Original Article

Knowledge and Attitudes among Primary School Teachers Regarding an Attention Deficit Hyperactivity Disorder in Al-Hilla City

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Abstract

Background: Attention-deficit hyperactivity disorder (ADHD) affects young children's social and intellectual development as well as their general well-being in primary schools. It is a prevalent emotional, cognitive, and behavioral disease. Teachers are essential in the identification of ADHD because they often engage with students in a variety of circumstances. To keep a healthy learning environment, primary school teachers must, in essence, enhance their understanding of and favorable attitudes toward students with ADHD. **Objectives:** The study's objectives were to assess primary school teachers' knowledge of and attitudes toward students with ADHD and discover the relationship between the two. As a result, the researcher has been looking at the study's goals. The association between sociodemographic characteristics (such as age, gender, etc.) and primary school teachers' knowledge of and attitudes about ADHD is also to be determined. **Materials and Methods:** applied quantitative research conducted in Babylon province between September 19, 2022, and July 1, 2023, used a descriptive cross-sectional study design to examine the knowledge and attitudes of primary school teachers regarding ADHD, with 225 teachers from 20 elementary schools in the Al-Qasim District participating. The teachers were chosen by convenience sampling, and the schools were chosen by systematic sampling from a pool of 103 schools. The information was gathered using a modified and adjusted questionnaire, and it was then electronically evaluated using Microsoft Excel 2010 and SPSS 20 programs. **Results:** The highest percentage of primary school teachers were 30–39 years old and female gender; whereas those having a poor level of knowledge, which constituted 55.1% and 68.9%, had a neutral attitude toward ADHD. **Conclusions:** The study concludes that there is a significant positive correlation between the teachers' knowledge and their attitude toward ADHD. In addition, the study found no statistically significant differences in teachers' knowledge and attitudes toward ADHD with respect to their age, gender, marital status, educational level, years of experience, teaching stage, or teaching specialties but found statistically significant differences in teachers knowledge and no statistical differences in their attitudes toward ADHD with respect to their residents.

Keywords: ADHD, attitudes, knowledge, primary schools

Introduction

A person's character starts to form during the formative years of life, making early childhood one of the most crucial periods for character formation. His intellectual development depends significantly on his mental processes, particularly his attention. Some of the kids can have attention issues that are related to their hyperactivity. Attention-deficit hyperactivity disorder (ADHD) is frequently identified in elementary school when behavioral, social, academic, and performance standards (obeying rules, remaining quiet while paying attention, cooperating with others, and so on) begin to pose a challenge.[1] ADHD is a chronic neurodevelopmental disorder that frequently leads to disruptive classroom behavior. This

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behavior can result in a variety of functional difficulties for children, such as social issues, cognitive disorders, issues with externalizing behavior, psychological issues, peer relationship issues, and low self-esteem. Frequently, these issues result in referrals to clinicians for evaluation and treatment. Since the teacher has more direct contact with students and their requirements, the relationship between home and school must be strengthened, especially during elementary school.[2] According to the American Psychiatric Association, there are three ways that ADHD manifests itself: mostly inattentive, primarily hyperactive/impulsive, and mixed.[3] Children's health and illness are correlated with the society of the future and successive generations' health and illness. Therefore, a society's mental health will suffer irreparable harm in infancy due to developmental issues such as infertility, growth in adolescence, and a lack of interest in learning about them.[4] Elementary school teachers have a crucial role in evaluating children's academic and behavioral concerns since they frequently interact with children in various controlled and unstructured situations. The extra stress and effort that come with teaching pupils who also have ADHD, however, compromises teachers' ability to effectively manage the affected children.[5] In primary schools, estimates range between 6% and 9% for males and 2% and 3% for girls. Approximately 30%–50% of children diagnosed with ADHD as minors continue to exhibit symptoms as adults. If children with ADHD are not treated, their ability to learn, develop healthy interpersonal relationships, maintain their mental health, and avoid psychiatric comorbidity may be severely impaired. ADHD can be a debilitating disorder. Comprehensive treatment for ADHD requires teachers' participation in a variety of areas, including the referral of children with erratic behavior, the sharing of information about their academic performance and history, social interactions, and general day-to-day functioning, as well as the planning and implementation of treatment.[5] The last few years have seen significant advancements in our understanding of the causes of ADHD. ADHD is categorized as a neurodevelopmental disorder.[6] Accordingly, ADHD hinders the brain's or central nervous system's normal growth and development. Evidence and studies indicate that genetic and neurological factors, in addition to environmental factors, such as biological toxins and/or viruses, are the primary causes of the disorder.[7] Considering everything said above, the researchers think it's critical to raise awareness of this problem and try to improve primary school teachers' attitudes and knowledge of children with ADHD. As a result, they will be better able to identify the illness and deal with these children.

