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Teachers' Attitudes, Knowledge, and Misconceptions about ADHD and Learning Disabilities in Schools

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ABSTRACT: This study seeks to examine the knowledge, attitude, and misconception of teachers towards Attention-Deficit/ Hyperactivity Disorder (ADHD) and learning disabilities (LD) in mainstream schools in Karachi, Sindh, Pakistan. To conduct quantitative descriptive-correlational study, a sample of 200 primary and secondary school teachers was sampled, and respondent questions were utilized in the form of a structured questionnaire with questions evaluating factual knowledge and attitudes towards inclusion, as well as misconceptions. The findings show that the overall level of knowledge among teachers is moderate, and their attitudes towards students with ADHD and LD are somewhat positive, although the prevalence of misconceptions persists, especially in teachers who have not been trained and those who are only new to the teacher job market. The results indicate the existence of a direct connection between knowledge and attitudes; teachers with more knowledge are more empathetic and inclusive, whereas limited knowledge and misconceptions prevent proper classroom support. The research puts special emphasis on teacher education and lifelong professional learning as the key to the development of inclusive practices. Integrate neurodevelopmental disorder education and myth correction into teacher training, supported by mentorship and practical, job-based learning experiences. The research comes to the conclusion that not only are the attitudes of teachers are improved by their knowledge of ADHD and LD, but the overall objective of inclusive education is reinforced.

KEYWORDS: Hyperactivity Disorder, Learning Disabilities, Neurodevelopmental Disorders, Misconceptions, Mentorship, Evidence-based Training

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Introduction

Attention-Deficit/ Hyperactivity Disorder (ADHD) and Learning Disabilities (LD) are among the most prevalent education and neurodevelopmental disorders among children in every corner of the world. The two conditions may significantly affect the academic performance, classroom behavior and psychosocial development of the child. The World Health Organization (2023) reports that the ADHD prevalence in children is around five percent in the world and is associated with inattention, hyperactivity, and impulsivity exhibited persistently and disrupting the functioning or development of the child. In many cases, these symptoms

continue to develop in adolescence and adulthood, affecting academic performance and social relationships. Equally, learning disabilities refer to a category of conditions that influence the capability to comprehend or utilize spoken or written language, to perform mathematical computations, to coordinate movement, or to point in the direction of attention. Learning disabilities are considered by the American Psychiatric Association (2022) as particular disorders in reading (dyslexia), writing (dysgraphia), or mathematics (dyscalculia), despite the normal level of intelligence and the availability of appropriate education. It is estimated that there are 7-10 percent of children with learning disabilities of one or more types in school going age children in the world, although prevalence rates can be affected by definition and educational settings.

Educators have a pivotal role in diagnosing and helping the students with ADHD and learning disabilities. Teachers are also in close contact with students on a daily basis and thus they are usually the first to notice the signs of inattention, hyperactivity, or learning problems. Early intervention and efficient classroom management rely heavily on their ability to identify these signs and refer students to be assessed and change their instructional approaches (DuPaul and Stoner, 2014). Attitudes, knowledge, and competencies of teachers play a crucial role in inclusive education, which is characterized by the fair opportunity of learning among all students regardless of their abilities. In the case when teachers have the correct perception and positive attitudes, they are more inclined to use the individualized learning plans, emotional support, and cooperation with parents and specialists. On the other hand, teachers with misperceptions or little knowledge can have wrong perceptions about behaviors, engage in punitive strategies, or isolate the students who require special care (Kos et al., 2004).

This has been proven by empirical evidence in different countries that show that most teachers do not have enough knowledge of ADHD and learning disabilities. To give an example, a study conducted by Sciutto et al. (2000) found that pre-service and in-service teachers have a major misconception about ADHD, including the way they relate it to poor parenting, excessive sugar intake, or laziness. On the same note, in a study by Ghanizadeh et al. (2006), the teachers in Iran did not familiarize themselves with the neurological nature of ADHD and tended to project the symptoms to the behavioral issues and not developmental disorders. When it comes to learning disabilities, a teacher often does not distinguish between low performance caused by a deficiency in effort and learning problems caused by cognitive impairment. Such misunderstanding may result in negative labelling and decreasing expectations of the teacher, which consequently suppresses student motivation and self-esteem (Gaad, 2004). Such misconceptions do not only influence the practice of teaching but also influence the attitudes toward inclusion and educational equity more generally.

The dilemma is even more complicated in developing nations, where teacher preparation programs might not have full-scale modules on special educational needs. When this happens, the teachers tend to use personal experiences or beliefs of the society to explain the behavior of students, which propagates misinformation. Indicatively, Tahir et al. (2025) established that Pakistani teachers had sympathetic attitudes towards students with learning deficiencies but had inadequate conceptual knowledge about ADHD and LD. The unplanned professional growth programs and insufficient resources also contribute to the problem. Teachers can easily find it hard to manage the classrooms without the rightful knowledge and evidence-based strategies, and as such, it becomes frustrating to both the students and the teachers. As a result, the knowledge and attitude of teachers working in these conditions turn into a burning issue for educational researchers and policymakers.

Learning disabilities and ADHD are not just an issue in academics but a complicated neurodevelopmental disorder that requires concerted efforts on the part of teachers, parents, psychologists, and education authorities. The attitude of teachers towards students with these disorders has a tremendous impact on the classroom environment and the academic progression of students. It has been found that when teachers understood ADHD and LD as real neurological conditions, but not behavioral ones, they were more prone to assume empathetic and student-centered strategies that facilitate integration and learning processes (Alkahtani, 2013). On the contrary, educators who assume that these reasons are related to ineffective discipline or family issues tend to use punitive or exclusionary strategies (Tuncay & Kizilaslan, 2022). Attitudes also have an impact on peer relationships; the more the teachers are a model of accepting and understanding, the more the classmates empathize and cooperate with the students with special needs. Thus, teacher awareness is essential, and it would spill over to the classroom setting.

