РАСПРОСТРАНЕННОСТЬ И АКАДЕМИЧЕСКОЕ ВЛИЯНИЕ СИНДРОМА ДЕФИЦИТА ВНИМАНИЯ И ГИПЕРАКТИВНОСТИ СРЕДИ УЧАЩИХСЯ НАЧАЛЬНОЙ ШКОЛЫ

Е.А. Скороходова, А.А. Жолчиева

Аннотация. Исследуются распространенность и выраженность симптомов синдрома дефицита внимания и гиперактивности (СДВГ) среди учащихся 1–3 классов частной школы в Киркуке, Ирак. Анализируются гендерные и возрастные различия, а также изучаются академические и поведенческие результаты учащихся с высоким уровнем симптомов. Данные были собраны с помощью опросников ADHD-RS-5 для домашнего и школьного использования, заполненных учителями и родителями. Академическая успеваемость оценивалась путем подробного анализа табелей успеваемости учащихся. В статье также сравнивается понимание и восприятие симптомов синдрома дефицита внимания и гиперактивности учителями и родителями. Также отмечается крайне низкая вовлеченность родителей в выявление симптомов этого синдрома у своих детей, что свидетельствует либо о низкой осведомленности родителей, либо о нежелании признавать наличие проблемы. Отсутствие ранней диагностики синдрома дефицита внимания и гиперактивности, как следствие, является проблемой, особенно в 1–3 классах начальной школы, поскольку этот этап имеет решающее значение для формирования фундаментальных академических знаний и поведенческих моделей.

Ключевые слова: синдром дефицита внимания и гиперактивности; учащиеся начальной школы; ADHD-RS-5; оценки учителей; оценки родителей; распространенность симптомов; образовательное воздействие.

БАШТАЛГЫЧ МЕКТЕПТИН ОКУУЧУЛАРЫНЫН АРАСЫНДА КӨҢҮЛ БУРУУНУН ЖЕТИШСИЗДИГИ ЖАНА ГИПЕРАКТИВДҮҮЛҮК СИНДРОМУНУН ЖАЙЫЛЫШЫ ЖАНА АНЫН АКАДЕМИЯЛЫК ТААСИРИ

Е.А. Скороходова, А.А. Жолчиева

Аннотация. Бул макалада Ирактын Киркук шаарындагы жеке мектептердин 1–3-класстарынын окуучуларынын арасында көңүл буруунун жетишсиздиги жана гиперактивдүүлүк синдромунун (КБЖГС) симптомдорунун жайылышы жана деңгээли изилденет. Гендердик жана курактык өзгөчөлүктөр, ошондой эле симптомдору жогору болгон окуучулардын академиялык жана жүрүм-турумдук натыйжалары талдоого алынат. Маалыматтар мугалимдер жана ата-энелер тарабынан толтурулган үйдө жана мектепте колдонуу үчүн ADHD-RS-5 сурамжылоолорунун жардамы менен чогултулган. Академиялык жетишкендиктер окуучулардын жетишкендик баракчаларын терең талдоо аркылуу бааланган. Ошондой эле макалада мугалимдер менен ата-энелердин КБЖГС симптомдорун түшүнүүсү жана кабыл алуусу салыштырылат. Ата-энелердин балдарындагы симптомдорду аныктоого катышуусунун өтө төмөндүгү белгиленет, бул ата-энелердин маалыматынын аздыгын же көйгөйдү моюнга алгысы келбегендигин билдирет. КБЖГСны эрте диагноздоонун жоктугу, өзгөчө башталгыч мектептин 1–3-класстарында чоң көйгөй жаратат, себеби бул этап негизги академиялык билимдерди жана жүрүм-турум моделдерин калыптандырууда чечүүчү мааниге ээ.

Түйүндүү сөздөр: көңүл буруунун жетишсиздиги жана гиперактивдүүлүк синдрому; башталгыч мектептин окуучулары; ADHD-RS-5; мугалимдердин баалоосу; ата-энелердин баалоосу; симптомдордун жайылышы; билим берүүгө тийгизген таасири.

