

Primary Teachers' Knowledge, Attitudes and Strategies for Inattentive ADHD in China

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Abstract

Attention-Deficit/Hyperactivity Disorder (ADHD) is among the most common neurodevelopmental disorders in school-aged children, yet pupils with a predominantly inattentive presentation are frequently overlooked because their difficulties are internalised and non-disruptive. Because primary school teachers are often the first professionals to observe children's learning and behaviour, their knowledge, attitudes and classroom practices strongly shape whether such pupils are identified and supported. This study examined Chinese primary school teachers' knowledge of the less visible, inattentive features of ADHD, their attitudes towards affected pupils, and the strategies and barriers they reported in everyday practice. An online questionnaire was administered to 93 practising primary teachers recruited through convenience and snowball sampling. The instrument comprised demographic items, a 13-item adaptation of the Knowledge of Attention Deficit Disorders Scale (KADDS), a 10-item attitude scale adapted from validated ADHD research, and two checklists of evidence-based strategies and perceived barriers. Results show that teachers' knowledge was low to moderate (mean 5.38/13; approximately 41% correct), with particularly limited understanding of gender distribution (34.8% correct) and inattentive symptoms. Attitudes were generally negative or uncertain (item means 2.24–2.51 on a five-point scale), characterised by low confidence and limited willingness to include pupils with ADHD. The most frequently reported strategies were low-cost instructional accommodations, whereas strategies requiring external support or referral were seldom used. Large class size (38.0%) and lack of time (26.1%) were the most cited barriers. The findings indicate that improving support for pupils with inattentive ADHD in China requires both targeted professional development and structural reform responsive to local sociocultural realities.

Keywords

ADHD, inattentive presentation, teacher knowledge, teacher attitudes, primary education, China

1. Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders among school-aged children worldwide, with a prevalence of approximately 5–7% [1, 2]. A meta-analysis conducted in China estimated the prevalence among primary school pupils at around 6% [3]. ADHD is associated with substantial difficulties in social interaction and academic performance in school settings,

and classroom-based interventions have been shown to improve both behavioural and learning outcomes, highlighting the influential role teachers play in shaping pupils' educational experiences [4].

However, ADHD-related difficulties are not always readily identifiable in everyday classroom practice. Barkley [5] distinguishes between different presentations of ADHD, noting that pupils with predominantly inattentive characteristics may not display disruptive behaviour yet still experience considerable difficulty in regulating attention and completing tasks. Similarly, Hinshaw [6] argues that ADHD should be understood as a heterogeneous condition whose symptoms vary across developmental and contextual factors. This variability increases the risk that some pupils' difficulties remain unrecognised, particularly when they do not conform to stereotypical images of hyperactivity.

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [7] divides ADHD into three presentations: predominantly inattentive, predominantly hyperactive-impulsive, and combined. Inattentive symptoms, which refer to difficulty concentrating, appearing not to listen, carelessness, and losing items, are largely internalised and rarely cause classroom disturbance, making them harder for teachers to notice than the overt restlessness and impulsivity of the hyperactive-impulsive presentation [5, 6].

Research on teachers' understanding of ADHD indicates that the misinterpretation of behaviour remains a persistent problem. Sciutto, Terjesen and Bender Frank [8] found that teachers' knowledge of ADHD is often partial and accompanied by misconceptions, with behaviour sometimes attributed to poor motivation or laziness rather than to underlying attentional or self-regulatory difficulties. Kos, Richdale and Hay [9] similarly report that teachers rely heavily on observable behaviour and academic performance when identifying pupils in need of support, which may lead to the under-identification of pupils whose difficulties are less visible.

This invisibility has significant implications for educational practice. Pupils with less visible or inattentive presentations are at risk of being under-identified and inadequately supported. Because primary school teachers are often the first professionals to observe children's learning and behaviour in formal educational settings, their perceptions and interpretations are crucial in shaping access to support. This concern is especially salient in educational systems that prioritise order, discipline and measurable academic achievement, i.e., features that characterise much of Chinese primary education [10].

While some emerging studies in China have examined teachers' general understanding of ADHD and the challenges they face [10, 11], research on how teachers conceptualise and respond to the less visible, inattentive difficulties within specific national contexts remains limited. Existing work has focused predominantly on teachers' overall perceptions of ADHD or their attitudes towards disruptive, hyperactive symptoms [8, 9], leaving a gap regarding how teachers identify and respond to pupils whose difficulties are not readily perceptible.