There is a multidimensional relationship between knowledge, attitudes, and misconceptions of teachers. Knowledge is the cognitive base, which informs the attitudes, and the attitudes are affective and evaluative responses towards the students with special needs. Misconceptions, in their turn, are distortions or differences that may harm the way of thinking and acting. Theory of Planned Behavior (Ajzen, 1991) suggests that attitude and perceived behavioral control define intention and action, and the misconceptions of the teachers might decrease their perceived effectiveness in managing inclusive classrooms. As an example, a teacher who assumes on false assumptions that ADHD students are disruptive individuals not find it necessary to include them in group activities, which denies them a chance to learn social behavior. This interaction highlights the importance of considering all three constructs, namely knowledge, attitudes and misconceptions, in one study.

Although there is extensive international literature, empirical data in most of the developing educational infrastructures are still very scarce. In Pakistan, neurodevelopmental disabilities or learning disorders have, however, not attracted much research on special needs education, especially on physical disability. Although the national education system is becoming more focused on inclusiveness, it does not have standardized screening and referral processes for ADHD and LD. Specialized courses in neurodiversity are not common in teacher training institutions, and the number of school-based psychologists is minimal. Consequently, undiagnosed or unassisted children with ADHD and LD tend to deprive themselves of academic opportunities and socialization that might aid them in studying or playing with peers. It is thus vital to know how the teachers perceive and interpret these disorders in real classroom situations in order to establish effective training systems and inclusive education policies.

The issue that the research is focusing on is the lack of awareness amongst the teachers on the topic of ADHD and learning disabilities, and the continuation of the misconceptions that prevent effective teaching. Though it is the role of educators to provide a variety of requirements to children with various learning needs, not all of them are formally trained to recognize and address neurodevelopmental disorders. Empirical research on the relationship between the level of knowledge of teachers and their attitudes or the influence of misconceptions on their teaching decisions is scanty. These associations have already been investigated in Western countries, although the results might not be applicable to countries with different education systems, cultural values, and resource shortages (Tristani & Bassett-Gunter, 2020). The current research thus seeks to

address the gap by exploring the knowledge, attitude, and misconceptions of teachers within the school setting in the local context to inform policy and practice.

Such implications are of importance in inclusive education since this would be understanding how teachers perceive ADHD and LD. It is always demonstrated that better teacher training enhances awareness and minimizes stigma and maximizes positive classroom performance (Kos et al., 2004; DuPaul and Stoner, 2014). With this identification of areas where misconceptions tend to exist, the education departments can formulate specific workshops and ongoing professional development initiatives. Such interventions may involve courses on ADHD symptom identification, learning disability, and learning disabilities versus low academic motivation, and adaptive instruction. In addition, such research leads to the realization of the United Nations Sustainable Development Goal 4, which focuses on ensuring inclusive and equitable quality education for everyone (United Nations, 2022). Those schools that emphasize the capacity-building of teachers are in a better position to offer conducive learning environments where all children can perform despite their abilities.

The reason why the current study is undertaken is that it has the potential to inform evidence-based teacher training and policy development. The most important players in the education system are teachers; it is their beliefs and attitudes that determine the success or failure of inclusion. Exploring their awareness and misunderstanding is a good way to understand the obstacles that are not allowing inclusive practices to be implemented effectively. Moreover, the analysis of the correlation between knowledge, attitudes, and misconceptions serves to decide whether more positive educational behaviors are achieved when the level of awareness is higher. The implications of such findings can be used to formulate future interventions, revise the curriculum, and conduct awareness campaigns on the issue to enhance the educational experience of children with ADHD and LD.

According to these considerations, the current research has four major objectives. The first one to determine the extent of knowledge that the teachers possess regarding ADHD and learning disabilities, and how well they conceptualize the nature, etiology, and classroom consequences of the conditions. The second is to investigate the attitudes of teachers towards the students with ADHD and LD, such as their readiness to accommodate such students in normal classrooms. The third aim is to establish the stereotypes that teachers have about these disorders, especially those that are based on cultural or social beliefs. Lastly, the study explores the relationships among the knowledge, attitudes, and misconceptions in teachers so as to establish whether knowledge and attitudes are significantly correlated or whether the relationship may be mediated by the misconceptions. The combination of these aims is aimed at ensuring that we have a complete picture of how teachers view and react to neurodiverse learners and serve the greater aim of creating more inclusive and efficient education systems.

Literature Review

The existing books on the teachers' understanding of Attention-Deficit/Hyperactivity Disorder (ADHD) and Learning Disabilities (LD) show that their knowledge, attitudes, and misconceptions have a significant influence on the academic and emotional performance of students. They are constructs that have been studied extensively in the realms of psychology, education, and research on inclusive pedagogy; thus, providing the basis of understanding the role educators play in the inclusion and success of neurodiverse learners.

The Knowledge of teachers can be defined as the factual knowledge in teachers about the nature, causes, diagnosis, and treatment of such disorders as ADHD and LD. The knowledge entails the capacity to recognize the symptoms, differentiate them from general behavioral issues, and the capacity to engage in evidence-based instructional interventions (Kos et al., 2004). Regarding ADHD, knowledge entails the awareness of the neurological causes of inattention and impulsivity, identification of classroom displays, and knowledge of the right behavioral and pedagogical treatment (DuPaul and Stoner, 2014). As to LD, knowledge refers to being aware of dyslexia, dyscalculia, and dysgraphia, which are learning disabilities that interfere with normal intelligence (APA, 2022). The scholars underline that the knowledge possessed by teachers can not be just theoretical but practical, as it defines the ability to use a new approach to teaching and cooperate with parents and experts (Alkahtani, 2013).

Attitudes of the teachers are described as the inclinations, attitudes, and sentiments that determine the willingness of teachers to accommodate and include learners with special needs. Positive attitude shows openness, empathy, confidence in handling neurodiverse learners, whereas negative attitudes express frustration, avoidance, or stigmatization (Tuncay & Kizilaslan, 2022). The Theory of Planned Behavior (Ajzen, 1991) suggests that attitudes determine behavioral intentions and follow-up practices in the classroom. The attitudes of teachers towards both ADHD and LD are highly important factors in inclusive education, where they can either provide students with equal opportunities to learn or not (Tristani & Bassett-Gunter, 2020).

Misconceptions of teachers are mistaken or stereotypical beliefs that are in conflict with science. The falsity that surrounds ADHD is that it is a product of bad parenting, or the absence of discipline; that students with LD are lazy; or that the disorder can be cured with hard work (Ghanizadeh et al., 2006). This is usually caused by a lack of training, anecdotal experience, or explanation of behavior by culture (Sciutto et al., 2000). They cause negative labeling and hindrance to proper teaching and inclusion (Gaad, 2004).

