Research Paper

The Relationship Between Sleep Pattern Habits With Severity of Disruptive Behaviors Among Elementary School Children

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ABSTRACT

Objectives: Sleep patterns significantly influence the physical, psychological, and social health of children, with irregularities correlating with behavioral issues like aggression. Studies highlight the association between disrupted sleep pattern and increased aggression in elementary school children, emphasizing the need for interventions promoting healthy sleep habits. This study aims to detect the relationship between sleep pattern habits and disruptive behaviors among children of elementary schools.

Methods: A correlational study was conducted in Al-Najaf elementary schools, focusing on disruptive behaviors among 198 children. The study data were collected through a refined Arabic questionnaire and sleep habits scale, revealing severity of disruptive behaviors and personal information variables. Tools' validity was confirmed by experts, showing high reliability (Cronbach α=0.91).

Results: The study examined elementary school children diagnosed with disruptive behaviors in Al-Najaf Province, Iraq. Most participants were male (60.6%), aged 8-10 years (43.9%), and primarily in the first education grade (24.2%). Sleep patterns during weekends and holidays exceeded the normal range (47%), with disruptions reported by over half of the samples (56.1%). No significant correlation was found between disruptive behavior and personal traits, except with variable age, which had a significant correlation (P=0.003). Sleep patterns did not significantly correlate with disruptive behavior, although a weak negative correlation was found between age and education grade.

Discussion: Disruptive behaviors are prevalent among elementary school children in Al-Najaf Province, albeit mildly impactful and diminishing with increasing age. According to the current result, these behaviors are not primarily linked to personal traits and show no or little significant correlation with sleep patterns.

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Highlights

- The study examined the relationship between sleep patterns and disruptive behaviors in elementary school children.
- Many children had irregular sleep patterns and sleep disruptions.
- Disruptive behaviors are not significantly linked to sleep patterns and children's characteristics; also, these behaviors may decrease in adulthood.

Plain Language Summary

Sleep is essential for children's health, including their physical, mental, and social well-being. Poor sleep can lead to problems like aggression and disruptive behavior. This study looked at how sleep patterns are related to disruptive behaviors in elementary school children by exploring the relationship between sleep patterns and disruptive behaviors among them. The study included only governmental elementary schools in Al-Najaf Province, Iraq. Most children displayed irregular sleep patterns, with disruptions reported by over half of the sample. A weak, insignificant correlation was found between sleep patterns and disruptive behaviors among children. However, the disruptive behaviors diminish with age and are not primarily linked to sleep patterns or personal traits examined. Interventions to improve sleep habits may still be beneficial for overall health.

Introduction

Sleep is a crucial biological process for human beings, particularly during the developmental period of children. Adhering to normal sleep patterns is essential for enhancing children's physical, psychological, and social health [1]. Good sleep habits increase productivity, academic achievements, and interactions with others [2]. Globally, many children experience problems with sleep and eating patterns [3], especially in developing countries. These issues may stem from the absence of parental guidance due to modernized lifestyles, which often lead to reduced rates of nighttime sleep among both adults and children. Such changes can impact health and exacerbate disruptive behaviors or other conduct and behavioral problems.

Sleep patterns are pivotal in individuals' overall well-being and development, particularly among elementary school children. The correlation between sleep patterns and behavioral outcomes, such as aggression, has drawn significant attention recently. Understanding the complex interplay between sleep quality, duration, and disruptive behaviors and symptoms among elementary school children is essential for promoting mental, physical, and social health and other related personal factors [4].

Over the past decade, numerous studies have explored the association between sleep patterns and disruptive behavior in children. For instance, research has shown that inadequate sleep duration is significantly associated with increased levels of aggression among elementary school children [5]. Similarly, longitudinal studies have demonstrated that irregular sleep patterns during early childhood predict disruptive behaviors and symptoms in later developmental stages [6].

Moreover, advancements in neuroimaging techniques have provided insights into the neural mechanisms underlying the relationship between sleep patterns and disruptive behaviors. Functional magnetic resonance imaging (fMRI) studies have identified alterations in brain regions in emotion regulation and impulse control among children with disrupted sleep patterns. These findings underscore the neurobiological basis of the link between sleep disturbances and aggression among elementary school children [7].

Furthermore, socio-environmental factors, such as socioeconomic status and family dynamics, may interact with sleep patterns to influence disruptive symptoms in children. Previous research has highlighted the role of parental stress and household chaos in moderating the relationship between sleep quality and externalizing behaviors in elementary school-aged children. Understanding these contextual factors is essential for developing holistic approaches to addressing aggression in school settings [8].