Materials and Methods

A descriptive (cross-sectional) study was conducted to examine the knowledge and attitudes of elementary school teachers regarding ADHD. The investigation is performed between September 19, 2022, and July 1, 2023. From the candidate institutions, a convenience (nonprobability) sample of 250 primary school teachers was selected for this study. The research was conducted at public elementary schools in the Al-Qasim neighborhood of Al-Hillah City, Iraq. From the total of 103 government-run primary schools in Al-Hilla City's Al-Qasim District, 20 were selected systematically. The study's instruments are assessment tools. Using a three-part, self-administered questionnaire, the data are gathered via a self-administered technique. Part one is sociodemographic (15 items), part two is the Knowledge of Attention Deficit Disorder Scale (30 items), and part three is the Teachers' Attitudes Scale (15 items) (20 items). The time required to complete the questionnaire ranged from 15 to 20 min. The validity of the questionnaire was attained through a panel of 15 experts, and the reliability of the questionnaire was established through a pilot study involving 25 primary school teachers from two primary schools (one for boys' students and

Table 1: Sociodemographic characteristics of the teachers

SDVs	Classification	No.	%
Age	30–39 years	**136**	**60.4**
	40–49 years	52	23.1
	50 and older	37	16.4
	39.19 ± 8.16		
Gender	Male	100	44.4
	Female	**125**	**55.6**
Residents	Urban	**128**	**56.9**
	Rural	97	43.1
Marital status	Single	25	11.1
	Married	**194**	**86.2**
	Divorced	4	1.8
	Widow	2	0.9
Education level	Diploma	74	32.9
	B.Sc.	**142**	**63.1**
	Postgraduate	9	4.0
Work experiences	<5 years	83	36.9
	5–10 years	12	5.3
	>10 years	**130**	**57.8**
Teaching stage	1st	22	9.8
	2nd	25	11.1
	3rd	35	15.6
	4th	36	16.0
	5th	**55**	**24.4**
	6th	52	23.1
Teaching specialist	Islamic	34	15.1
	Arabic	**61**	**27.1**
	English	25	11.1
	Math	44	19.6
	Sociology	26	11.6
	Science	28	12.4
	Psychology	7	3.1

Bold values indicate mean median age and standard deviation

Table 2: How was the study sample distributed according to the information sources used to understand attention-deficit hyperactivity disorder (ADHD)

Information-related	Classification	No.	%
Do you have enough information about ADHD	No	206	**91.6**
	Yes	19	8.4
Have you ever heard or read about ADHD	No	189	**84.0**
	Yes	36	16.0
Have you ever worked with students that have ADHD?	No	163	**72.4**
	Yes	62	27.6
Do you attended courses about ADHD	No	211	**93.8**
	Yes	14	6.2
Do you have a child with ADHD	No	216	**96.0**
	Yes	9	4.0
What action would you take in the case of ADHD	Refer him to a psychiatrist	8	3.6
	Refer him to psychologist	15	6.7
	Notifying the parents	76	33.8
	Notifying the school authorities	125	**55.6**
	No activity	1	0.4
Sources of information	Manuals and professional articles	13	5.8
	Media (radio, TV, newspaper, magazines, etc.)	25	11.1
	Internet	114	**50.7**
	Meetings and in-service instruction.	13	5.8
	Specialists (psychiatrists and psychologists)	8	3.6
	Others (friends, family members, etc.)	52	23.1

Bold values indicate mean median age and standard deviation

one for girls' students) in the Qassim area of the Babylon province, who represented 10% of the target population of 250. The following analyses were all carried out using The statistical analysis was carried out using Microsoft Excel and SPSS, version 27.0 (IBM Company, Chicago, IL, USA).

Ethical approval

All experiential protocols were approved under the College of Nursing, University of Babylon, Iraq, under the reference No. 339 on 16 Jul 2022. All experiments were carried out in accordance with approved guidelines.

Results

The results show the characteristics of the participants [Table 1]; the average age is 39.19 (SD = 8.16) years among the age group 30–39 years were mostly (60.4%). In regards to gender, most of the participants were female (55.6%). Concerning residents, more than half were from urban areas (56.9%). For marital status-related findings, the majority of participants were married (86.2%). With respect to the education level, the bachelors (B.Sc.) were predominated among the study sample (63.1%). Regarding work experience, one-third were expressed >10 years. Most of them teach the 5th stage (24,4%) and specialized Arabic (27.1%).