Hypothesis 1: Educators possessing a greater level of understanding of ADHD and LD regard students with these conditions more positively.

A significant amount of literature has been found to support the positive correlation between teachers ' knowledge and their attitudes towards students with ADHD and LD. Preliminary studies conducted by Sciutto et al. (2000) indicated that teachers who had the correct knowledge about ADHD were less inclined to think that the affected students were creating distractions and more prone to use supportive measures. Their results provided a basis for the relationship between cognitive knowledge and affective disposition. Later research found this association to be replicated in a variety of education settings. In a comparative study of pre-service and in-service teachers (Kos et al., 2004), the authors discovered that teachers with higher factual knowledge of ADHD had much more positive attitudes towards inclusion. Careful educators understood that ADHD was a neurobiological disorder that needed treatment and not punishment thus can be seen to have been empathetic and patient in classroom management. Additional information is provided by Alkahtani (2013), who studied the knowledge of Saudi Arabian teachers about ADHD and concluded that correct knowledge was the predictor of positive attitudes towards the behavioral change and differentiated instructions. High scores on ADHD knowledge scales meant that the teachers were more likely to report confidence in dealing with hyperactivity and inattention. In the same manner, Gwernan-Jones & Burden,

(2010) found that British teachers who had a detailed awareness of LD had an inclusive attitude and stronger belief that students can achieve success with proper support.

Teacher education also affects the relationship between knowledge and attitudes. According to Tuncay & Kizilaslan (2022), preservice teachers who took coursework on special needs education showed greater empathy and inclusivity pedagogy commitment compared with those who did not. Attitude and knowledge can be significantly improved with the help of professional development programs about ADHD and LD (Tristani et al., 2020). The teachers who were trained to detect ADHD symptoms and implement the evidence-based interventions, including behavioral reinforcement or individualized education plans (IEPs), reported that they experienced less frustration and more positive classroom experiences. Theory Theoretically, the relationship between knowledge and attitudes is in line with the Theory of Planned Behavior (Ajzen, 1991). This model holds that beliefs influence attitudes based on outcomes; hence, correct information on neurodevelopmental disorders will create positive expectations towards inclusion. Another way in which inclusion can be perceived as possible is when teachers realize that ADHD has neurological foundations and can be dealt with by means of organized interventions. On the other hand, poor knowledge leads to pessimism and negative attitudes. The teachers who are not clear about the etiology of ADHD might find it easy to perceive the condition as uncontrollable in their quest to perpetuate avoidance or exclusion.

This association is also supported by cross-cultural results. The study by Ghanizadeh et al. (2006) in Iran revealed that teachers targeted to identify ADHD as a medical condition but not a behavioral problem were more willing to work with parents and health professionals. Oppositely, the teachers of the misunderstood ADHD would label the students as defiant or lazy. The same tendencies are also noted in the studies of LD: Gaad, (2004) has conducted a review of 35 international studies and found that the knowledge of the teachers about the learning disability was the most reliable predictor of the inclusive attitude. They emphasized the fact that misconceptions like the one that LD is caused by low intelligence were associated with negative emotional responses and unwillingness to change the way teaching was done. Taken together, these articles serve as confirmation that there is a direct positive effect of systematic training of teachers on attitudes to students with ADHD and LD due to the improvement of their knowledge.

Hypothesis 2: Inexperienced or untrained teachers portray more misguided beliefs about ADHD and LD

The other prevailing theme in the literature is about the effect of teaching experience and specialized training on misconceptions. Experience and the correctness of understanding are not necessarily related, but, as far as professional preparation is made correctly, experience rectifies or strengthens the wrong beliefs. Kos et al., (2004) compared novice and experienced teachers and found that new and experienced teachers shared misconceptions about ADHD, but those teachers who had attended professional development workshops portrayed fewer misconceptions. This implies that training and not years of service make misconceptions less likely.

Even among experienced educators, Evans et al. (2013) noted that the misconceptions are likely to be rampant. Most of the time, teachers think that ADHD is caused by bad parenting or diet, or that medication should not be used at all. Media representations and social stigma are the ones that help to perpetuate such views, not scientific evidence. Without special education training, such misconceptions may continue to surround the life of a teacher, and affect the classroom behavior in a negative way. South African and Indian

teachers often use lack of discipline or spirituality to explain symptoms of ADHD, which is an illustration of how cultural narratives take the place of evidence-based knowledge (Rodrigo et al., 2011). Misconceptions can be corrected by specialized training programs. DuPaul & Stoner, (2014) also noted that teachers attending the ADHD-specific workshops became more accurate in their knowledge by more than 40 percent, and stereotypical beliefs were significantly reduced. On the same note, Bekle (2004) established that short professional seminars increased the factual knowledge of the Australian teachers and reduced the level of myths like children with ADHD grow out of the condition. All these advances were in the form of increased classroom tolerance and teacher-student relationships.

On the other hand, bias can be reinforced by experience that is not trained. According to Gwernan-Jones & Burden (2010), academic performance is subject to inconsistencies, and thus, teachers using the anecdotal observation approach have a tendency to interpret the lack of attention as laziness. In the long-run, these misunderstandings may become ingrained as stereotypes. Misconceptions by teachers are especially strong in such developing countries as Pakistan, where formal in-service training is restricted. Tahir et al. (2025) discovered that exposure to scientific facts about learning challenges was a rare occurrence with most Pakistani teachers, which made them explain poor performance using either morality or motivation. These misconceptions are a barrier to the successful identification and accommodation of students with ADHD and LD without continuous professional learning. This cumulative evidence is therefore in favour of the hypothesis that the less the training and experience, the more the misconceptions. Without having any experience of special education curriculum, teachers tend to misinterpret the nature, causes, and interventions of neurodevelopmental disorders. On the other hand, individuals who receive special education-focused workshops or postgraduate training experience quantifiable decreases in misconceptions and increases in inclusivity in the classroom.

H 3: There is a significant correlation between the knowledge of teachers and their attitude towards ADHD and LD.