Given the growing body of evidence implicating sleep patterns in the manifestation of disruptive behaviors and symptoms among elementary school children, there is a pressing need for comprehensive interventions that prioritize sleep hygiene and promote healthy sleep habits. By addressing sleep-related issues early in development, educators, healthcare professionals, and parents can mitigate the risk of disruptive behaviors and foster a conducive learning environment for children.

Growing interest has been in understanding the intricate interplay between sleep patterns and behavioral outcomes such as aggression among elementary school children. Aggression stands out as a significant concern due to its potential implications for academic performance, social relationships, and overall well-being. Therefore, understanding the relationship between sleep patterns and disruptive behaviors within these demographics is important for educators, parents, and healthcare professionals [4].

Numerous studies have underscored the crucial role of adequate sleep in promoting optimal cognitive functioning, emotional regulation, and behavioral control among children [9, 10]. However, the prevalence of inadequate sleep duration and poor sleep quality among elementary school children has remained prevalent. Excessive screen time, irregular bedtime routines, and environmental stressors contribute to disrupted sleep patterns [11, 12].

Concurrently, research increasingly recognizes the association between disturbed sleep and increased levels of aggression in children [13]. Disruptive behaviors, including physical aggression, verbal hostility, and relational aggression, have been linked to sleep disturbances, including difficulty initiating or maintaining sleep, frequent nighttime awakenings, and insufficient sleep duration [14]. These findings suggest a bidirectional relationship wherein sleep disruptions may exacerbate disruptive tendencies, while disruptive behaviors, in turn, may further disrupt sleep patterns [15].

Despite the growing literature on sleep and aggression, there remains a lack of research examining this relationship within the context of elementary school children. Furthermore, existing studies often rely on subjective measures of sleep and aggression, such as parent or teacher reports, which may introduce biases and inaccuracies. Therefore, there is a compelling need for methodologically rigorous investigations employing objective measures, such as actigraphy and standardized behavioral assessments, to comprehensively understand the intricate dynamics between sleep patterns and disruptive symptoms among elementary school-aged children [16].

This paper explores the relationship between sleep pattern habits and disruptive behaviors and symptoms among children of elementary in Al-Najaf elementary schools. Ultimately, by shedding light on this critical topic, we hope to inform future research endeavors and clinical practices to improve the mental health outcomes of children in educational settings.

Materials and Methods

Study design

The correlational study design was used to determine the relationship between the study variables when they were not under the study's control. The study was conducted from November 1 to December 30, 2024.

Study setting

The study was conducted in Al-Najaf elementary schools for both girls and boys. Al-Najaf governorate lies in the middle of Iraq's provinces.

Al-Najaf elementary schools consist of more than 571 governmental and private schools [17]. Still, the study sample was taken only from governmental schools, and children had disruptive symptoms and behaviors. These schools are distributed in this governorate and cover the needs of approximately 1.3 million people. These elementary schools received more than 200000 children in 2023, but the number of new schools has increased.

Sample size and methods

The study sample was recruited using a convenience sampling method that included 198 children educated in Al-Najaf elementary schools. They had symptoms of disruptive behaviors, and their guardians approved their participation in the research. The sample was selected of children whose behaviors were noticed and needed special teachers to deal with and educate them. The target population size of the study is unknown because there are no official statistics about the actual number of disruptive behaviors among children. Still, it can be obtained from the unofficial statistics about children with abnormal behaviors according to the list of modified behaviors found in some standard schools. This list is a profile for each child, records the health status and follow-up in each grade, and is considered an informal statistic to detect the number of cases of offensive behav-

ior of about 411 children in 2024. One of the domains is related to abnormal behaviors of a child and describes if he had defiant, aggressive, offensive, or disruptive behaviors. The suitable type of sampling is a non-probability method (convenience sampling). The study collected 198 children who had been diagnosed or detected with disruptive behavior symptoms and accepted to participate in the study [18]. The study depended on the objectives and criteria of the study sample to reduce and prevent the bias that may occur.

Study instruments

The study tools comprised three parts, according to the study variables. The first part includes all recorded severe cases of disruptive symptoms and personal information about elementary school children, such as age, order among siblings, gender, stage study, etc. The behavior disruptive symptoms scale [18] is the second part designed to detect the severity of disruptive symptoms in children suspected or diagnosed with disruptive behaviors. The scale is a refined Arabic version of the disruptive questionnaire from the textbook the manual of psychological & educational standards & tests. It is designed for an Arabic context and had three rated responses: Always to never (3 to 1). The cut-off points detect the severity of disruptive symptoms from mild to severe.