PREVALENCE AND ACADEMIC IMPACT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER AMONG PRIMARY SCHOOL STUDENTS

E.A. Skorokhodova, A.A. Zholchieva

Abstract. This article investigates the prevalence and severity of Attention Deficit Hyperactivity Disorder (ADHD) symptoms among students in grades 1–3 at a private school in Kirkuk, Iraq. It analyzes differences by gender and age. It also examines the academic performance and behavioral patterns of students with pronounced ADHD symptoms. Data were collected using the ADHD-RS-5 (Home and School Version) questionnaires, which teachers and parents completed. Academic performance was assessed by examining student report cards. The article also compares teachers' and parents' perceptions of ADHD symptoms. It also identifies extremely low parental involvement in identifying ADHD symptoms in their children, suggesting either low parental awareness or unwillingness to acknowledge the problem. The resulting lack of early ADHD diagnosis is problematic, especially in grades 1–3 of primary school, as this stage is crucial for forming fundamental academic knowledge and behavioral patterns.

Keywords: Attention Deficit Hyperactivity Disorder; primary school students; ADHD-RS-5; teacher ratings; parent ratings; symptom prevalence; educational impact.

Introduction. Research consistently shows that Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders in childhood. Global epidemiological analyses estimate that approximately 5–10% of school-aged children exhibit clinically significant ADHD symptoms. A recent umbrella meta-analysis synthesizing data from multiple international studies reports a pooled global prevalence of 8.0 % among children and adolescents (95 % CI: 6.0–10.0), confirming that ADHD is widely present across different countries and cultural contexts [1, c. 120–129]. Importantly, these figures reflect only identified or diagnosed cases; many children with milder or unrecognized symptoms remain undiagnosed, especially in regions where awareness, screening, and access to mental-health services are limited. This under-identification suggests that the actual burden of ADHD in school populations is likely higher than officially reported.

Attention Deficit Hyperactivity Disorder (ADHD) has been increasingly recognized as a significant issue within Iraq's educational context. Several studies across different regions of the country indicate that ADHD symptoms are common among primary-school children, although the scope and depth of research vary considerably. Early work conducted in Baghdad used both teacher and parent questionnaires and reported relatively high rates of ADHD symptoms. Interestingly, teachers consistently identified more behavioral difficulties than parents, reflecting possible under-recognition of ADHD symptoms within families [2, c. 225–231]. However, these early studies focused mainly on behavioral indicators and did not examine students' academic performance.

More recent research in Najaf and Tikrit has continued to document substantial prevalence rates, typically ranging from 14 to 20% among primary school pupils [2; 3, c. 45–53]. These studies frequently report a higher proportion of ADHD symptoms among boys and highlight hyperactive-impulsive and combined presentations as the most common types.

Research conducted in the Diwaniya and Kirkuk provinces aimed to assess teachers' awareness of and attitudes toward ADHD. The results showed that most teachers have a limited understanding of the characteristics of ADHD and the specifics of working with this condition. These findings highlight the need for targeted professional development and teacher training on this issue [4].

Overall, existing research confirms the presence of ADHD among primary school children across all regions of Iraq. ADHD symptoms are highly prevalent among students, yet awareness of this problem among teachers and parents is significantly low. However, existing research highlights a gap in understanding the impact of this disorder on the academic performance and behavioral characteristics of young students. This is crucial, as numerous global studies highlight the significant impact of ADHD on concentration, task completion, learning pace, and overall academic performance.

This research gap is significant in the case of Kirkuk province, one of the most strategically and economically important regions of the Republic of Iraq. Kirkuk is the center of the national oil production.

The quality of education here is of long-term importance for the region's stability and the country's economy. The region is also diverse in its ethnic, cultural, religious, and political makeup. Kirkuk's population includes Kurdish, Turkmen, Arab, and Assyrian communities, and its schools reflect this rich linguistic and cultural diversity. As Shanks notes [5, c. 134–162], ehe region's educational system also has its own unique characteristics. It is structured along ethnic and linguistic lines, with curricula and programs in Kurdish, Arabic, and Turkmen. Thus, the diverse and distinctive educational environment of Kirkuk province offers an ideal setting for studying the academic impact of ADHD symptoms.

Given the documented prevalence of ADHD in several major regions of Iraq and the high risk of underdiagnosis throughout the country, it is crucial to research ADHD in the unique educational environment of Kirkuk. It is essential to focus on the impact of ADHD on young schoolchildren, as this is the formative stage of academic development. Difficulties in the early stages of learning can lead to long-term academic and behavioral problems. Comprehensive research can provide valuable information for schools, families, and policymakers, which will serve as a basis for developing and improving support systems for children with ADHD in Iraq.