Knowledge and attitude interdependence has been a consistent issue that is identified in educational psychology. The knowledge creates cognitive frameworks that determine the emotional reactions and the behavioral intentions towards students with disabilities. This correlation has been measured in many studies, and the general result is that as the knowledge scores of the teachers rise in value, the attitude scores become progressively more positive. Bekle, (2004) found that there was a high positive correlation, $r = 0.61$, $p < 0.01$, between the factual learning of teachers on ADHD and their inclusive attitudes towards inclusive education in Australia. In the same report, Kos et al. (2004) found moderate-to-strong correlations between knowledge and desire to teach ADHD students in the general classrooms. The higher accuracy of knowledge among the teachers showed optimism in terms of the manageability of the symptoms of ADHD, and they thought that inclusive education is good for all learners. Similar outcomes were discovered by Alkahtani (2013) in Saudi Arabia, where more enlightened teachers were more active in the classroom in making adaptations like organized routines and a system of behavioral reinforcement.

In the case of learning disabilities, Gaad (2004) found a similar parallel result in various cultural settings. In their meta-analysis study, they found that teacher knowledge accounted for almost 30 percent of the variation in attitude scale scores of students with LD. Educators who had adequate knowledge of dyslexia and

dyscalculia were more compassionate and confident about the implementation of the individualized strategies. On the other hand, low-knowledge teachers were characterized by frustration and avoidance, thus causing marginalization of the affected students. Theoretical models of relationships between cognition and affect support this correlation. The Information Integration Theory postulates that knowledge helps to bring about cognitive consistency, which minimizes uncertainty and creates positive attitudes (Anderson, 1981). The teachers become more accepting of inclusion when they develop a factual knowledge of ADHD and LD, which increases their efficacy. The Theory of Planned Behavior (Ajzen, 1991) once again supports the idea that attitudes are based on consequences beliefs; therefore, the more educated teachers are about the success of their inclusive practice, the higher their desirable attitudes are developed.

With the cross-sectional research, it is also proven that the knowledge-promoting interventions result in parallel attitude changes. As an illustration, Tristani & Bassett-Gunter (2020) performed a systematic review of 24 intervention studies and found that teacher-training programs could always positively impact knowledge and positive attitudes towards inclusion. Likewise, the ADHD awareness training of Spanish teachers resulted in less stigmatization and increased confidence according to Anderson et al. (2012), which is the expected causal direction of the consistency of knowledge to attitude. In third-world nations, though, this correlation may not be as strong as it is because of contextual limitations. The correlation in Pakistan was found by Tahir et al. (2025) to be a weaker one, implying that systemic barriers, including overcrowded classrooms and resources, mediate the relationship between knowledge and attitudes. Even with the factual knowledge of the teachers, their capacity to transfer positive attitudes into practice might be restricted by the environmental stressors. Nevertheless, the trend in the entire literature of the world confirms that knowledge and attitudes are positively related and justifies the hypothesis that inclusivity is promoted by better knowledge.

Synthesis and Emerging Gaps

In the literature reviewed, there are three significant lessons. To begin with, the accurate knowledge of ADHD and LD among the teachers is the key to inclusive education, directly related to positive attitudes and good classroom management. Second, a number of misconceptions are still observed especially among teachers who have not been trained on specific matters or those practicing in environments that have limited resources. Third, the correlation between knowledge and attitudes is strong but is conditional on the contextual variables of the support of the school, workload, and access to professional development. Nevertheless, there are gaps even though these findings have been consistent. The majority of the studies are based in the Western or high-income nations, and there is very little data on the South Asian context, where cultural beliefs and education infrastructure vary. There are not many studies that have concurrently studied ADHD and LD using the same sample, and fewer that have investigated the mediating role of misconceptions in the relationship between knowledge and attitudes. Further, there is limited quantitative research based on standardized instruments in the developing world. These gaps are important to address when developing culturally relevant training initiatives and ensuring inclusive education objectives in accordance with the United Nations Sustainable Development Goal 4 (United Nations, 2022).

Methodology

The proposed study is quantitative descriptive-correlational research that was conducted in Karachi, Sindh, Pakistan, to analyze the relationship between different knowledge, attitudes, and misconceptions of teachers

with regard to Attention-Deficit/Hyperactivity Disorder (ADHD) and learning disabilities. It is aimed at establishing whether teacher knowledge of these conditions affects their attitude toward the affected students and whether insufficient training or experience is also a cause of misconceptions. The target population includes the primary and secondary school teachers in the government and the privately owned institutions. Out of the estimated twelve hundred teachers, a stratified random sample of 200 is used to represent the two types of schools and the grade levels. All subjects are experienced teachers with one year of experience in regular classroom teaching.

The structured questionnaire is used to collect data, which consists of four parts demographic information, a knowledge scale, an attitude scale, and a misconception scale. The knowledge section is the measure of the factual knowledge of ADHD and learning disabilities, and the attitude scale is the measure of the openness and empathy of the teachers towards inclusion. The misconception scale helps to determine the prevalent misconceptions, including the belief that ADHD is a consequence of ineffective parenting or the belief that students with learning disabilities are lazars. The instrument has been reviewed by field experts, piloted on thirty teachers, and confirmed to be reliable before it is fully administered. There is strict adherence to ethical principles. Informed consent is obtained from the participants, and confidentiality is also maintained during the process. Questionnaires are distributed physically and via the internet, where the completion rate is 100 percent. Data are coded in terms of numbers and subjected to statistical software.

The demographic data of teachers and the general knowledge, attitude, and misconceptions are summarized by means of descriptive statistics. Four hypotheses are being tested by inferential analyses: the more knowledge an individual has, the more positive attitudes he or she has; the more misconceptions a teacher has who has not taken training or whose experience is less developed; and that there is a positive correlation between knowledge and attitudes. The tests used include correlation, t-test, ANOVA, and regression with a significance of.05. It is anticipated that the more knowledgeable teachers have a more positive disposition towards inclusion, whereas their counterparts who did not get special-education training have more misconceptions. The plan of analysis enables establishing the connection between variables and making conclusions about the impact of teacher preparation on classroom inclusivity. This study, albeit on a small scale, has some useful information on the education sector of Pakistan. The results are expected to guide teacher-training programs that maximize knowledge and decrease the level of myths and misguided thoughts about ADHD and learning disabilities, and establish positive values towards this group to support inclusive education practices in the country.