Focusing on Chinese primary schools, this study explores how teachers perceive and interpret ADHD-related behaviour and how they judge when such behaviour indicates a need for additional support, with particular attention to less visible, inattentive presentations. The study is guided by three research questions:

RQ1. What is the level of knowledge that primary school teachers hold about the less visible, inattentive symptoms of ADHD?

RQ2. What are teachers' attitudes towards pupils who display such behaviour, and what challenges do they perceive?

RQ3. What strategies do Chinese primary school teachers report using to support pupils with ADHD, particularly when difficulties are less visible, and what barriers do they perceive?

2. Literature Review

2.1 Defining ADHD and the Inattentive Presentation

The inattentive presentation of ADHD is central to this study. Barkley [5] notes that pupils with predominantly inattentive characteristics may experience substantial difficulties in attention regulation and task completion without displaying disruptive behaviour, while Hinshaw [6] emphasises that ADHD is heterogeneous, with symptoms varying across developmental and contextual factors. This variability heightens

the risk that pupils' difficulties remain unrecognised when they do not conform to stereotypical images of hyperactivity, and it justifies examining teachers' understanding of inattentive symptoms as a distinct construct.

2.2 Teachers' Knowledge of ADHD

A consistent finding in the literature is that teachers frequently misunderstand ADHD-related behaviour and attribute it to motivational or personality deficits. Sciutto and colleagues [8] observed that teachers' understanding of ADHD often contains misconceptions, with behaviour sometimes attributed to a lack of motivation or an unwillingness to self-regulate, i.e., a pattern confirmed and extended in subsequent research. Njeri [12] found that Kenyan primary teachers most often encountered the inattentive subtype yet lacked a comprehensive understanding of ADHD's core features, indicating that the very symptoms most prevalent in classrooms are those teachers understand least well. Likewise, recent evidence indicates that pre-service teachers possess limited factual knowledge of ADHD, even while expressing optimism about supporting affected pupils [13]. Such findings highlight the need for targeted professional development, a need that is arguably more urgent in China, where teachers contend with large classes and limited training.

To measure these gaps systematically, the Knowledge of Attention Deficit Disorders Scale (KADDS) developed by Sciutto and colleagues [8] has been widely used to assess three domains of knowledge: symptoms/diagnosis, causes, and treatment. Studies employing the KADDS consistently report moderate-to-high knowledge of symptoms but weaker understanding of causes and treatment [13, 14]. Importantly, teachers show lower accuracy in identifying inattentive than hyperactive-impulsive symptoms [15], which directly relates to the risk of under-identifying pupils with less visible difficulties. Kos and colleagues [9] demonstrate that teachers over-rely on observable behaviour and academic performance, which can lead to the neglect of pupils whose difficulties are not obvious.

Although reliance on observation is understandable given classroom demands, it produces a systematic bias towards identifying externalising behaviour; pupils who internalise their difficulties, such as those with inattentive ADHD, may be assumed to have no problem and therefore receive no intervention [16]. This bias is central to the present study: if teachers treat observable disruption as the principal indicator of need, pupils with invisible difficulties will be overlooked. Intervention research suggests that these knowledge gaps are modifiable. Barker and colleagues [17] found that neuroscience knowledge translation improved pre-service teachers' understanding of ADHD, with personalised content, particularly personal stories from individuals with ADHD, more effective than depersonalised content in reducing misconceptions about social causation, although expert-led delivery without lived experience could also shift attitudes.

In the Chinese context, Jin and Fu [18] conducted a controlled study in which an experimental group ($n = 53$) received six training sessions while a control group ($n = 59$) received none; training significantly improved teachers' understanding of the aetiology, symptoms and treatment of ADHD, reduced negative attitudes, enhanced self-efficacy, and broadened teachers' repertoire of support strategies. Notably, 71%

of participants had previously attended only short seminars, and 16.3% cited a lack of training as a barrier to support. Similarly, a randomised controlled study of 72 primary teachers in Egypt found significant knowledge gains in the intervention group [19]. These studies suggest that scalable professional development can be both feasible and effective, even in resource-constrained contexts.