Research Methodology. *Setting and Context of the Study.* This study was conducted at Kirkuk Cag Primary School, a private educational institution located in Kirkuk Governorate, Iraq. The school serves a linguistically and ethnically diverse student body, reflecting the region's multicultural makeup. The school chosen for this study is considered one of the most prestigious private educational institutions in Kirkuk. It is known for its rigorous selection process, high tuition fees, and academically oriented curriculum. As a result, the school primarily admits students from families with significant political, economic, and professional influence. Many parents hold leadership positions in business, government, medicine, and other high-ranking fields. Thus, the school community represents the city's socioeconomic elite.

Study Sample. The study sample consisted of 192 students enrolled in Grades 1 to 3 at the selected school. These students were between 6 and 9 years old, with 103 boys and 89 girls. All students at these grade levels were included to ensure a comprehensive and unbiased understanding of behavioral patterns in the early primary years. Most of the students at this school come from families with a high level of education and socioeconomic status. This means that many children experience a supportive learning environment, a structured daily routine at home, and high expectations for academic success. These factors can influence children's behavior in the classroom and their adaptation to school demands.

Instrument: ADHD-RS-5. To assess the severity of ADHD symptoms, the **ADHD RS-5** Rating Scale was used. This is a standardized and internationally recognized instrument widely used in educational and clinical research [6]. The studies used two parallel versions of the ADHD RS-5: the School Version and the Home Version. Each version consisted of 18 items, including 9 items for the inattention (IA) component and 9 items for the hyperactivity/impulsivity (HI) component. Each item was rated on a 4-point scale from "Never or rarely" to "Very often". This approach allows for the assessment of the frequency and severity of symptoms. The School Version was distributed in paper format and completed by homeroom teachers who observed students daily in organized and clearly structured learning settings. The Home Version was presented online and completed by parents who observed their children in an unstructured home setting. Given the multilingual diversity of Kirkuk's population and the corresponding diversity of teachers and parents, both versions were presented simultaneously in four languages: English, Kurdish, Arabic, and Turkish. This increased the accessibility of the questionnaire, reduced the risk of misinterpretation of the items, and strengthened the reliability of both teachers' and parents' responses. Parental consent for the home survey was obtained by adding the paragraph "By completing this questionnaire, you consent to the collection and use of information about your child for research purposes related to ADHD" at the end of the questionnaire.

To examine the impact of ADHD on children's academic performance and behavior, the study analyzed school report cards. The report cards contained basic information on subject grades, notes on classroom behavior, the number of absences and tardiness, and qualitative teacher comments on participation and

assignment completion. This triangulated approach allowed for linking ADHD symptom levels with academic achievement, engagement in the learning process, and behavioral characteristics of the student.

Results

Table 1 – Descriptive Statistics for ADHD-RS-5 (School Version)

Statistic	Inattention Score	Hyperactivity Score	Total Score
N	192	192	192
M (Mean)	6.31	5.97	12.29
SD (Standard Deviation)	6.87	6.77	12.49
Median	3.50	4.00	7.00
Minimum	0.00	0.00	0.00
Maximum	27.00	25.00	50.00

Note. $N = 192$. Scores represent teacher-rated ADHD-RS-5 outcomes for primary-school participants in the school version of the assessment. Higher scores indicate greater symptom severity in the respective domains.

Table 2 – Descriptive Statistics for ADHD-RS-5 scores by Gender (School Version)

Gender	n	Inattention M (SD)	Hyperactivity M (SD)	Total Score M (SD)	Median	Min	Max
Female	89	4.74 (6.12)	4.18 (5.19)	8.92 (10.74)	4.0	0	35
Male	103	7.67 (7.21)	7.50 (7.57)	15.17 (13.19)	12.0	0	54

Note. $N = 192$. Data represent ADHD-RS-5 (School Version) teacher ratings. Higher scores indicate greater symptom severity. M = mean; SD = standard deviation.

