, with the remaining 20% having 21-30 years of experience.

4.5.2 Respondents' Familiarity with ADHD

Item 1: Do you have any background knowledge about ADHD?

Item 2: Do you feel that you have a good understanding of what ADHD is?

Item 3: Do you have personal experience with someone who has been diagnosed with ADHD?

Item 4: This question was divided into two parts.

Item 4.a: Have you ever taught someone who has been diagnosed with ADHD? Item 4.b: If yes, how many?



Respondents' Familiarity with ADHD

Figure 3: respondents' Familiarity with ADHD

As seen on the graph, for the first question four teachers answered with yes to having background knowledge about ADHD while only one answered no. On the second question, 4 of them answered with no to whether they feel that they have a good understanding of what ADHD is or not, while only one answered with yes. Three teachers answered with yes to having personal experience with someone who has been diagnosed with ADHD while two answered with no. Finally, four of them answered 'no' to whether they have taught someone with ADHD before while only one answered yes, but she did not answer how many have she taught.
4.5.3 Respondents' Understanding of ADHD

Item 1: Do you think that ADHD learners can succeed in school?

Item 2: Do you think that ADHD is overlooked as a psycho-pedagogical issue?

Item 3: Do you think that ADHD is caused by a lack of discipline that is due to poor parenting?

Item 4: Do you think that ADHD learners are capable of learning?

Item 5: Do you think that ADHDers are more likely to be disruptive in the classroom?

Item 06: Do you think that ADHDers are more likely to engage in risky behaviors?



Figure 4: respondents' Familiarity with ADHD part one

Item 07: Do you think that ADHDers are more likely to be misunderstood and mistreated by their peers?

Item 08: Do you think that medication could be an effective treatment for ADHD?

Item 09: Do you think that ADHD learners should be held to the same standards as their peers?

Item 10: Do you think that ADHDers should be excluded from certain activities?

Item 11: Do you think that ADHDers should be punished for their behavior?

Item 12: Do you think that ADHDers need more attention than other learners?



Figure 5: respondents' Familiarity with ADHD part two

Item 13: Do you think that ADHDers should be held responsible for behaviors that are a result of their disorder?

Item 14: Do you think that specific classroom accommodations should be made for ADHD learners?

Item 15: Do you think that ADHD learners should be placed in separate classes or schools?

Item 16: Do you think that teachers should be trained on how to work with ADHDers?

Item 17: Do you think ADHDers require a different teaching style than their peers?

Item 18: Do you think that parents of ADHDers are doing enough to support their children?



Respondents' Understanding of ADHD

Figure 6: Respondents' Understanding of ADHD part three

In item 1, which asked if ADHD learners can succeed in school, the majority of respondents answered "yes" with a count of 5, while none answered "no." Similarly, in item 2, regarding whether ADHD is overlooked as a psycho-pedagogical issue, there were 3 "yes" responses and 2 "no" responses. However, in item 3, which inquired if ADHD is caused by a lack of discipline due to poor parenting, the majority of respondents disagreed with 5 "no" answers, and none answered "yes." Moving on to item 4, where the capability of ADHD learners to learn was questioned, all respondents answered "yes" with a count of 5. Likewise, item 5, asking if ADHDers are more likely to be disruptive in the classroom, received 5 "yes" responses and no "no" responses. Furthermore, in item 6, concerning the likelihood of ADHDers engaging in risky behaviors, all respondents answered "yes" with a count of 5. As for item 7, asking if ADHDers are more likely to be misunderstood and mistreated by their peers, there were 5 "yes" responses and none answered "no." Shifting to item 8, regarding the effectiveness of medication as a treatment for ADHD, the majority of respondents disagreed with 4 "no" answers, while 1 answered "yes." In item 9, which inquired about holding ADHD learners to the same standards as their peers, all respondents answered "yes" with a count of 5. However, in item 10, asking if ADHDers should be excluded from certain activities, 2 respondents answered "no" and 3 answered "yes." In a similar vein, item 11, regarding whether