2.3 Teachers' Attitudes Towards ADHD

Beyond knowledge, teachers' attitudes, including beliefs about the legitimacy of ADHD, perceptions of affected pupils' abilities, and perceptions of their impact on classroom dynamics, shape teachers' willingness to provide support [9]. In a large cross-sectional survey of Irish primary and secondary teachers, Adamis and colleagues [20] found generally low knowledge (mean identification of 9.5/18 DSM symptoms) and reported that 58% of teachers held negative attitudes, which were associated with teaching in boys' schools; intriguingly, more positive attitudes were associated with discussing ADHD less often with peers, indicating that the knowledge-attitude relationship is not simply linear. Al-Moghrabi and colleagues [21] surveyed 732 kindergarten and primary teachers and found that, despite basic knowledge of aetiology and symptoms, significant gaps remained regarding diagnosis and treatment, and that special educational needs (SEN) training significantly predicted knowledge, highlighting the value of structured professional development.

A recurring theme is the gap between beliefs and practice. Ghram and Alkahtani [22] found that although primary teachers recognised the importance of social-emotional learning for pupils with ADHD, systemic barriers such as limited resources and institutional support constrained implementation, with teachers relying mainly on academic support strategies. Consistent with this, teachers' self-reported knowledge of ADHD has been shown to influence how they plan and implement strategies for pupils' social and emotional wellbeing [24]. These belief–practice gaps are likely relevant to the Chinese context, where comparable constraints may shape teachers' responses.

Several consistent patterns emerge. Although many teachers accept ADHD as a genuine condition, some remain concerned about overdiagnosis or attribute ADHD-related behaviour to environmental factors such as parenting [8, 14]. Teachers may experience frustration and stress when teaching affected pupils [9], yet they generally remain willing to include such pupils and express interest in learning how to support them better [15]. Redha and Ahmad [23] found that teachers' attitudes in Kirkuk, Iraq, were significantly associated with their knowledge and private training experiences, indicating that professional development can positively influence attitudes.

Notwithstanding this body of work, most research examines hyperactive-impulsive or combined presentations, with far less attention to attitudes towards predominantly inattentive pupils, whose difficulties are less visible and less disruptive. Teachers may feel frustrated by disruptive behaviour yet underestimate the needs of quiet, inattentive pupils who do not disturb the class. Further research into attitudes towards less visible presentations is therefore needed.

2.4 Supporting Pupils with ADHD in Mainstream Classrooms

Classroom intervention can significantly improve behavioural and learning outcomes [4]. Three broad categories of effective strategy are commonly identified: antecedent-based, instruction-based, and consequence-based [4, 26]. Antecedent-based strategies include seating pupils near the teacher or away from distractions, giving clear and concise instructions, breaking tasks into smaller units, and using visual prompts. Instruction-based strategies include extending deadlines, providing frequent feedback and encouragement, and teaching organisational skills. Consequence-based strategies include daily behaviour report cards, token economies, and consistent home–school communication [4].

Cultural context shapes how these strategies are understood and applied. A systematic review of teacher perceptions in Arab countries found generally limited knowledge and considerable variation in the interpretation of ADHD-related behaviour, emphasising the influence of cultural factors on identification [25], a point that resonates with the Chinese context. Alghamdi [26] argues that effective interventions must be tailored to individual needs, implying that pupils with inattentive symptoms may require approaches distinct from those used for hyperactive-impulsive pupils. For inattentive pupils specifically, recommended strategies include providing additional cues to sustain attention, using private signals to redirect focus, reducing task load, frequently checking understanding, and giving clear, timely feedback [24]. Unlike strategies aimed at reducing disruption, these focus on capturing attention, building organisational skills, and providing structured support for task completion.