The results show that the majority (91.6%) of primary school teachers have enough knowledge about ADHD, 84% were not read about ADHD, 72.4% were not taught to students with ADHD, majority of (93.8%) were not attended courses about ADHD, the minority (96%) of did not have a child with ADHD, in case of ADHD, 55.6% were only informed the school authorities. The

Table 3: Overall primary school teachers' knowledge toward ADHD

Knowledge	No.	%	M (±SD)	Ass.
Poor	124	55.1	9.79±4.80	Poor
Fair	98	43.6		
Good	3	1.3		
Total	225	100.0		

Table 4: Overall primary school teachers' attitudes toward ADHD

Attitudes	No.	%	M (±SD)	Ass.
Negative	60	26.7	52.17±13.06	Neutral
Neutral	155	68.9		
Positive	10	4.4		
Total	225	100.0		

Table 5: Correlation between knowledge and attitudes among primary school teachers toward ADHD

Correlation statistics	Knowledge	Attitudes
Knowledge	1	0.217**
Attitudes	0.217**	1

** non significant at P ≤ 0.01.

Table 6: Relationship between teachers' knowledge and sources of information regarding ADHD

Correlation statistics	1	2	3	4	5	6	7	8
1. Knowledge	1							
2. Have enough information	0.403**	1						
3. Read about ADHD	0.223**	-0.133–*	1					
4. Taught to students with ADHD	0.113	-0.116–	0.219**	1				
5. Courses on ADHD	0.369**	-0.082–	0.112	0.077	1			
6. Do you have a child with ADHD	0.339**	-.091–	0.089	0.075	0.792**	1		
7. Action would take with ADHD	0.116	-.018–	0.068	0.050	-0.023–	0.083	1	
8. Sources of information about ADHD	0.118	0.035	0.028	0.118	-0.041-	0.020	0.129	1

** non significant at P ≤ 0.01.

Table 7: Relationship between teachers' attitudes and sources of information regarding ADHD

Correlation statistics	1	2	3	4	5	6	7	8
1. Attitudes	1							
2. Have enough information	-0.110–	1						
Read about ADHD	0.115	-0.133–	1					
4. Taught to students with ADHD	0.043	-0.116–	0.219**	1				
Courses on ADHD	0.070	0.082	0.112	0.077	1			
6.Do you have a child with ADHD	0.157*	0.191	0.089	0.075	0.792	1		
7. Action would take with ADHD	0.014	-0.018–	0.068	0.150	0.023	0.083	1	
8. Sources of information about ADHD	-0.004–	0.035	0.028	0.118	0.041	0.020	0.129	1

** non significant at P ≤ 0.01.

Internet was the most prevalent source of ADHD-related information [Table 2].

The results revealed that the majority of primary school teachers (55.1%; $M = 9.79$; SD = 480) possessed inadequate knowledge of ADHD ($M = 9.79$; SD = 480) [Table 3].

The results showed that 68.9% of the primary school teachers exhibited neutral attitudes regarding ADHD ($M = 52.17$; SD = 13.06) [Table 4].

Findings show that the primary school teachers' attitudes are positively significantly correlated with their knowledge regarding ADHD ($r = 0.217$; $P = 0.001$) [Table 5].

Findings show that the primary school teachers' knowledge is positively significantly correlated with their enough information about ADHD ($r = 0.403$; $P = 0.000$), reading about ADHD ($r = 0.223$; $P = 0.000$), courses related to ($r = 0.369$; $P = 0.000$) and having a child with ADHD ($r = 0.339$; $P = 0.000$) [Table 6].

Findings show that the primary school teachers' attitudes are positively significantly correlated with their having a child with ADHD ($r = 0.157$; $P = 0.005$) [Table 7].

Discussion

Results showed that most teachers were young people (30–39 years old). Young teachers have been reported to be difficult for most primary school students' attentional and metacognitive capacities, which highlights an important approach. This is consistent with the findings of Al-Moghamsi and Aljohani,[8] who discovered that the majority of instructors were between the ages of 31 and 40. Their study was titled "Elementary school teachers' knowledge of attention-deficit hyperactivity disorder." The results of the study reveal that the majority of teachers were females (55.6%). The teaching profession is more preferred for women than men because women have more empathy toward children than men, and they have more contact with their children at home. Furthermore, this may be explained by the fact that females were subjected to greater burdens and required more time and energy than males. This result is in accordance with the study of Shehata *et al.*[5] the "Efficacy of Structured Training Program on Knowledge, Attitude, and Management Techniques Among Primary School Teachers toward Children with Attention Deficit Hyperactivity Disorders," which found that 71.7% of the study sample were females. In terms of residency, the percentage of teachers in urban areas is higher than in rural areas (56.9%). This result may be due to the increase in population density in the urban area because most school sites are located in city centers and because there are higher proportions of students in urban areas than in rural areas. A previous review demonstrated that geographical location plays a limited role in the large variance of ADHD prevalence estimates according to primary school teachers' reports.[1] This result is in line with the study of Al-Amarei and Mohamed,[1] who found that of the study sample, 84.3% were living in urban areas. According to the study's findings, 86.2% of teachers were married. The study's findings are in line with those of Alabd *et al.*,[9] who discovered that the majority of the study participants (94.8%) were married.