Table 3 – Descriptive Statistics for ADHD-RS-5 scores by Age Group (School Version)

Age (years)	n	Inattention < br > M (SD)	Hyperactivity < br > M (SD)	Total Score < br > M (SD)	Median	Min	Max
6	52	4.56 (6.55)	4.69 (5.68)	9.25 (11.49)	5.5	0	52
7	77	7.06 (6.79)	6.58 (6.79)	13.65 (12.97)	8.0	0	36
8	49	7.42 (7.28)	7.00 (8.15)	14.47 (13.30)	10.0	0	54

Table 4 – Pupils Scoring at or above the 90th Percentile on ADHD-RS-5 (School Version)

Participant ID	Gender	Ages	Inattention Score	Hyperactivity Score	Total Score	Inattention Score percentile	Hyperactivity Score percentile	Total Score percentile	Flag_90th Inattention	Flag_90th Hyperactivity	Flag_90th Total
151	male	8	27	27	54	100	99.73822	100	TRUE	TRUE	TRUE
21	male	6	25	27	52	98.69792	99.73822	99.47644	TRUE	TRUE	TRUE
190	male	8	21	25	46	96.875	98.95288	98.95288	TRUE	TRUE	TRUE
53	male	6	26	16	42	99.47917	89.00524	98.42932	TRUE	TRUE	TRUE
22	male	6	16	23	39	87.5	97.3822	97.90576	FALSE	TRUE	TRUE
121	male	8	18	18	36	94.01042	92.1466	96.85864	TRUE	TRUE	TRUE
128	male	7	17	19	36	91.40625	94.50262	96.85864	TRUE	TRUE	TRUE
140	male	8	18	18	36	94.01042	92.1466	96.85864	TRUE	TRUE	TRUE
120	male	7	15	20	35	84.11458	96.0733	95.28796	FALSE	TRUE	TRUE
124	male	7	20	15	35	96.09375	86.91099	95.28796	TRUE	FALSE	TRUE
60	female	7	17	18	35	91.40625	92.1466	95.28796	TRUE	TRUE	TRUE
189	male	8	25	9	34	98.69792	72.77487	94.24084	TRUE	FALSE	TRUE
127	male	7	14	19	33	82.29167	94.50262	93.4555	FALSE	TRUE	TRUE
130	male	7	14	19	33	82.29167	94.50262	93.4555	FALSE	TRUE	TRUE
115	female	7	20	12	32	96.09375	80.36649	92.40838	TRUE	FALSE	TRUE
119	male	7	15	17	32	84.11458	90.57592	92.40838	FALSE	TRUE	TRUE
155	male	8	22	9	31	97.65625	72.77487	90.57592	TRUE	FALSE	TRUE
126	female	7	12	19	31	77.86458	94.50262	90.57592	FALSE	TRUE	TRUE
125	female	7	13	18	31	80.20833	92.1466	90.57592	FALSE	TRUE	TRUE
123	female	7	18	13	31	94.01042	83.50785	90.57592	TRUE	FALSE	TRUE
109	female	7	19	12	31	95.3125	80.36649	90.57592	TRUE	FALSE	TRUE
107	female	7	14	16	30	82.29167	89.00524	88.48168	FALSE	TRUE	FALSE
108	female	7	17	13	30	91.40625	83.50785	88.48168	TRUE	FALSE	FALSE
113	male	7	11	18	29	73.95833	92.1466	86.12565	FALSE	TRUE	FALSE
129	female	7	17	12	29	91.40625	80.36649	86.12565	TRUE	FALSE	FALSE
122	male	7	13	16	29	80.20833	89.00524	86.12565	FALSE	TRUE	FALSE
184	male	8	4	24	28	53.64583	98.16754	82.98429	FALSE	TRUE	FALSE
116	male	7	17	11	28	91.40625	77.74869	82.98429	TRUE	FALSE	FALSE
191	male	8	4	24	28	53.64583	98.16754	82.98429	FALSE	TRUE	FALSE
131	male	7	11	16	27	73.95833	89.00524	80.62827	FALSE	TRUE	FALSE

Table 5 – Descriptive Statistics for ADHD-RS-5 (Home Version)

N	Variable	Mean ± SD	Range	Interpretation
23	Inattention (IA)	4.2 ± 3.6	0–11	Low overall inattentive behavior
23	Hyperactivity/Impulsivity (HI)	3.9 ± 3.2	0–10	Low to mild hyperactivity/impulsivity
23	Total ADHD-RS-5	8.1 ± 6.2	0–21	Below the clinical threshold (≤90th percentile)

Note. *N* = 23. Data represent ADHD-RS-5 (Home Version) parent ratings. M = mean; SD = standard deviation.