A meta-analysis by Sadek, Al-Hroub and Khatib [27] reported moderate knowledge but highly variable attitudes, and found that knowledge did not reliably predict attitudes, supporting the argument that distinct strategies are needed to address knowledge gaps and negative attitudes respectively. Aljumah [28] found that general-education teachers' judgements of strategy effectiveness predicted their implementation, even when those judgements were inconsistent with the evidence, and that confidence predicted the use of evidence-based strategies. This suggests that misconceptions about “what works” can lead teachers to adopt ineffective approaches. Widiastuti and colleagues [29] similarly found that effective support for pupils with ADHD involved direct, individualised methods and positive reinforcement rather than punishment, an emphasis particularly relevant in the discipline-oriented Chinese context. Whether teachers implement recommended strategies, however, depends on their knowledge, attitudes and self-efficacy [30, 32]: teachers who lack knowledge may struggle to identify need, those with negative attitudes may be unwilling to invest effort, and those lacking confidence may avoid implementation even when they recognise difficulties. This knowing–doing gap may be especially evident in China, where structural constraints such as large classes and limited resources complicate implementation [33].

2.5 Research in the Chinese Context

Chinese research has begun to examine teachers' overall perceptions of ADHD and the challenges they face. Li and Wang [11] found that urban primary teachers held moderate knowledge but significant gaps regarding aetiology and treatment, and that recognition was based mainly on impulsive symptoms, which implies that pupils with poor concentration are more likely to be overlooked. Ching, Li and Li [10] reported that Chinese teachers' understanding was shaped by a disconnect between medical and educational perspectives: teachers accepted ADHD as a medical diagnosis but lacked practical knowledge for support, and cultural emphases on discipline and achievement shaped their definitions of "normal" and "problematic" behaviour, such that behaviour not directly threatening academic performance or classroom order was less likely to be seen as warranting intervention.

Wang and Feng [34] documented the challenges of implementing inclusive education for children with ADHD in mainstream Chinese classrooms, while Long, Sharma and Subban [33] identified barriers including large classes (often 40–50 pupils), heavy workloads, limited professional support, and insufficient pre-service and in-service SEN training. Under such conditions, teachers must make difficult decisions about allocating limited attention, and pupils whose difficulties are less visible may be more readily overlooked, reflecting structural constraints rather than a simple lack of concern.

In sum, although ADHD can have serious educational consequences, pupils with less visible, inattentive presentations are at particular risk of under-identification and inadequate support, and research on how teachers understand and respond to such difficulties within specific national contexts remains limited. Four gaps are especially notable. First, existing studies typically use general measures of ADHD knowledge that do not distinguish inattentive from hyperactive-impulsive symptoms, so teachers' specific knowledge of inattention is poorly understood. Second, attitude research focuses largely on disruptive behaviour, with few studies examining attitudes towards pupils whose difficulties are internalised. Third, although Western research documents effective strategies and recent work has examined predictors of strategy use [28, 30], little is known about whether Chinese teachers implement these strategies or the barriers they encounter. Fourth, few studies use a single, integrated design to examine the relationships among knowledge, attitudes and strategies specifically in relation to less visible difficulties. The present study addresses these gaps by focusing on Chinese primary teachers' perceptions of the inattentive presentation of ADHD.

3. Methodology

3.1 Participants

The study received ethical approval from the UCL Institute of Education. A total of 93 primary-school teachers were recruited. One participant was excluded due to incomplete survey responses, yielding a final analytical sample of $N = 92$. Table 1 summarises the sample. The largest groups had 6–10 years (33.3%) and 2–5 years (28.0%) of teaching experience. Teachers were distributed across grade levels, most commonly middle primary (37.6%). Almost all teachers (98.9%) had taught a pupil with a formal ADHD diagnosis. Regarding training, 26.9% had received systematic training or a course, 71.0% had attended only short workshops or seminars, and one teacher (1.1%) had received none. Nearly half taught in rural/township public schools (49.5%), with the remainder in urban public (25.8%) and private schools (23.7%). The high proportion of rural teachers is noteworthy, as structural barriers such as oversized classes may be more pronounced in these settings [33]. Participants represented all six major Chinese regions, most frequently the Northeast (26.9%).

Table 1: Demographic characteristics of participants ($N = 93$)

Variable	Category	n	%
Teaching experience	2–5 years	26	28.0
	6–10 years	31	33.3
	11–15 years	19	20.4
	16 years or more	16	17.2
Grade level	Lower primary (Grades 1–2)	33	35.5
	Middle primary (Grades 3–4)	35	37.6
	Upper primary (Grades 5–6)	24	25.8

Variable	Category	n	%
ADHD training	Systematic training/course	25	26.9
	Short workshops/seminars	66	71.0
	Never received	1	1.1
Taught pupil with ADHD diagnosis	Yes	92	98.9
School type	Urban public	24	25.8
	Rural/township public	46	49.5
	Private	22	23.7

3.2 Materials

An online questionnaire was administered via Microsoft Forms in four sections. It includes four sections. Section A (six researcher-designed items) collected demographic information: years of teaching experience, current grade level, experience teaching a pupil with a formal ADHD diagnosis, prior ADHD/SEN training, school type, and region.