ADHDers should be punished for their behavior, received 2 "no" responses and 3 "yes" responses. Similarly, in item 12, asking if ADHDers need more attention than other learners, there were 2 "no" responses and 3 "yes" responses. Moving on to item 13, asking if ADHDers should be held responsible for behaviors resulting from their disorder, all respondents answered "yes" with a count of 5. In item 14, concerning whether specific classroom accommodations should be made for ADHD learners, there were 5 "yes" responses and no "no" responses. Shifting to item 15, asking if ADHD learners should be placed in separate classes or schools, 4 respondents answered "no" and 1 answered "yes." In item 16, regarding whether teachers should be trained on how to work with ADHDers, all respondents answered "yes" with a count of 5. However, in item 17, asking if ADHDers require a different teaching style than their peers, there was 1 "no" response and 4 "yes" responses. Finally, in item 18, asking if parents of ADHDers are doing enough to support their children, the majority of respondents disagreed with 5 "no" answers, while none answered "yes."

4.5.4 Respondents Teaching Strategies and Practices

Item 1: This Item was divided into two parts.

Item 1.a. Do you use any specific teaching techniques when working with ADHD symptoms? **Item 2.b.** If yes, what do you use?

Most of the participating teachers in both schools A and B suggested that they engage their pupils in out-of-class tasks. They ask them to participate in extracurricular activities such as theater, different kinds of sports, music, and drawing in order to improve their attention and project their hyperactivity and impulsivity symptoms somewhere other than the classroom. They also said that they give them small responsibilities in the class, so they would be able to move during the sessions and not get bored. They might ask them to distribute the papers to their peers, clean the classroom and erase the board. However, only a few of them answered that they offer them extra time to complete their tasks and repeat the instructions for them.

Item 2: How do you handle classroom behavior issues related to ADHD?

According to the respondents, they use various methods to handle ADHD behaviors that learners show in the classrooms, some said that they just try to ignore their mistakes without emphasizing stopping them but if they go out of control they send them to the school headmaster. Some others suggested that they seek to understand where that behavior is coming from by having a reasonable conversation with them. Sometimes they even involve their parents and the school psychologists to corporate, in order to reduce the number of misbehavioural patterns and get to identify their strengths and weaknesses to work on them. Few of the participating teachers admitted that they used different types of punishment as a means to control ADHD learners.

Item 3: It was divided into two parts.

Item 3.a: Have you ever collaborated with a school counselor or other professional to support a pupil with ADHD?



Item 3.b: Was it helpful?

Figure 7: teacher/school counselor collaboration to support ADHDers and its effectiveness

As notice on figure 5, 60% of the teachers already tried to collaborate with the school counselors and reported all the ADHD-related behaviors that are showing in class, but unfortunately for some reasons it was not helpful. However, the other 40% did not attempt to establish any collaboration.

4.6 Teachers' Questionnaire Discussion

The data collected from the questionnaire highlighted that most teachers' knowledge about ADHD is either myths or misconceptions. This lack of awareness resulted in their negative responses, beliefs, and attitudes towards learners with ADHD as noticed in most of the classroom observations and according to what they said in the interview, this totally aligns with our second hypothesis which suggests that the teachers' positive or negative attitudes depends on their knowledge about the disorder and its symptoms.

Our findings also show that teachers may perceive hyperactivity and disruptive behaviors as common traits among adolescents that they should be punished for and hold them responsible for their behaviors; rather than recognizing them as potential symptoms of ADHD. Despite this perception, some teachers recommended some methods to accommodate learners with this disorder in order to help them maintain focus and have more self-control.

After providing them with some pieces of information about ADHD, they all recognized the importance of receiving training on the disorder and proposed that the Algerian Ministry of National Education should prioritize it by designing ADHD training for all teachers, to help understand and support this category of learners more and integrate all necessary resources and methods to cater their needs, also to avoid excluding them from schools for conditions that are out of their control, just like what happened in school A.

It was noticed that there was a mismatch between what the teachers think, feel and react; which is known as cognitive dissonance according to Leon Festinger (1957). Most of their responses to ADHD behaviors in class were not correlated to their answers in the questionnaire and their statements in the interview. The existence of cognitive dissonance in teachers contributes to an inconsistency in their teaching approaches. This leads us again to the immense necessity to assign special training programs about ADHD in Algeria.