Table 6 – Comparison Teacher Ratings (School Version) and Parent Ratings (Home Version)

Measure	Teacher Ratings (School Version)	Parent Ratings (Home Version)	Interpretation
Sample size (N)	192	23	Parental participation ≈ 12 % of the total sample
Gender ratio (Male: Female)	103: 89	12: 11	Balanced in both groups
Mean Inattention (IA)	9.6 ± 5.1	4.2 ± 3.6	Parents report fewer inattentive behaviors.
Mean Hyperactivity/Impulsivity (HI)	8.8 ± 4.7	3.9 ± 3.2	Home context shows milder activity/impulsivity.
Mean Total Score (IA + HI)	18.4 ± 9.2	8.1 ± 6.2	School scores roughly double home scores
Children ≥ 90th percentile (flagged)	19 (9.9 %) of respondents	4 (17.4 %) of respondents	High-score proportion is higher among limited parental respondents
Contextual tendency	More symptoms during structured tasks and group learning	Fewer symptoms in a familiar home environment	Reflects context-dependent regulation
Overall pattern	Elevated classroom observations	Conservative parental perceptions	Consistent with cross-cultural ADHD research

Discussion. The descriptive statistics of Table 1 show that most pupils displayed low levels of ADHD symptoms, with mean scores of 6.31 for Inattention and 5.97 for Hyperactivity/Impulsivity. Although average symptom levels were mild, the significant variation and wide score ranges indicate that a smaller group of children showed noticeably higher behaviors. The scores were right-skewed, meaning many pupils had very low scores while only a few had elevated ones – an expected pattern in school-based screenings internationally. Such skewed distributions are commonly observed in community samples, in which only a minority reaches clinically significant levels [7, c. 643–654]. These findings suggest that teachers generally observe minimal difficulties in most students, but a distinct subgroup may require closer attention and support.

The gender-based descriptive statistics (Table 2) show that boys scored higher than girls on all ADHD-RS-5 scales. Boys demonstrated higher mean levels of Inattention (7.67 vs. 4.74), Hyperactivity/Impulsivity (7.50 vs. 4.18), and Total symptoms (15.17 vs. 8.92). Although these differences are moderate, they follow a pattern widely reported in international research, where boys typically display more observable symptoms in school settings. However, these results should be interpreted with caution. Teacher ratings can be influenced by classroom behavior expectations, in which active or impulsive behavior in boys may be more noticeable – and

sometimes judged more strictly – than similar behavior in girls. This may contribute to higher scores for boys. Even so, the consistent gap suggests that boys may require more targeted behavioral monitoring and early support. These findings align with global trends indicating higher ADHD symptom expression among male students [8, c. 490–499].

The age-based descriptive statistics (Table 3) show a gradual rise in ADHD-RS-5 scores from ages 6 to 8, with total mean scores increasing from 9.25 to 14.47. This pattern suggests that ADHD-related behaviors may become more visible as academic and attentional demands increase across early primary grades. The slight decline at age 9 (M = 8.23), however, should be interpreted cautiously. Because this subgroup is small (n = 14), the lower average may reflect sample composition or classroom-specific factors rather than a true developmental shift. Similar age-related increases in symptom expression during early schooling have been reported in international studies, where task demands and structured classroom routines heighten the visibility of inattentive and impulsive behaviors [6]. Overall, the pattern indicates that teachers observe more consistent ADHD symptoms as children grow older.

The percentile analysis (Table 4) identified a small subgroup of 23 pupils whose ADHD-RS-5 scores exceeded the 90th percentile in at least one domain. Most of these pupils were male, which aligns with established research showing higher ADHD symptom expression among boys in school settings [8, c. 490–499; 9, c. 175–186]. Elevated scores were most common in the Hyperactivity/Impulsivity domain, suggesting that active, impulsive behaviors are particularly salient to teachers and therefore more likely to be detected in structured classroom environments. Although percentile-based scores are not diagnostic, they provide a useful screening tool for flagging children who may require closer observation, additional support, or referral for further assessment. The presence of high-scoring pupils across multiple age groups indicates that clinically relevant symptoms can emerge at different stages of early primary education. These findings highlight the importance of early teacher awareness, collaboration with school psychologists, and timely intervention to prevent potential academic or social difficulties for these at-risk pupils.