Section B (13 items, see Table 2 in Section 4.1) assessed knowledge of ADHD symptoms, diagnosis and related features, adapted from the KADDS [8]. The KADDS is a well-validated instrument assessing three domains (symptoms/diagnosis, aetiology, treatment); the 13 items most relevant to inattentive presentations were selected, each answered as True, False, or Don't Know. The Don't Know option is a key feature of the KADDS, distinguishing lack of knowledge from misconception [8].

Section C (10 items, see Table 3 in Section 4.2) measured attitudes and perceived challenges using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), adapted from validated attitude scales [9, 14], covering confidence, beliefs about inclusive education, stress/frustration, belief in ADHD as a valid condition, and interest in professional development.

Section D comprised two checklists: 14 evidence-based strategies (see Table 4 in Section 4.3) for supporting inattentive pupils (based on [4, 24]) and 12 common barriers to implementation (see Table 5 in Section 4.3) (based on [30]), each with an "Other" option.

3.3 Procedures

The questionnaire was created in Microsoft Forms with a participant information sheet and consent form on the first page. Recruitment messages were distributed through teacher WeChat groups and private messages to relevant professionals. The survey remained open for four to six weeks (April–May 2026), with a reminder posted after three weeks. Responses were downloaded as spreadsheet files and stored securely in institutional cloud storage.

3.4 Data Analysis

Data were analysed in SPSS. Data from one participant was excluded due to incompleteness of the questionnaire. The KADDS total score was computed by awarding one point per correct answer and zero for incorrect or "Don't Know" responses. Pearson correlation was used to examine associations between continuous variables (e.g., knowledge and attitudes). All tests were two-tailed with significance set at $p < .05$. Before inferential testing, assumptions of normality (Shapiro-Wilk) and homogeneity of variance (Levene's test) were assessed. Given the very low proportion of missing values, listwise deletion was used, and box plots were inspected for outliers. Cronbach's α was calculated for the adapted KADDS and attitude scales, with a threshold of 0.70 for acceptable internal consistency.

4. Results

4.1 Teachers' Knowledge of ADHD (RQ1)

Total knowledge score. The mean KADDS total was 5.38 (SD = 4.59) out of 13, or approximately 41% correct. Scores ranged from 0 to 13 and were highly dispersed: 27.2% scored 0, while only 14.1% scored 11 or above. Overall, most participants failed to identify more than half of the symptoms and features assessed.

Item-level knowledge. As shown in Table 2, correct-response rates ranged from 33.7% to 47.8%, indicating low-to-moderate knowledge. The highest accuracy was for Item 4 (“difficulty awaiting their turn,” 47.8%) and the lowest for Item 11 (“difficulties with peer relationships,” 33.7%). Only 34.8% correctly answered Item 2 (“ADHD is more common in boys than in girls”), indicating that roughly two-thirds of teachers misunderstood the gender distribution. Items addressing inattentive symptoms (Items 6, 10, 12 and 13) yielded accuracy between 40.2% and 45.7%, comparable to items on hyperactivity/impulsivity but all below 50%, indicating that teachers’ limited understanding extends across both presentations.