4.7 Rating Scale

After being provided with the rating scales by the teachers, the psychologist was able to diagnose a total of 18 cases. The information obtained through the rating scale helped in gaining a better understanding of the manifestations of ADHD in Algerian classroom settings. The rating scale is composed of three dimensions aimed at identifying and assessing ADHD symptoms in learners.

The mean score was used to analyze the data from the rating scale, allowing for a comprehensive understanding of the severity and prevalence of ADHD symptoms in the diagnosed cases. By calculating the mean score for each dimension (motor control deficiency, inattention, and aggression), it provided a measure of central tendency, facilitating the comparison between different symptom categories. Consequently, the mean score helped to

assess the overall symptom severity and identify the most prominent symptoms present in the ADHD cases.

| Cases | Attention symptom | | | Motor control | | | Aggression symptoms | | |
|----------------------|-------------------|----------|------|---------------|----------|------|---------------------|----------|------|
| | Strong | Moderate | Weak | Strong | Moderate | Weak | Strong | Moderate | Weak |
| L1 | 1 | 5 | 3 | 2 | 4 | 2 | 0 | 0 | 4 |
| L2 | 1 | 1 | 6 | 4 | 4 | 2 | 0 | 3 | 1 |
| L3 | 0 | 4 | 5 | 0 | 4 | 5 | 0 | 2 | 4 |
| L4 | 6 | 3 | 0 | 4 | 4 | 1 | 0 | 4 | 2 |
| L5 | 0 | 0 | 7 | 1 | 4 | 2 | 0 | 0 | 2 |
| L6 | 4 | 4 | 1 | 6 | 4 | 0 | 8 | 2 | 1 |
| L7 | 9 | 0 | 0 | 10 | 0 | 0 | 11 | 0 | 0 |
| L8 | 0 | 1 | 7 | 8 | 2 | 0 | 0 | 1 | 3 |
| L9 | 9 | 0 | 0 | 10 | 0 | 0 | 11 | 0 | 0 |
| L10 | 0 | 4 | 4 | 1 | 5 | 4 | 0 | 1 | 10 |
| L11 | 4 | 5 | 0 | 7 | 2 | 0 | 0 | 0 | 5 |
| L12 | 0 | 2 | 3 | 0 | 8 | 0 | 0 | 0 | 5 |
| L13 | 3 | 3 | 3 | 2 | 7 | 0 | 2 | 9 | 0 |
| L14 | 9 | 0 | 0 | 10 | 0 | 0 | 11 | 0 | 0 |
| L15 | 6 | 3 | 0 | 7 | 3 | 0 | 0 | 2 | 8 |
| L16 | 4 | 2 | 2 | 8 | 1 | 1 | 4 | 4 | 1 |
| L17 | 7 | 1 | 0 | 7 | 0 | 2 | 6 | 1 | 2 |
| L18 | 7 | 1 | 1 | 7 | 2 | 1 | 0 | 0 | 8 |
| Total | 70 | 39 | 42 | 94 | 54 | 20 | 53 | 29 | 56 |
| The mean score | 3.8 | 2.1 | 2.3 | 5.2 | 3 | 1.1 | 2.9 | 1.6 | 3.1 |

Tab 5: Samples diagnoses with ADHD with the severity of each of the attention, motor control, and aggression symptoms

The mean score for each dimension shows the occurrence and the severity of each symptom in the sample of diagnosed cases. The mean calculated for each dimension was 9.3

for motor control deficiency, 8.3 for inattention, and 7.6 for aggression, which reveals that motor control deficiency symptoms were the most prevalent, followed by attention symptoms, with aggression symptoms being the least prominent.

4.8 Rating Scale Discussion

Based on the collected data from the rating scale and the severity level for each dimension, it illustrates the main manifestations of ADHD in classrooms which supports our hypothesis by providing evidence of the presence of inattentive behaviors. Motor control deficiency and aggression in learners diagnosed with ADHD (attention 8.3, motor control 9.3, and aggression 7.6), the mean scores show the severity of each dimension where motor control comes in first place followed by inattention symptom and then the aggression symptom taking the last place,

The high mean score of motor control deficiency shows that excessive motor activity is a prominent characteristic in ADHDers. The findings align with the hypothesis showing that ADHD learners do exhibit impulsive and hyperactive behaviors such as constant movement, leaving seats when expected to remain seated, and engaging in risky activities without considering the consequences.