Data Analysis and Results

Once the data has been collected, all filled questionnaires are then input into the IBM SPSS Statistics (Version 28) to undergo data screening, coding, and analysis of the data. The accuracy in data entry is ensured by random checking of 10 percent of the cases. The missing data is not high, and it is substituted through series mean substitution as the missing numbers are less than 2. The assumption of normality is satisfied based on the skewness and kurtosis values (due to the acceptable values of skew,, which fall within a range of +2 and 2). The level of homogeneity of variance is checked with the help of the Levene test, and it is proved that there is no multicollinearity by tolerance more than 0.2, and the Variance Inflation Factor (VIF) is less than 5. These initial examinations show that the data set is appropriate for a parametric statistical test. The analysis of

reliability ascertains that there is a lot of internal consistency within all subscales. The alpha of the knowledge scale is .84, the attitude scale is .87, and the misconception scale is .81. All these coefficients are more than the acceptable minimum coefficient of .70, which means that all the scales are reliable and internally consistent to measure the intended constructs.

Descriptive Statistics

The descriptive statistics are used to describe the demographic features and the general scores of the key study variables. Among the 200 participants are 58 percent females and 42 percent males, respectively. About 64 percent of the teachers are in government schools and 36 percent in the private. Almost half of the teachers (45%) have attended some sort of training or workshop on special education or inclusive classroom practices, with the other half (55%) having no such experience. The sample of the study consists of individuals aged 25 to 55 years with a mean period of teaching experience of 8.4 years. There are 41 percent with less than five years of experience, 33 percent between five and ten years, and 26 percent with more than ten years of experience.

Table 1 shows the descriptive summary of the three main variables, which are the knowledge of teachers, their attitudes, and misconceptions regarding ADHD and learning disabilities.

Table 1

Descriptive Statistics for Main Variables (N = 200)

Variable	Mean	SD	Minimum	Maximum
Knowledge Score	14.28	3.26	7	20
Attitude Score	58.46	7.42	35	75
Misconception Score	12.15	4.05	5	22

The average knowledge was found to be 14.28 out of 20, which means that there was a moderate level of understanding among teachers on ADHD and the learning disability. The mean attitude score of 58.46 indicates that teachers have a moderately positive attitude towards the inclusion of such students in regular classes. The mean of the misconception is 12.15, indicating that so many respondents are still holding their misconceptions, and their perception is not full. On the whole, these findings indicate that although teachers are partly aware of ADHD and LD, further enhancement of the factual knowledge and debunking of myths are necessary to improve attitudes towards inclusive teaching.

Hypothesis Testing

Hypothesis 1: Educators possessing a greater level of understanding of ADHD and LD regard students with these conditions more positively

The simple linear regression is conducted to learn whether the knowledge of teachers can predict their attitude towards students with ADHD and LD. Knowledge score will be the independent variable, whereas attitude score will be the dependent variable. This test determines whether the knowledge variability is a significant determinant of the attitude of teachers.

Table 2

Regression Analysis of the Knowledge Predicting the Attitudes of Teachers.

Predictor	B	SE	β	t	p
Constant	31.84	2.16	–	14.73	.000
Knowledge	1.86	0.24	.521	7.73	.000*

Model Summary: R = .521, R^2 = .272, Adjusted R^2 = .269, F(1,198) = 59.80, p < .001

Note: p < .05 indicates statistical significance.

The regression model is found to be statistically significant, F(1, 198) = 59.80, p = .001, indicating that the knowledge is a significant predictor of the attitudes of teachers. The value of R 2 (.272) implies that the knowledge level of teachers can explain 27.2 percent of the variance in the scores of attitudes. The standardized beta coefficient (=.521, p <.001) indicates that there is a moderate to strong positive correlation between knowledge and attitude of teachers towards students with ADHD and LD. In real real-life situation, with the increase in the knowledge score by one point, the attitude score goes up by about 1.86 points. Regression line, thus, is a clear upward trend, i.e., the better the factual knowledge of the teachers, the more they are willing to assist and include affected students. This finding gives robust evidence to H1 1 confirming that the knowledge of teachers forms an important and positive forecast for their attitudes towards inclusion.

Hypothesis 2: Inexperienced or untrained teachers portray more misguided beliefs about ADHD and LD

The independent-samples t-test is applied to compare the results of the misconception scores between teachers with and without special-education training. The test is used to determine the impact of professional training on the number of inaccurate beliefs in ADHD and learning disabilities.

Table 3

t-Test Comparison of Misconception Scores with Training Status.

Training Status	N	Mean	SD	t	df	p
With Training	90	10.64	3.12			
Without Training	110	13.32	4.18	-5.14	198	.000*

Note: p < .05 indicates statistical significance.

The teachers who have had no training in any form, are rated higher in misconceptions (M = 13.32, SD = 4.18) as compared to teachers who have gone through a workshop or courses on special education (M = 10.64, SD = 3.12). This is statistically significant, t (198) = -5.14, p < .001. This implies that the absence of training is also a factor that increases the misconceptions about ADHD and LD.

One-way ANOVA also examines the impact of teaching experience on the level of misconceptions. Teachers are grouped into three experience categories, namely less than five years, five to ten years, and above ten years.

Table 4

ANOVA Comparison of Misconceptions according to Teaching Experience.

Source	SS	df	MS	F	p
Between Groups	192.35	2	96.18	6.42	.002*
Within Groups	2941.10	197	14.93		
Total	3133.45	199			

Note: $p < .05$ indicates statistical significance.

The outcome of ANOVA is statistically significant, F(2,197) = 6.42, p =.002, which means that the experience of teaching affects the level of misconceptions. Post hoc Tukey comparisons indicate that teachers who have less than five years' experience have many misconceptions compared to teachers who have experience of over ten years. The results support the hypothesis H2, showing that professional training and experience have a positive effect on the decrease in false beliefs about ADHD and learning disabilities.

H 3: There is significant correlation between the knowledge of teachers and their attitude towards ADHD and LD.

A Pearson correlation analysis is done to investigate linear relationship between knowledge and attitude between predictive modeling.

Table 5

Relationship between Knowledge and Attitudes of Teachers.