Table 2: Teachers’ knowledge of ADHD (N = 92)

Item	Statement	Correct (%)
1	Symptoms must have appeared before age 7 for diagnosis	41.3
2	ADHD is more common in boys than in girls	34.8
3	Difficulty organising tasks and activities	41.3
4	Difficulty awaiting their turn	47.8
5	Often fidget or squirm in their seats	40.2
6	Difficulty sustaining attention on tasks	45.7
7	Difficulty playing quietly	40.2
8	Often interrupt or intrude on others	42.4
9	Difficulty following instructions and finishing schoolwork	42.4
10	Avoid tasks requiring sustained mental effort	43.5
11	Difficulties with peer relationships	33.7
12	Inattentive pupils often appear to be daydreaming	40.2
13	Good academic performance can coexist with attention difficulties	41.3

4.2 Teachers’ Attitudes and Perceived Challenges (RQ2)

Table 3 presents attitudes measured on a five-point scale. Item means ranged from 2.24 to 2.51, clustering between “Disagree” and “Neutral” and indicating generally negative or uncertain attitudes. The highest mean was for Item 5 (“ADHD is a valid educational/medical condition,” $M = 2.51$, $SD = 0.96$), indicating some acceptance of its validity. Lower scores for Item 1 (“confident in my ability to teach children with ADHD,” $M = 2.28$, $SD = 1.23$) and Item 6 (“would welcome a child with ADHD into my classroom,” $M = 2.24$, $SD = 1.01$) reflect limited confidence and reservations about inclusion. Item 3 (“behaviour is often intentional or manipulative,” $M = 2.41$, $SD = 1.08$) indicated some negative attribution, while responses to items on stress and support reflected moderate frustration. Teachers reported generally negative attitudes marked by low confidence and reluctance, which may hinder their willingness to provide support.

Table 3: Teachers’ attitudes towards ADHD (N = 92)

Item	Statement	M	SD
1	I feel confident in my ability to teach children with ADHD	2.28	1.23
2	Children with ADHD should be educated in regular classrooms	2.38	0.99
3	The behaviour of children with ADHD is often intentional/manipulative	2.41	1.08
4	Teaching a child with ADHD creates extra stress for me	2.41	1.07
5	I believe ADHD is a valid educational/medical condition	2.51	0.96
6	I would welcome a child with ADHD into my classroom	2.24	1.01
7	I feel frustrated when teaching children with ADHD	2.29	1.12
8	More resources should be allocated for children with ADHD	2.42	1.00
9	I am interested in learning more about ADHD and how to support pupils	2.34	1.02
10	With appropriate support, children with ADHD can learn like others	2.27	0.99

4.3 Reported Strategies and Perceived Barriers (RQ3)

Strategies. As shown in Table 4, the most frequently reported strategies were low-cost instructional accommodations: providing clear, concise instructions (42.4%), breaking assignments into smaller tasks (38.0%), and seating pupils near the teacher or away from distractions (35.9%). Strategies involving external support were used far less often, referral for external evaluation (14.1%) and consulting a school psychologist or SEN staff (12.0%), as were providing frequent feedback (8.7%) and incorporating movement breaks (6.5%).

Barriers. Table 5 shows that the most cited barriers were large class size (38.0%) and lack of time (26.1%), followed by insufficient training/knowledge (16.3%) and concern about stigma or labelling (13.0%). Notably,

5.4% reported that a pupil's adequate academic performance made intervention seem unnecessary, reflecting a possible misconception about the relationship between achievement and support needs.

Table 4: Strategies used to support inattentive pupils (N = 92)

Rank	Strategy	n	%
1	Providing clear, concise, simple instructions	39	42.4
2	Breaking assignments into smaller tasks	35	38.0
3	Seating near the teacher / away from distractions	33	35.9
4	Modifying assignments (quantity, format)	18	19.6
5	Collaborating with parents on consistent strategies	15	16.3
6	Recommending/referring for external evaluation	13	14.1
7	Daily behaviour report card / home-school communication	12	13.0
8	Peer tutoring or buddy systems	12	13.0
9	Consulting school psychologist/SEN staff	11	12.0
10	Teaching organisational skills	10	10.9
11	Allowing extended time	10	10.9
12	Using visual cues or prompts	9	9.8
13	Providing frequent feedback and encouragement	8	8.7
14	Incorporating movement breaks	6	6.5

Table 5: Perceived barriers to supporting inattentive pupils (N = 92)

Rank	Barrier	n	%
1	Large class size / too many pupils	35	38.0
2	Lack of time during the school day	24	26.1
3	Insufficient training or knowledge about ADHD	15	16.3
4	Concern about stigma or labelling the pupil	12	13.0
5	Lack of support from school administration	10	10.9
6	Difficulty balancing one pupil's needs with the whole class	9	9.8
7	Lack of confidence in my ability to help	8	8.7
8	Limited access to resources or materials	8	8.7
9	Lack of support from parents/families	7	7.6
10	Pupil's behaviour is too challenging	6	6.5
11	Uncertainty about which strategies are effective	5	5.4
12	Adequate academic performance, so intervention seems unnecessary	5	5.4