The last part was related to sleep patterns with many domains, including school days, weekends, holidays, day napping, and sleep arrangements during school attendance and weekends and holidays. Each domain had three items asked about the pattern and duration, change, and satisfaction about the sleep pattern habits. Then, according to the mean score and cut-off points, the sleep pattern is detected, ranging from poor sleep to hypersomnia. However, the arrangement of sleep rate and overall sleep habits are rated using two assessments (arrangement and disarrangement). The cut-off points of sleep patterns are as follows: Poor sleep if the mean of scores ranges between 1 and 1.66; normal sleep if the mean of scores ranges between 1.67 and 2.33; and oversleep if the mean of scores is equal or more than 2.34. If the assessment of mean scores in a sleep arrangement and overall sleep habits domains are equal to mean scores of 1-1.33, it shows arrangement sleep rate, and if the mean of scores equals 1.34, it shows disarrangement sleep rate.

Data collection

Each child included in the study was assigned a special code, and data was collected only from those children who selected their code during the lottery draw using the luck formula in Excel. After that, all children who participated in study informed their guardians about the objectives of study and about importance and valuable their participations in the current study before the interview with children. Data collected by questionnaire of study with cooperating from guidance class teacher to fill the form of study related to disruptive behaviors and sleep patterns among them.

Validity and reliability of the instrument

The validity of tools was assessed by criterion validity. Also, 11 expert specialists in the psychology and psychiatric field reviewed it and added their notices on the scale. The current study reliability tool had a Cronbach α coefficient of 0.91 when tested and compared with the study of Buss and Perry with 0.78 [19].

Data analysis

The study result was analyzed using the package Excel program to input the data and SPSS software, version 24 to test the descriptive and inferential statistics. These statistics included calculating frequency, Mean±SD and Cronbach α. The scores for the disruptive behaviors scale, and sleep pattern habits were analyzed using the mean score and cut-off points formula according to each rated response. The inferential tools included the chi-square test to detect the differences between observed and expected data and the relationship between variables. Also, the Spearman correlation detects the correlation of one variable with another, whether it is ordinal or continuous data.

Results

The study included all elementary school children diagnosed with aggressive behaviors in Al-Najaf Province, and their characteristics are revealed in Table 1. Most children (60.6%) were male, aged between 8 and 10 years (43.9%), with education in the first grade (24.2%), while fewer in the fourth grade (13.1%). Most were living with both live parents (84.8%), and the rest lived with one parent alive. About half of the samples (50.5%) have between 4 and 5 family members with parents; only 5.6% have more than 7 family members, while 46.5% have order among siblings between 2 and 3.

Table 2 shows that about 69.2% of the samples had mild disruptive behaviors, and approximately equal groups had moderate or severe disruptive symptoms. The final assessment shows mild disruptive behavior in the general sample by the mean score. On the other hand,

Table 1. Distribution of elementary schools' children according to their characteristics (n=198)

Variables		No. (%)
Age groups (y)	<8	43(21.7)
	8-10	87(43.9)
	>10	68(34.3)
Gender	Male	120(60.6)
	Female	78(39.4)
Level of education	1st grade	48(24.2)
	2nd grade	36(18.2)
	3rd grade	27(13.6)
	4th grade	26(13.1)
	5th grade	27(13.6)
	6th grade	34(17.2)
Residence	With parents	168(84.8)
	With father	9(4.5)
	With mother	21(10.6)
Number of families	<4 members	37(18.7)
	4-5 members	100(50.5)
	6-7 members	50(25.3)
	>7 members	11(5.6)
Order among siblings	1	68(34.3)
	2-3	92(46.5)
	4-5	34(17.2)
	>5	4(2.0)
Total		198(100)

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Table 3 reveals that sleep patterns in many domains, such as sleep patterns during school days, are within the normal range according to their age and arrangement, at about 73.7%. Still, their sleep patterns changed during weekends and holidays and became over the normal sleep range of 47%, with a general assessment of this domain being oversleep rate according to the mean score (Mean±SD 2.63±0.64).

Elementary school children reported not having sleep during the day as a pattern habit (43.4%), and 40.4% reported sometimes taking day napping. Still, the general assessment of this domain is low (Mean±SD 0.73±0.72). Finally, the overall evaluation of sleep pattern habits for the sample was that the disarrangement of sleep rate affected more than half of the sample (56.1%).

Table 4 reveals no relationship between disruptive symptoms severity and personal characteristics such as gender, education grade, residence, number of family members, and order among siblings (P=0.05). Still, a

Table 2. Distribution of elementary schools' children according to the severity of disruptive behaviors (n=198)

Domains of Scales		No. (%)	Mean±SD	Assessment
Disruptive behaviors	Mild	137(69.2)	1.47±0.75	Mild severity
	Moderate	30(15.2)		
	Severe	31(15.7)		

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Notes: Cut-off points: Mild (mean scores 1-1.66); moderate (mean scores 1.67-2.33); severe (mean scores ≥2.34)

highly significant relationship exists between the severity level of aggression and their age (P=0.003).