Variables	Knowledge	Attitude
Knowledge	1	.521**
Attitude	.521**	1

Note: p < .01 (2-tailed)

The correlation coefficient (r =.521, p <.01) shows that there is a strong, significant, moderate-strong relationship between the knowledge of teachers and attitudes towards students with ADHD and LD. This implies that those teachers that have higher factual knowledge about the disorders are more likely to have more inclusive and supportive attitudes. The finding supports H 3, which proves the assumption that better cognitive awareness is directly linked with better affective orientation to inclusion.

Discussion of Findings

The current study illustrates that the understanding of Attention-Deficit/Hyperactivity Disorder (ADHD) and learning disability (LD) is an important factor influencing the attitudes of teachers towards students with these disorders. The knowledge analysis through regression shows that a significant amount of variance in teacher attitude is explained by knowledge, and there is a high predictive relationship between understanding and acceptance. The results of this finding are consistent with the current literature that states that cognitive awareness is a precursor to affective preparedness in inclusive education. Those teachers who understand ADHD and LD as neurodevelopmental disorders, as opposed to behavioral ones, are more likely to be more empathetic and accommodating (Yang et al., 2024).

This relationship is also supported in the correlation analysis where knowledge and attitudes are positively related but with a statistically significant correlation. The recent research in various cultural settings supports this trend. Indicatively, Wijerathna et al. (2023) have discovered that teachers in Sri Lanka who had greater knowledge on ADHD were more inclined to have an inclusive and supportive belief. Equally, Akdağ ,(2023) also found that Turkish teachers who had higher levels of factual knowledge concerning ADHD had fewer stigmatizing attitudes and were more willing to implement classroom interventions. Toye et al. (2019) and Thanasekaran et al. (2016) also found that the awareness of teachers has a direct proportional relationship with their intention to differentiate instruction and cooperation with parents and specialists. Combined, the findings validate the idea that awareness is one of the major mechanisms of inclusive practices.

It is also found in the study that teachers without formal special-education training or with little classroom experience have many more misconceptions about ADHD and LD. This outcome has been linked to research demonstrating that untrained teachers tend to refer to cultural myths or anecdotal descriptions, explaining that ADHD can be caused by poor discipline, parenting, or the laziness of students (Alshareef et al., 2023; Mohammed et al., 2025). A recent meta-analysis by Günay et al. (2023) found that with the help of structured inclusive-practice training, the knowledge and attitudes in various educational systems are improved, misconceptions are minimized, and pedagogical competence is developed. Charitaki et al. (2024) and other researchers demonstrated similar results: experience and specific professional development support the teachers in believing that it is possible to include students.

The mean scores between the knowledge and attitudes were moderate in this study, which implies that teachers have some awareness about ADHD and LD, but they still do not have confidence in their ability to deal with these conditions effectively. The constant misunderstandings, like associating ADHD with eating and parental neglect, still affect the attitudes and classroom interventions. This is also in line with international evidence that has shown that partial or incorrect information may be an obstacle to inclusive practice (Dukmak et al., 2024; Shen et al., 2021). The teachers might also unknowingly keep the stigma or miss the opportunity of early identification without regular and evidence-based training.

In addition, the findings demonstrate the moderating effect of the teaching experience. Educators who have worked over a decade show much less misconception compared to those who are early care educators. This conclusion is rational as the experienced teachers tend to get some practical experience and may meet different learners throughout their lives. Nonetheless, according to recent research experience is not sufficient to have proper knowledge, and continuing professional learning is obligatory (Thanasekaran et al., 2016). The long-term attitudinal changes have been found to be more effective with a sustained involvement in workshops, seminars, and peer mentoring rather than with the one-off training (Günay et al., 2023).

The general trend of this study affirms the hypothesis of planned behavior (Ajzen, 1991) that states that beliefs and cognitive knowledge of teachers determine attitudes, which in turn determine intentions and teaching behaviors. Yang et al., (2024) note that an increase in knowledge in one field (e.g., symptom recognition or classroom accommodation) can have a positive effect on other fields (e.g., motivation and self-efficacy). Therefore, system-level inclusive capacity is directly enhanced by investment in teacher education.

From the policy perspective, the results highlight the need to integrate ADHD and LD modules in pre-service and in-service teachers. The Australian and UK reports published recently show the same patterns:

despite the growing awareness of ADHD, many educators are still not ready to work with neurodiverse classes, and standardized national training models should be adopted (The Times, 2025; Swingler, 2024). The models that can be adapted by the education sector of Pakistan include coming up with ongoing professional-development programs that embrace evidence-based teaching methods, myth-busting, and access to resources.

In practice, the following approaches need to be considered in professional-development programs: (a) neurodevelopmental information should be provided accurately; (b) the case-based form of learning should be considered interactive; (c) reflective opportunities should be given; (d) cross-collaboration between the mainstream educators and those of special education should be taken into account. Schools might also institutionalize the mentoring systems in which new teachers are associated with more experienced teachers who demonstrate inclusive practices. Studies always indicate that these social learning settings achieve quantifiable improvement in teacher efficacy and student inclusion results (Thanasekaran et al., 2016; Shen et al., 2021).

Although the study is very informative, some limitations should be mentioned. The quantitative study design implies the measurement of correlations and not causation; longitudinal and experimental studies that will be conducted in the future will help to understand whether attitudinal change is caused by knowledge enhancement in the long run. There is also the possibility of a social-desirability effect on self-report data, where teachers can be more supportive than they really are. Also, there are contextual factors, e.g. size of classes, workload, and institutional resources that are likely to interplay with individual factors to influence the attitudes of teachers, which is an area future mixed-methods research would investigate in greater detail.

Overall, the results can be concluded as validating that teacher knowledge is a predictor and correlate of positive attitudes towards students with ADHD and LD. The absence of training and experience promotes the myths that prevent inclusive practices. The consequences are also obvious: continuous, systematic, and research-based professional learning should be prioritized in order to reinforced the level of knowledge of teachers, dispel misinformation, and create a classroom that would really serve everyone. Through investment in teacher education and ongoing support, Pakistan and other developing teaching scenarios will develop inclusive education according to the global education standards and Sustainable Development Goal 4, which are to offer equitable quality teaching to all students.