The adapted KADDS (13 items) showed excellent internal consistency (Cronbach's $\alpha = .917$), as did the attitude scale (10 items; $\alpha = .904$). A one-way ANOVA found no significant difference in KADDS total scores across the four experience groups, $F(3, 88) = 1.71$, $p = .170$, indicating that knowledge did not differ significantly by teaching experience. A Pearson correlation revealed a small, non-significant positive association between knowledge and attitudes, $r(90) = .085$, $p = .420$, indicating no meaningful relationship between the two. Because only one teacher reported having received no ADHD training ($n = 1$), a meaningful group comparison by training status could not be conducted.

5. Discussion

5.1 Teachers' Knowledge of ADHD

Regarding the first research question, teachers' knowledge of ADHD was generally low (mean 5.38/13; ~41% correct), indicating that most participants lacked accurate knowledge of diagnostic criteria, prevalence and associated features. This is consistent with prior findings that teachers' knowledge is incomplete and contains misconceptions [8], that gaps are particularly evident for difficult-to-identify symptoms [15], and that Chinese urban teachers hold moderate knowledge with notable gaps regarding causes and treatment [11]. The present study extends this work by showing that knowledge of inattentive symptoms is particularly limited.

The low accuracy for Item 2 (34.8%) indicates that about two-thirds of teachers did not recognise the gender distribution of ADHD, a misconception that may contribute to the under-identification of girls, who more often display inattentive rather than hyperactive-impulsive symptoms [6]. It should be noted that our study did not directly collect or analyse student-level gender data; therefore this remains a speculative implication for future investigation rather than a finding demonstrated by the current results. The lowest accuracy, for peer-

relationship difficulties (Item 11, 33.7%), suggests limited recognition of the social difficulties associated with ADHD, and the modest accuracy for Items 12 and 13 (40.2% and 41.3%) indicates an incomplete understanding of the core features of inattentive ADHD. Such gaps may lead teachers to interpret inattentive behaviour as laziness, poor motivation or inadequate parenting rather than as a potential sign of neurodevelopmental difficulty [9], delaying identification and intervention and contributing to cumulative academic and social difficulty [16].

5.2 Teachers' Attitudes and Challenges of ADHD

Attitudes were generally negative or uncertain, with all item means below 2.6. Low confidence (Item 1, $M = 2.28$) and limited willingness to include pupils (Item 6, $M = 2.24$) echo findings that teachers often feel they lack the resources or skills to teach pupils with ADHD [14] and that such teaching is experienced as stressful [9]. The negative-attribution item (Item 3, $M = 2.41$) indicates that some teachers still attribute ADHD-related behaviour to low effort or laziness rather than neurodevelopmental difficulty [8], an attribution that can damage teacher–pupil relationships and reduce willingness to support [10]. Although belief in ADHD as a valid condition received the highest mean (Item 5, $M = 2.51$), this remained below the scale midpoint, suggesting that acceptance is tentative and may reflect the still-developing public understanding of neurodevelopmental conditions in China [10]. The most cited challenges, large class size (38.0%) and lack of time (26.1%), reflect the realities of Chinese primary education, where classes frequently exceed 40 pupils and workloads are heavy [33]; these conditions may underlie teachers' low confidence and reluctance.

5.3 Strategies and Barriers of ADHD

The most frequently reported strategies, clear instructions (42.4%), task-breaking (38.0%) and strategic seating (35.9%), are evidence-based [4, 24] and, notably, low-cost and easy to implement without extensive training or resources, which may explain their popularity. By contrast, strategies requiring external support or collaboration were rarely used (external referral 14.1%; consulting a psychologist 12.0%), consistent with reported barriers of limited time (26.1%), insufficient training (16.3%) and limited administrative support (10.9%), and with the reality that referral pathways and school psychological services remain limited in China [33]. Large class size and lack of time again emerged as principal structural barriers: with classes exceeding 40 pupils, individualised attention is difficult, and in a system that prizes discipline and achievement, pupils who neither disrupt the class nor depress academic outcomes are unlikely to be prioritised [10]. The finding that 13.0% cited concern about stigma is important for understanding how teachers decide whether to intervene: in a cultural context that values “face” and the avoidance of negative labels, teachers may hesitate to single out pupils for support even when they perceive a need, which is consistent with evidence that Chinese pre-service teachers' intentions to interact with pupils with ADHD depend on attributions and perceptions of effort [10].