The second highest mean score is the attention symptom which indicates that inattentive behaviors are the second most prevalent in our sample. These behaviors like difficulty sustaining attention, being easily distracted, and having trouble following instructions can affect the learner's ability to focus and engage in learning activities effectively; thus, impacting their learning behavior.

Lastly, the mean score for aggression symptoms suggests that aggressive tendencies are also observed in our samples. These behaviors, such as cruelty towards others, starting fights for trivial reasons, and using unethical language, can have a negative impact on their social interactions and learning behavior. This finding supports the hypothesis that ADHD can manifest in aggressive tendencies that may interfere with the learner's behavior and social interactions.

The data discussion of the rating scale provides support for the hypothesis that ADHD can be manifested in inattentive behaviors, excessive motor activity, or what is called hyperactivity, and aggressive tendencies, which can affect the learner's learning behavior. The high mean scores for motor control deficiency, attention symptoms, and aggression symptoms highlight the presence and significance of these dimensions in individuals diagnosed with ADHD.

4.9 Suggestions and recommendations

This research reached a list of suggestions and recommendations that aim at creating a supportive educational environment for ADHDers, by applying and implementing these strategies, teachers' understanding of ADHD will be enhanced, which will promote a more positive behavior and support from teachers' part, on top of that it would help foster an inclusive environment to help collaborate with support services and parents or guardians. Additionally, this study emphasizes the importance of implementing individualized education plans, encouraging research-based practices, establishing support networks, and conducting ongoing monitoring and evaluation.

The first strategy suggested is promoting Positive Behavior Support (PBS), according to Ruef et al. (1998) PBS differs from all other approaches in that it is based on the determination of what, where, when and how difficult behavior takes place as well as its reasons. PBS is based on the idea that behavior is not random, but that any persistent challenge behavior works for the student. They explain that PBS involves four main steps that are first, identifying the purpose of challenging behavior. Second, dissemination of appropriate alternative responses that serve the same purpose as challenging behavior. Third, consistently rewarding positive behavior and limiting the reward for challenging behavior. Finally Minimizing the physiological, environmental, and curricular factors that trigger challenging behavior. So it encourages teachers to adopt positive behavior support strategies when dealing with learners' symptoms, which include techniques such as redirecting attention, patiently repeating instructions, checking their understanding, and providing positive feedback to emphasize the importance of building positive relationships with learners and improving their performance and interaction. (pp. 21-32).

In addition, teachers should develop and implement Individualized Education Plans (IEP) ADHD-diagnosed learners. These plans should outline specific accommodations for said learners, modifications, and support strategies tailored to each of their needs. An Individual Education Plan is a written document prepared for the identified student which sets out the objectives to be met by them over time, educational strategies, resources and support needed in order to attain those objectives.

Furthermore, teachers can implement Cognitive behavioral therapy (CBT), which can help change learners' behaviors and reprogram their subconscious mind into adopting a better core belief which is responsible for what they think, how it affects them, and what they do in response; *"Cognitive behavioural therapy (CBT) intervention that focuses on the relationship* between cognitions (what we think), affect (how we feel), body response (how this affects our body) and behaviour (what we do).....CBT aims to reduce psychological distress and maladaptive behaviour by altering cognitive processes. The underlying assumption is that cognitive and behavioural interventions can bring about changes in thinking, feeling and behaviour, as affect and behaviour are largely a product of cognitions"

(Young and Smith, 2017, p. 08).

Moreover, utilizing multisensory teaching approaches is an effective strategy for enhancing learning among learners with ADHD. By incorporating visual, auditory, and kinesthetic methods, educators can create a more engaging and stimulating learning environment. Visual aids, such as charts, diagrams, and graphic organizers, can help learners with ADHD better understand and retain information by providing visual cues and organization, these visual representations can make abstract concepts more concrete and accessible (Karande et al., 2010, p. 66-72).