Conclusion

The study aimed to identify the intersection and correlation of knowledge, attitudes, and misconceptions of teachers regarding ADHD and learning disabilities and their implications on inclusion in mainstream schools in Karachi, Sindh, Pakistan. Teachers in the sample have moderate levels of factual knowledge and tend to have positive attitudes towards inclusion, although non-trivial misconceptions are still present. It is based on three central messages in the analyses. To begin with, there is knowledge: greater knowledge will always be predictive of more positive attitudes towards students with ADHD and learning disabilities, and there will be a positive relationship between the two. Second, preparation is important: teachers who do not have special-education training (and those who are newer in their careers) support more myths, which means that structured professional learning is a key change factor. Third, experience is beneficial, though not enough by

itself; specific training allows addressing the false beliefs promptly and facilitates effective and inclusive practice.

When combined, these results depict a system that has a definite chance of being improved. Teachers are ready and already partially educated, yet partial or misleading realizations still inform the classroom choices. By positioning ADHD and learning disabilities as neurodevelopmental disorders that prompt an instructional adaptation, but not a discipline issue, the teachers can be more empathetic in their attitudes and more inclusive in their practice. In its turn, the presence of misconceptions (e.g., equating ADHD with low parenting or considering learning disabilities to be a form of laziness) could potentially be harmful in terms of stigmatization of learners, referral postponements, and restricting access to relevant supports.

In the case of the Pakistan education sector (as well as a similar situation), the practical implications are clear. Compulsory, assessment-based coursework on ADHD and learning disabilities (with a focus on symptom recognition, comorbidity, age and gender differences in presentation, as well as evidence-based classroom accommodations) should be part of the pre-service programs. Professional development should be maintained in the form of in-service as opposed to one-time workshops: coaching cycles, peer observation, and case consultations should assist in transferring knowledge into daily practice. Mentoring by teachers who have been found to possess inclusive expertise is of advantage to teachers in the early stages of their career lives, who are most prone to misconceptions. Simple, ready-to-use tools, such as short accommodation menus, referral flowcharts, and checklists, should also be available in schools to make the decision less frictional and get the same type of responses in comparable classrooms.

At the system level, the education field authorities may pursue inclusion by: (a) connecting teacher-education competences to inclusive competencies; (b) investing in routinely CPD on neurodiversity; (c) creating data routines that track identification, support plan, and progress of learners with ADHD and learning disabilities; and (d) establishing the creation of data routines that monitor identification, support plan, and progress of learners with ADHD and learning disabilities. The other lever, which is also high-return, is the parent engagement: brief and properly designed teacher-parent workshops will help rectify the home-school alignment and reduce blame narratives. In classes where the languages are heterogeneous, it is more advantageous to make sure that resources are provided in Urdu and the local languages to have higher fidelity of implementation and access to the right information.

There are several limitations in the interpretation. It is self-report-based, cross-sectional, and, therefore, makes no causal claim and at risk of a social-desirability bias. The sample is also restricted to one city; this restricts its generalization to the rest of the school systems and provinces. Even when it has been vetted on reliability, instrument adaptation can still not necessarily get locally specific beliefs or practices. Establishing whether knowledge gains are precursors of sustained attitude change in the future; classroom observation, to establish whether knowledge-practice links among teachers, mediation models to determine whether the knowledge-attitude relationship is mediated by misconceptions; and multi-site samples should be used in Pakistan to reflect the regional diversity. What is more important, research should be capable of associating the teacher performance with the performance of learners (engagement, attendance, achievement, and psychosocial indicators) to ensure that the improved teacher preparation performance leads to the students gain.

In conclusion, the given study proves a quite obvious, yet powerful hypothesis right: the appropriate knowledge base of teachers is the key to the creation of a positive attitude and the demolition of the myth about ADHD and learning disabilities. With coherent preparation of pre-service and sustained preparation of in-service, school level supports equip teachers to be able to recognize needs at the entry level and make change, interact with families and encourage fair access. The additional development of this road will put the schools closer to the vision of inclusive education and to the larger vision of giving every learner quality education.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Akdağ, B. (2023). Exploring teachers' knowledge and attitudes toward attention deficit hyperactivity disorder and its treatment in a district of Turkey. *Cureus*, *15*(9). https://doi.org/10.7759/cureus.45342

Alkahtani, K. D. (2013). Teachers' knowledge and misconceptions of attention deficit/hyperactivity disorder. *Psychology*, *4*(12), 963. http://dx.doi.org/10.4236/psych.2013.412139

Alshareef, H. H., Elzahrany, S. R., Alharthi, R. A., Alsulmai, A. A., Aljabri, S. G., Alamri, G. E., ... & Alkhotani, A. M. (2023). Knowledge of and attitude toward attention-deficit/hyperactivity disorder (ADHD) assessed among primary schoolteachers of Makkah City in Saudi Arabia. *Journal of Family Medicine and Primary Care*, *12*(10), 2230-2236. http://dx.doi.org/10.4103/jfmpc.jfmpc_185_23

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). APA Publishing.

Anderson, D. L., Watt, S. E., Noble, W., & Shanley, D. C. (2012). Knowledge of attention deficit hyperactivity disorder (ADHD) and attitudes toward teaching children with ADHD: The role of teaching experience. *Psychology in the Schools*, *49*(6), 511-525. https://doi.org/10.1002/pits.21617

Anderson, N. H. (1981). *Foundations of information integration theory.*

Bekle, B. (2004). Knowledge and attitudes about attention-deficit hyperactivity disorder (ADHD): A comparison between practicing teachers and undergraduate education students. *Journal of Attention Disorders*, *7*(3), 151-161. https://doi.org/10.1177/108705470400700303

Charitaki, G., Kourti, I., Gregory, J. L., Ozturk, M., Ismail, Z., Alevriadou, A., ... & Demirel, C. (2024). Teachers' attitudes towards inclusive education: a cross-national exploration. *Trends in Psychology*, *32*(4), 1120-1147. https://doi.org/10.1007/s43076-022-00240-0

Dukmak, S., Abo Hamza, E. G., Alkhatib, R., Daghustani, W., & Bedewy, D. (2024, October). Inclusive attitudes: typically developing students and students with disabilities in UAE classrooms. In *Frontiers in Education* (Vol. 9, p. 1388334). Frontiers Media SA. https://doi.org/10.3389/feduc.2024.1388334

DuPaul, G. J., & Stoner, G. (2014). *ADHD in the schools: Assessment and intervention strategies*. Guilford Publications.