5.4 Implications and Future Research

The findings both align with and extend prior research. Consistent with earlier work [8, 9, 15], teachers showed limited knowledge, some misconceptions, and particular difficulty with inattentive symptoms, and their perceptions appeared shaped by cultural emphases on achievement and order. The study extends this literature by focusing specifically on the inattentive presentation, by using a context-adapted KADDS, and by examining the knowledge–attitude relationship directly. The absence of a significant correlation between knowledge and attitudes ($r = .085$, $p = .420$) indicates that these are distinct constructs and that providing information alone may be insufficient to change attitudes, which is consistent with meta-analytic evidence that knowledge does not reliably predict attitudes [27] and with evidence that implementation depends on factors beyond knowledge [28]. An unexpected finding was the absence of significant knowledge differences across experience groups, $F(3, 88) = 1.71$, $p = .170$; contrary to the assumption that experience brings greater knowledge, this suggests that ADHD knowledge is not acquired through classroom experience alone and that professional development is needed regardless of tenure, which is consistent with evidence that training, rather than experience, predicts knowledge and attitudes [23].

The study indicates that distinguishing inattentive from hyperactive-impulsive symptoms is valuable when assessing teacher knowledge; that knowledge and attitudes may represent separable dimensions requiring separate attention; and that cultural and structural factors, class size, achievement pressure, and stigma, must

be considered when interpreting teachers' responses. The low knowledge levels point to an urgent need for professional development focused specifically on inattentive presentations, correcting common misconceptions (e.g., gender distribution) and equipping teachers with accessible strategies. Because knowledge and attitudes were uncorrelated, training should include a dedicated component addressing attitudes, e.g., structured contact with individuals who have ADHD [17]. The prominence of structural barriers indicates that teacher-level intervention alone is insufficient; school- and system-level reform, reducing class sizes where feasible, protecting preparation time, and ensuring access to professional support services, is also needed. Finally, concerns about stigma suggest that schools should adopt policies that normalise additional support, favouring universal support measures that benefit all pupils over conspicuously targeted interventions.

Several limitations qualify these findings. Convenience and snowball sampling limit generalisability and may over-represent digitally active teachers; self-report data are subject to social desirability bias; and the abbreviated 13-item KADDS is not directly comparable with the full instrument. Future research should employ larger, more representative samples across regions and school types; develop and evaluate targeted interventions, including randomised comparisons of information-based and contact-based training, to improve knowledge of and attitudes towards inattentive ADHD; and examine specifically how Chinese schools identify and support girls, who are especially likely to be overlooked. Cross-cultural comparative studies would further clarify how cultural attitudes towards disability and classroom management shape teachers' responses.

6. Conclusion

This present study examined Chinese primary teachers' knowledge, attitudes and practices regarding pupils with less visible, inattentive ADHD. Teachers demonstrated low-to-moderate knowledge (~41% correct), with particularly limited understanding of inattentive symptoms and gender distribution; they held generally negative or uncertain attitudes marked by low confidence and reluctance to include affected pupils; they relied predominantly on low-cost instructional accommodations while rarely using strategies requiring external support; and they identified large class size and lack of time as the principal barriers. The study makes theoretical contributions by foregrounding the neglected inattentive presentation, demonstrating empirically the independence of knowledge and attitudes, and situating ADHD research in a non-Western context shaped by class size, achievement pressure and stigma. Practically, it identifies specific knowledge gaps and structural barriers that professional development and school policy should address.

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Conflicts of Interest

The authors declare no conflict of interest.

Ethics and Consent

The study was conducted in accordance with the Declaration of Helsinki and approved by the UCL Institute of Education. All participants provided digital informed consent prior to participation, and all data were fully anonymised.

Data Availability

The anonymised dataset is available from the corresponding author on reasonable request.

Permissions

Not Applicable.

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