The study of Shehata *et al.*,[5] which discovered that 80% of the study population was married, further reinforced this conclusion. According to the study's findings, the sample's bachelor's degree holding rate was 63.1%. The study's findings concur with those of Khademi *et al.*,[10] who discovered that 60.5% of the study group possessed a bachelor's degree. Moreover, the results are in line with those of Mahdi and Al-Juboori,[11] who discovered that the majority of the sample (62.8%) had a bachelor's degree. These findings do not correspond with the findings of Al-Amarei and Mohamed,[1] who found that most of the sample had a diploma degree (61.4%). According to the findings of this study (57.8%), their teaching experience was greater than 10 years. This result of the study disagrees with that of Al-Amarei and Mohamed,[1] who discovered that 38.5% of the sample had ten years of teaching experience or less. According to the study's findings, 8.4% of teachers say they have enough sources of information regarding ADHD, while 91.6% say they don't. This may be due to a lack of information about the disease as well as a lack of educational programs on the disease given to teachers. This result agrees with the study of Al-Amarei and Mohamed,[1] who found that more than half of the study sample had no information about ADHD (59%). Regarding the sources of information about ADHD, have you ever heard or read about it? According to the study results, 16% of teachers answered "yes," and 84% answered "no." This result disagrees with the study of Khademi *et al.*,[10] who found that of the sample teachers' answers to the question, "Have you heard about ADHD?" Yes, 93%; no, 7%. Regarding the sources of information about ADHD, do you have a child with ADHD? The study result shows that 96% of the teachers answered "no," and 4% answered yes. According to the current study's findings about the primary sources of information about ADHD, 50.7% of teachers learned about ADHD via an online resource. This outcome reflects the enormous amount of information that is currently available on the internet, but relying solely on it as a source of knowledge is inappropriate because not all of the information that is posted online comes from reliable sources, and when it comes to information about the disease, one must exercise caution. The study's findings concurred with those of Al-Amarei and Mohamed[1]and Alfageer *et al.*[12] but did not agree with those of Al-Omari *et al.*[13] The study's findings for radio and television were 34.9%. The study's findings showed that most participants (55.1%) had little awareness of ADHD. Several studies recently came to the conclusion that this outcome can be caused by teachers not being aware of this illness and how to treat a child who has it. possibly as a result of Iraq's lower requirements for vocational education. Professionals need to accurately identify this disorder; therefore, it is important for teachers to know the characteristics and advantages of ADHD. Several studies support our results,[1,10,14-16] and they discovered that the majority of the teachers had adequate knowledge about ADHD. At an average of 52.17, nearly two-thirds (68.9%) of primary school teachers reported having neutral attitudes toward ADHD (13.06). While unfavorable attitudes toward ADHD were present in 26.7% of the sample as a whole, positive attitudes were present in 4.4% of the population. The study of Khademi *et al.*,[10] Knowledge and Attitude of Primary School Teachers in Tehran, Iran, Regarding ADHD and SLD, indicated that the attitudes were neutral (47.5%), which is consistent with the findings of this study. The results of the study show a substantial positive correlation (r = 0.217; P = 0.001) between the teachers' knowledge and attitude. The findings of this study were in agreement with those of another study.[1] conducted in Al-Najaf city, which found a substantial positive association between instructors' knowledge and attitudes (r = 0.468, P = 0.0001). According to the study's findings, there is a positive correlation between primary school teachers' knowledge and their access to reliable sources of information about ADHD (r = 0.403; P = 0.000), reading about ADHD (r = 0.223; P = 0.000), enrolling in courses related to ADHD (r = 0.369; P = 0.000), and having a child with ADHD (r = 0.339; P = 0.000). The current study agreed with the study conducted in Al-Najaf City by Al-Amarei and Mohamed[1]; this study showed there are important associations among teachers' knowledge and source information (2 = 15.659, at P-value = 0.032). Regarding the relationship between teachers' attitudes and sources of information, the study findings show that primary school teachers' attitudes are positively correlated with their having a child with ADHD (r = 0.157; P = 0.005). The current study agreed with the study conducted in Jordan[13]; this study showed no significant difference in attitudes regarding ADHD and the source of information; the result was t (120) = 1.1, P > 0.05.

Conclusions

The study showed there is a significant positive correlation between the teachers' knowledge and their attitude toward ADHD; in addition, the study found knowledge and sources of information regarding ADHD are positively correlated, as are attitudes and sources of information regarding ADHD.

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Conflicts of interest

There are no conflicts of interest.

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