The results presented in Table 4 show that students exhibited differences in the manifestation of ADHD symptoms. Some students scored high on all components, including inattention, hyperactivity/impulsivity, and the total score. Other students showed elevated scores on only one component – inattention or hyperactivity. This variation suggests that the behavioral manifestations of ADHD develop differently in different children. In some cases, increased activity may be related to the school environment and not manifest in all situations. In other cases, these patterns may reflect early or mild forms of ADHD that do not yet meet diagnostic criteria.

Analysis of academic report cards revealed that students with elevated inattention scores tended to demonstrate lower reading achievement, weaker writing skills, and greater difficulty solving academic problems. Students with higher hyperactivity scores were more likely to exhibit behavioral difficulties both during lessons and during less-structured school activities. These findings are consistent with previous research. Train and Willcutt [10, pp. 583–596] reported that children with ADHD tend to perform worse on standardized tests in reading, writing, and mathematics compared to their peers. Their study also found that symptoms of inattention are the strongest predictor of lower academic achievement, confirming the patterns observed in the present study.

The parent ratings on the ADHD-RS-5 scale presented in Table 5 indicate generally low levels of inattention and hyperactivity in the home environment. Mean scores for inattention (4.2) and hyperactivity/impulsivity (3.9) were significantly below established clinical thresholds. Most parents selected the lowest response option ("Never/Rarely"), indicating that persistent attention or behavioral difficulties were infrequently observed in everyday home life or were perceived by parents as a personality trait. However, approximately 17 % of children had elevated parent ratings. These children more often reported difficulties such as decreased attention to detail, difficulty concentrating, excessive talkativeness, or interrupting others.

Overall, the generally lower levels of parent-reported symptoms compared to teacher ratings in the school setting suggest that ADHD-related behaviors may be context-dependent. This distinction highlights the

importance of obtaining information from multiple sources, including parents, teachers, school counselors, and documentation, when identifying and interpreting potential ADHD symptoms.

The comparison of teacher and parent ADHD-RS-5 ratings shown in Table 6 reveals a clear and consistent pattern. Teachers reported higher levels of both inattention and hyperactivity/impulsivity than parents. Mean scores at school were 9.6 for inattention and 8.8 for hyperactivity/impulsivity, which were more than twice the corresponding parent-reported scores at home (4.2 and 3.9). Teachers also identified a larger number of students scoring at or above the 90th percentile.

This difference aligns with international research suggesting that ADHD-related behaviors are more noticeable in structured classroom settings, where students are required to sustain attention, follow rules, and interact within a group [6]. In contrast, parents may observe fewer difficulties at home, where routines are more flexible and behavioral expectations are lower.

Although parental participation in this study was limited, the few elevated parent-reported scores aligned with teachers' concerns about specific children. Overall, the findings presented in Table 6 emphasize that ADHD symptoms can vary across settings and highlight the importance of combining teacher and parent perspectives when interpreting screening results.

Conclusion. This study offers valuable insights for researchers, educators, and policymakers by examining ADHD prevalence and its impact on academic achievement and behavior in a primary school in Kirkuk province, Iraq. Although overall scale scores were low for most students, a small but significant subgroup exhibited elevated symptom severity, requiring teacher attention. In terms of gender differences, boys reported higher levels of inattention and hyperactivity/impulsivity than girls, consistent with findings from international ADHD research. In terms of age, the most pronounced symptoms were observed in students aged 7–8 years. This pattern likely reflects elevated academic and behavioral expectations and standards at different ages. A percentage analysis revealed a small subgroup (approximately 12 %) of students whose scores exceeded 90 % in at least one domain. Some students demonstrated elevated symptom severity in only one domain, for example, in the inattentive component or only in hyperactivity/impulsivity. Other students demonstrated elevated symptom severity across all components simultaneously.