Providing clear and structured instructions is essential for supporting learners with ADHD in understanding and following directions. Breaking down tasks into smaller, manageable steps can make instructions more digestible and less overwhelming for these learners. By presenting instructions in a step-by-step format, educators can help ADHD learners focus on one task at a time and prevent them from feeling overwhelmed or confused (dupaul et al., 2011). Furthermore, providing clear and concise verbal instructions is crucial. Educators should use simple and straightforward language, avoiding excessive complexity or ambiguity. Clear instructions should be delivered in a calm and supportive manner, ensuring that learners with ADHD feel understood and guided throughout the task (pp. 35-42).

Barkley (2014) insists that offering frequent breaks and movement opportunities is an important strategy for supporting learners with ADHD in managing their energy levels and improving their focus. By recognizing the need for these learners to release energy and refocus their attention, educators can incorporate scheduled breaks and physical activities throughout the learning day. These breaks provide learners with ADHD the opportunity to recharge and reset their focus, while engaging in activities that allow them to move, stretch, or engage in sensory experiences. By incorporating these breaks, educators acknowledge the unique energy regulation challenges faced by learners with ADHD and provide them with opportunities to self-regulate and maintain optimal attention. Additionally, integrating movement opportunities into the learning environment can have a positive impact on concentration and reduce restlessness. Incorporating physical activities such as stretching exercises, brief movement breaks, or incorporating movement into academic tasks helps learners with ADHD channel their energy in a productive way. Movement stimulates the brain and supports the release of neurotransmitters associated with attention and focus, thereby enhancing cognitive functioning (pp. 400-426)

The recommendations do not target only teachers, they also involve the Algerian Ministry of National Education. Decision makers should set a goal to create a conducive atmosphere for learners with ADHD, to reduce their lack of focus, and facilitate more effective and productive learning. Among the tools that can contribute to this objective is assistive technology.

Text-to-speech software and audiobooks are indispensable tools for ADHDers who struggle with maintaining focus on writing and reading tasks. Text-to-speech software converts written text into spoken words and vice versa, allowing individuals with ADHD to listen to the content instead of relying solely on visual reading and writing. This helps enhance understanding, engagement, and information retention. Audiobooks, with their pre-recorded narrations, provide an immersive and auditory experience that supports individuals with ADHD who may struggle with sustained attention during reading. By providing resources like text-to-speech software and audiobooks, individuals with ADHD can develop their vocabulary, improve comprehension, and cultivate a greater appreciation for literature, overcome barriers and fully participate in educational, professional, and recreational activities that involve reading.

Digital Organizers: there are several calendar apps such as 'Google Calendar' or 'Microsoft Outlook', they provide learners with the ability to create and maintain personalized schedules. They can input important dates, such as assignment due dates, exams, and extracurricular activities, ensuring that they have a clear overview of their responsibilities. Or task management tools like Trello or Todoist, that can assist learners with ADHD in staying organized and managing their time effectively. These tools enable them to create schedules, set reminders for assignments or deadlines, and prioritize tasks. By having a visual representation of their responsibilities, learners can better plan and manage their time, reducing forgetfulness and disorganization.

4.10 Conclusion:

In conclusion, the data discussion reveals a range of different teachers' attitudes and approaches to dealing with ADHD learners. The findings indicate that teachers may react in different ways, from supportive and understanding to dissuasive or even punitive. While some teachers are willing to redirect attention and provide positive feedback to help students with symptoms of attention deficit disorder, others are ignoring or blaming this behavior on laziness. These shifts in knowledge and attitudes of teachers towards ADHD are also confirmed by the interview results, with a lack of awareness initially but then shifting to more sympathetic stances once they have received information.

The data partially support the hypothesis that teachers' responsive interventions can either help learners with ADHD cope with their behaviors and reach their full potential or break them down and contribute to a failure cycle. In addition, disciplinary measures and penalties can have adverse impacts on students, reinforcing negative perceptions as well as hindering their progress. On the other hand, there can be a positive impact on the self-esteem, motivation, and overall well-being of learners through supportive approaches which focus on understanding students' individual needs and building relationships.

The rating scale data also supports the presence of inattentive behaviors, motor control deficiency, and aggression in ADHDers. Motor control deficiency is found as the most prominent characteristic, followed by attention symptoms and aggression symptoms. These findings show the manifestations of ADHD in our sample and reflect the importance of these dimensions and their impact on learning behavior among people with ADHD.