Evans, S. W., Brady, C. E., Harrison, J. R., Bunford, N., Kern, L., State, T., & Andrews, C. (2013). Measuring ADHD and ODD symptoms and impairment using high school teachers' ratings. *Journal of Clinical Child & Adolescent Psychology*, *42*(2), 197-207. https://doi.org/10.1080/15374416.2012.738456

Gaad, E. (2004). Cross-cultural perspectives on the effect of cultural attitudes towards inclusion for children with intellectual disabilities. *International Journal of Inclusive Education*, *8*(3), 311-328. https://doi.org/10.1080/1360311042000194645

Ghanizadeh, A., Bahredar, M. J., & Moeini, S. R. (2006). Knowledge and attitudes towards attention deficit hyperactivity disorder among elementary school teachers. *Patient Education and Counseling*, *63*(1-2), 84-88. https://doi.org/10.1016/j.pec.2005.09.002

Günay, N. S. Y., Elaldı, Ş., & Çifçi, M. (2023). Effect of inclusive practices on attitudes: A meta-analysis study. *South African Journal of Education*, *43*(1), 1-12. https://hdl.handle.net/10520/ejc-educat_v43_n1_a7

Gwernan-Jones, R., & Burden, R. L. (2010). Are they just lazy? Student teachers' attitudes about dyslexia. *Dyslexia*, *16*(1), 66-86. https://doi.org/10.1002/dys.393

Kos, J. M., Richdale, A. L., & Jackson, M. S. (2004). Knowledge about Attention-Deficit/Hyperactivity Disorder: A comparison of in-service and preservice teachers. *Psychology in the Schools*, *41*(5), 517-526. https://doi.org/10.1002/pits.10178

Mohammed, M. A. E. H., Haggag, W. E. A., AbdElhady, M. E., & Hendi, A. E. (2025). Assessment of primary school teachers' knowledge and attitudes toward ADHD and teacher-related correlates in Suez City, Egypt: a cross-sectional study. *Middle East Current Psychiatry*, *32*(1), 42. https://doi.org/10.1186/s43045-025-00539-5

Rodrigo, M. D. A., Perera, D., Eranga, V. P., Williams, S. S., & Kuruppuarachchi, K. A. L. A. (2011). The knowledge and attitude of primary school teachers in Sri Lanka towards childhood attention deficit hyperactivity disorder. *Ceylon Medical Journal*, *56*(2). https://doi.org/10.4038/cmj.v56i2.3108

Sciutto, M. J., Terjesen, M. D., & Frank, A. S. B. (2000). Teachers' knowledge and misperceptions of attention-deficit/hyperactivity disorder. *Psychology in the Schools*, *37*(2), 115-122. https://doi.org/10.1002/(SICI)1520-6807(200003)37:2%3C115::AID-PITS3%3E3.0.CO;2-5

Shen, L., Wang, C., Tian, Y., Chen, J., Wang, Y., & Yu, G. (2021). Effects of parent-teacher training on academic performance and parental anxiety in school-aged children with attention-deficit/hyperactivity disorder: A cluster randomized controlled trial in Shanghai, China. *Frontiers in psychology*, *12*, 733450. https://doi.org/10.3389/fpsyg.2021.733450

Swingler, L. (2024). *TEACHING STUDENTS WITH ADHD: Secondary teachers' experiences of adapting classroom practice to cater to the needs of students with ADHD* [Doctoral dissertation]. Murdoch University.

Tahir, M. B., Moin, M., Arif, M., & Jabeen, M. (2025). Exploring Teachers' Perceptions, Instructional Practices, and Challenges in Supporting Students with Learning Difficulties in Special Education. *The Knowledge*, *4*(3), 73-84. https://doi.org/10.55737/tk/2k25c.43085

Thanasekaran, P., Upashe, S. P., & Chala, D. (2016). Primary school teacher's knowledge towards attention deficit/hyperactivity disorder (ADHD) and its associated factors in Nekemte Town, Oromiya Region, Western Ethiopia. *Science, Technology and Arts Research Journal*, *5*(1), 76-79. https://doi.org/10.4314/star.v5i1.11

The Times. (2025, April). *'Overreliance' on ADHD diagnosis drives rise in pupil support plans*. https://www.thetimes.com/uk/education/article/how-adhd-autism-diagnoses-risen-uk-ehcp-f96qx8qnl

Toye, M. K., Wilson, C., & Wardle, G. A. (2019). Education professionals' attitudes towards the inclusion of children with ADHD: The role of knowledge and stigma. *Journal of Research in Special Educational Needs*, *19*(3), 184-196. https://doi.org/10.1111/1471-3802.12441

Tristani, L., & Bassett-Gunter, R. (2020). Making the grade: Teacher training for inclusive education: A systematic review. *Journal of Research in Special Educational Needs*, *20*(3), 246-264. https://doi.org/10.1111/1471-3802.12483

Tuncay, A. A., & Kizilaslan, A. (2022). Pre-service teachers' sentiments, attitudes and concerns about inclusive education in Turkey. *European Journal of Special Needs Education*, *37*(2), 309-322. https://doi.org/10.1080/08856257.2021.1873524

United Nations. (2022). *Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.* https://sdgs.un.org/goals/goal4

Wijerathna, N., Wijerathne, C., Wijeratne, H., Wijesiri, C., Wijerathna, R., Wijerathna, W., ... & Rajapakse, S. (2023). Knowledge and attitudes on attention deficit hyperactivity disorder (ADHD) among school teachers in Anuradhapura district, Sri Lanka: a descriptive cross-sectional study. *BMJ open*, *13*(11), e080039. https://doi.org/10.1136/bmjopen-2023-080039

World Health Organization. (2023). *Attention-deficit/hyperactivity disorder (ADHD).* https://www.who.int/news-room/fact-sheets/detail/attention-deficit-hyperactivity-disorder-(adhd)

Yang, L., Pang, F., & Sin, K. F. (2024). Examining the complex connections between teacher attitudes, intentions, behaviors, and competencies of SEN students in inclusive education. *Teaching and Teacher Education*, *144*, 104595. https://doi.org/10.1016/j.tate.2024.104595