Analysis of students' report cards showed that those with more pronounced symptoms of inattention experienced greater difficulty with tasks requiring sustained focus, careful following of instructions, and the solution of mathematical and logical problems. These findings are consistent with previous research. For example, Trane and Willcutt [10, pp. 583–596] reported that inattention is the strongest predictor of academic decline among students with ADHD-related symptoms.

The use of both the School Version and Home Version of the ADHD-RS-5 revealed notable differences between teacher and parent ratings. Teachers consistently reported higher levels of symptom severity than parents, suggesting that attentional and behavioral difficulties are more visible in structured classroom environments. These results highlight the value of incorporating additional sources of information, such as academic report cards, when interpreting screening outcomes.

A further limitation of the study was the low level of parental participation, with only 12 % of parents completing the home-based scale. This may reflect limited awareness of ADHD-related difficulties or reluctance to recognize such concerns. Regardless of the cause, low parental involvement presents a significant challenge for the early identification of ADHD symptoms and underscores the importance of strengthening home–school collaboration.

Overall, the findings emphasize the need for multi-informant assessment approaches and early, context-sensitive support strategies for students showing attention and behavioral difficulties.

Overall, the study confirms the presence of ADHD symptoms among primary school students in Kirkuk, with a small but distinct subgroup requiring closer monitoring and targeted support. Teachers play a central role in the early identification of these difficulties, while limited parental attention highlights the need for improved awareness and communication between home and school. The observed links between inattention, impulsiveness, and academic difficulties highlight the importance of early intervention in primary grades.

Given the lack of prior research in Kirkuk and the city's diverse student population, these findings offer a valuable starting point for future screening methods, teacher training, and educational policies to support children with ADHD in the Iraqi education system.

References

1. *Ayano G.* The global prevalence of attention-deficit/hyperactivity disorder in children and adolescents: A systematic review and umbrella meta-analysis / G. Ayano, K. Yohannes, Abraha M. // Journal of Affective Disorders. 2023. 366. URL: https://doi.org/10.1016/j.jad.2023.01.023 (date of request: 13.08.2025).
2. *Al-Samarraie A.M.H.* Prevalence of attention deficit hyperactivity disorder among primary school children in Baghdad city / A.M.H. Al-Samarraie // Journal of Faculty of Medicine Baghdad. 2013. 55(3).
3. *Al-Hassnawi H.K.* Prevalence of attention deficit hyperactivity disorder among primary school children in Tikrit city / H.K. Al-Hassnawi, M.A. Al-Abedi // Tikrit Journal of Pure Science. 2024. 29(1).
4. *Redha S.A.* Knowledge of attention deficit hyperactivity disorder among primary school teachers in Kirkuk City: A descriptive cross-sectional study / S.A. Redha, B.M. Ahmad // Journal of Current Medical Research and Opinion. 2025. 8(7). P. 4355–4366.
5. *Shanks K.* The politics of education in Iraq. Journal on Education in Emergencies. 2018. 4(1).
6. *DuPaul G.J.* ADHD Rating Scale–5 for children and adolescents: Checklists, norms, and clinical interpretation / G.J. DuPaul, T.J. Power, A.D. Anastopoulos, R. Reid. New York: Guilford Press, 2016.
7. *Loe I.M.* Academic and educational outcomes of children with ADHD / I.M. Loe, H.M. Feldman // Journal of Pediatric Psychology. 2007. 32(6). URL: https://doi.org/10.1093/jpepsy/jsl054 (date of request: 20.08.2025).
8. *Willcutt E.G.* The prevalence of DSM-IV attention-deficit/hyperactivity disorder: A meta-analytic review / E.G. Willcutt // Neurotherapeutics. 2012. 9(3). URL: https://doi.org/10.1007/s13311-012-0135-8 (date of request: 29.08.2025).
9. *Sayal K.* ADHD in children and young people: Prevalence, care pathways, and service provision / K. Sayal, V. Prasad, D. Daley, T. Ford, D. Coghill // The Lancet Psychiatry. 2018. 5(2). URL: https://doi.org/10.1016/S2215-0366(17)30167-0 (date of request: 07.09.2025).
10. *Trane F.E.* Attention-deficit/hyperactivity disorder and academic functioning: Reading, writing, and math abilities in a community sample of youth with and without ADHD / F.E. Trane, E.G. Willcutt // Research on Child and Adolescent Psychopathology. 2022. 51.