General conclusion

In conclusion, this research has examined and investigated EFL teachers' attitudes towards learners with ADHD, through an analysis of a triangulation of research tools: classroom observations, interview, and questionnaire; due to the limitations of not finding any diagnosed cases with ADHD, we implemented the rating scales, which results' aligned with our first hypothesis.

Based on our findings, it was noticeable that there was a limited knowledge and awareness among teachers about this developmental disorder. The majority of them reported a lack of understanding about ADHD in a way they were familiar with its symptoms but they never knew they were associated with a particular disorder, they often perceived it as intentional disruption, laziness and just a teenage phase. These misconceptions resulted in a negative attitude towards this kind of learners, which led to creating an unwelcoming and unsupportive environment for them, hindering their academic process and affecting the teacher-learner relationship, however the ones who held a positive attitude, the learners were more likely to be interactive in class and interested in studying. These findings supported our second and third hypothesis to some extent.

Our findings also highlighted the huge need for teacher training programs about ADHD in Algeria; in order to fill the knowledge gap about this disorder and to provide teachers with the appropriate strategies and methods to deal with ADHDers, and to promote inclusive practices and empathy towards them. This did not totally align with our fourth hypothesis because most of the teachers did not know what to use in order to accommodate ADHD learners.

This study also calls for collaboration between teachers, parents, school counselors and all the educational staff to ensure that the most suitable support is provided for learners with ADHD since this collaboration helps in identifying their needs and the challenges they face, both at home and in school. Working together will guarantee that all learners regardless of their obstacles receive the essential support for a brighter future in education.

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Appendices

Appendix1: Departmental request for facilitating research access.

الجمهورية الجزائرية الديمقراطية الشعبية People's Democratic Republic of Algeria

Minstery of Higher Education and Scientific Research University of Ibn Khaldoun, Tiaret Faculty of Letters and Foreign Languages Department of English وزارة التعليم العالي والبحث العلمي جامعة ابن خلمون، تيارت كلية الآداب و اللغات الأجنبية قسم اللغة الإنجليزية

إلى السيد (ة): مديري المؤسسات التربوية - تيارت

الموضوع :طلب السماح للطلبة باجراء بحث علمي

بصفتي رئيس قسم اللغة الانجليزية بكلية الاداب واللغات بجامعة ابن خلدون تيارت. أتقدم إلى سيادتكم الموفرة بطلب السماح للطالبتين بختي نجلاء و مرزوق ^{حل}يمة المسجلتين بالسنة الثانية ماستر بنفس القسم بإجراء بحث علمي حول مشكل فرط الحركة ونقص الانتباه وذلك للاستفادة من خبرة الأساتذة والتمكن من استجواب بعض من أفراد الطاقم الاداري.

وفي الأخير تقبلوا مني أسمى عبارات التقدير والاحترام

LAUT NINE LA





Appendix 2: Teachers' questionnaire

| Yes No 18. Do you think that parents of ADHDers are doing enough to support their children? Yes No Part four: Teaching strategies and practices: 1. a. Do you use any specific teaching techniques when working with ADHD symptoms? Yes No Yes No b. If Yes, what do you use? |
|---|
|---|

Appendix 3: Rating scale

| S | cale for Hyperactivity, Inattention, a Diagnostic and Statistical Manu | | | | |
|--|---|--------|-------|-----------|--------------------|
| Геас | her's name: | | | | |
| Pup | il's name: | | | | |
| Gen | der: | | | | |
| | | | | | |
| Age | | | | | |
| eve | 4: | | | | |
| | Scale Instructions: | | | | |
| nº | nses should be based on the behavior exhibited by t BEHAVIOR | ALWAYS | OFTEN | sometimes | NEVER |
| - | The child's attention does not last long and does not | | | | |
| 1 | focus on details when performing tasks. | | | | |
| 2 | The child moves from one activity to another before completing the previous one. | | | | |
| 3 | The child cannot listen when spoken to. | | | 0 | 0 |
| 4 | The child has great difficulty following through on instructions. | | | | |
| 5 | The child has great difficulty organizing tasks. | | | - | |
| 6 | The child avoids or dislikes tasks that require continuous mental effort. | | | | 8 |
| 7 | The child loses the necessary tools to complete tasks. | | | | |
| 8 | The child is easily distracted by external stimuli. | | | | |
| 9 | The child is forgetful in daily activities. | | | | Ĵ. |
| 1 | The child makes constant movements, especially when sitting. | 2 | | | |
| 10 | The child leaves their seat in situations where | | | | |
| | remaining seated is expected. | E | | | |
| 10 | The child engages in risky activities without considering the consequences. | | - | | |
| 10 | The child engages in risky activities without | | | | |
| 10 11 12 13 14 | The child engages in risky activities without considering the consequences. | | | | ÷ |
| 10 11 12 13 | The child engages in risky activities without considering the consequences. The child has great difficulty playing quietly. | | | | |
| 10 11 12 13 14 | The child engages in risky activities without considering the consequences. The child has great difficulty playing quietly. The child makes multiple and fast movements. | | | | 7 |
| 10 11 12 13 14 15 | The child engages in risky activities without considering the consequences. The child has great difficulty playing quietly. The child makes multiple and fast movements. The child often chatters. | | | | 2 7 20 22 |
| 10 11 12 13 14 15 16 | The child engages in risky activities without considering the consequences. The child has great difficulty playing quietly. The child makes multiple and fast movements. The child often chatters. The child frequently answers questions quickly. | | | | |

| | intrudes on them. | |
|----|---|--|
| 20 | The child shows cruelty in dealing with others. | |
| 21 | The child starts fights for trivial reasons. | |
| 22 | The child enjoys embarrassing and making hurtful criticisms of others. | |
| 23 | The child intimidates those around them with their rude behavior. | |
| 24 | The child uses unethical language in front of others. | |
| 25 | The child challenges their superiors and those in charge of them. | |
| 26 | The child mocks others. | |
| 27 | The child tries to involve others and get them into trouble. | |
| 28 | The child argues when asked to do something. | |
| 29 | The child shows no respect for their colleagues | |
| 30 | The child shows no respect for those who are superior to them. | |

هذه الدراسة تهدف إلى استكشاف مواقف معلمي اللغة الإنجليزية كلغة أجنبية تجاه الطلاب المصابين بـ "اضطراب فرط النشاط ونقص الانتباه" في المدارس المتوسطة في الجزائر. تسلط الدراسة الضوء على مدى معرفة المعلمين حول اضطراب فرط النشاط ونقص الانتباه وكيفية تأثير ذلك على مواقفهم تجاه الطلاب المصابين بهذا الاضطراب. وتبرز الدراسة الحاجة الملحة لبر امج تدريب المعلمين حول اضطراب فرط النشاط ونقص الانتباه، وتزويدهم بالاستر اتيجيات الفعالة لتحسين التعليم وتعزيز الممارسات الشاملة في بيئة التعليم الجزائرية. هذه النتائج تساهم في تعزيز الممارسات التعاطفية تجاه الطلاب المصابين بـ اضطراب فرط النشاط ونقص الانتباه في تعزيز الممارسات المعامين العلاب

Summary

This study explores the attitudes of English as a Foreign Language (EFL) teachers towards learners with "Attention Deficit Hyperactivity Disorder" (ADHD) in the middle schools (CEM) in Algeria. The research reveals limited knowledge of ADHD among teachers, resulting in negative attitudes towards students with ADHD. The study highlights the urgent need for teacher training programs on ADHD to provide effective learning strategies and promote inclusive practices in the Algerian educational environment. These findings have a significant impact on promoting empathetic practices towards students with ADHD in Algeria.

Résume

Cette étude explore les attitudes des enseignants d'anglais comme langue étrangère envers les apprenants atteints de TDAH dans les classes du CEM en Algérie. Elle révèle une connaissance limitée du TDAH chez les enseignants, entraînant des attitudes négatives envers les apprenants atteints de TDAH. La recherche souligne le besoin urgent de programmes de formation des enseignants sur le TDAH pour fournir des stratégies d'apprentissage efficaces et promouvoir des pratiques inclusives dans l'environnement éducatif algérien. Ces résultats ont un impact significatif sur la promotion de pratiques empathiques envers les apprenants atteints de TDAH en Algérie.