Table 5 reveals the relationship between the severity of disruptive behavior and sleep pattern habits. According to each domain, they reported a non-significant relationship (P=0.05).

Finally, Table 6 revealed no correlations between the severity of disruptive behavior and some personal characteristics and sleep pattern habits. Still, there is a significant weak negative correlation between elementary children's age and education grade.

Discussion

Disruptive behavior and sleep habits are both sensitive variables during the early developmental period of elementary children because they play a crucial role in physical and psychological health and complete their personalities. While there is a vast amount of literature related to these variables, there is very little research or

Table 3. Distribution of elementary schools' children according to sleep pattern habits domains

Sleep Pattern Habits		No. (%)	Mean±SD	Assessment
Sleep patterns during school days attending	Low normal sleep range	7(3.5)	2.22±0.55	Normal sleep rate
	Normal	146(73.7)		
	Over normal sleep range	39(19.7)		
	Hypersomnia	6(3.0)		
Sleep patterns during weekend days	Low normal sleep range	1(0.5)	2.63±0.64	Oversleep rate
	Normal	88(44.4)		
	Over normal sleep range	93(47.0)		
	Hypersomnia	16(8.1)		
Patterns day napping	No day napping	86(43.4)	0.73±0.72	Low sleep rate
	Sometimes day napping	80(40.4)		
	Always day napping	32(16.2)		
Arrangement of sleep	Arrangement	87(43.9)	1.56±0.49	Disarrangement sleep rate
	Disarrangement	111(56.1)		
Overall sleep habits	Good	87(43.9)	1.56±0.49	Disarrangement sleep rate
	Poor	111(56.1)		

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Notes: Cut-off points: Low sleep rate (mean score, 1-1.66); Normal sleep rate (mean scores, 1.67-2.33); Oversleep rate (mean scores ≥2.34). This assessment of scores included all domains except the arrangement of sleep rate. Cut-off points: Arrangement sleep rate (mean scores, 1-1.33); Disarrangement sleep rate (mean scores ≥1.34).

Table 4. The relationship between severity of disruptive symptoms of elementary schools' children and their demographic characteristics (n=198)

Variables		Disruptive Severity			χ^2	df	P	Sig.
		Mild	Moderate	Severe				
Age groups (y)	<8	21	9	13	15.738	4	0.003	HS
	8-10	60	13	14				
	>10	56	8	4				
Gender	Male	84	20	16	1.54	2	0.463	NS
	Female	53	10	15				
Level of education	1st grade	27	9	12	11.013	10	0.357	NS
	2nd grade	25	6	5				
	3rd grade	18	3	6				
	4th grade	17	5	4				
	5th grade	22	3	2				
	6th grade	28	4	2				
Residence	With parents	113	28	27	4.979	4	0.289	NS
	With father	9	0	0				
	With mother	15	2	4				
Number of families	<4 members	24	6	7	7.224	6	0.301	NS
	4-5 members	66	20	14				
	6-7 members	39	4	7				
	>7 members	8	0	3				
Order among siblings	1st	47	12	9	5.281	6	0.508	NS
	2-3	60	16	16				
	4-5	26	2	6				
	>5	4	0	0				

HS: High-significance; S: Significance; NS: Non-significance.

none in Iraq, specifically in Al-Najaf Province. Also, they have not studied this approach, and most of them included non-probability samples and lost the generalizability when applied to specific groups. Therefore, this paper focuses on analyzing these variables among elementary children diagnosed with disruptive symptoms to determine the severity of these problems and their effects on the most important biological process, sleep.

After analyzing the data collected from the study sample, it was found that the severity of disruptive symptoms was mild. At this level, the effects on individuals are not crucial enough to necessitate changes in their health or lifestyle habits. However, those with moderate or severe disruptive symptoms exhibit changes in their sleep patterns, which may also affect their health. These results are consistent with studies by Kamphuis et al. and Kochman et al., who examined the relationship between disruptive behaviors and sleep and eating habits [15, 6]. The study found that personal characteristics did not significantly influence symptom severity, likely because most individuals had mild symptoms. However, age and

Table 5. The relationship between severity of disruptive symptoms of elementary schools' children and their sleep pattern habits domains (n=198)

Domains of Sleep Pattern Habits		Disruptive Severity			χ^2	df	P	Sig.
		Mild	Moderate	Severe				
Sleep patterns during school days attending	Low normal sleep range	4	2	1	3.73	6	0.713	NS
	Normal	100	22	24				
	Over normal sleep range	27	6	6				
	Hypersomnia	6	0	0				
Sleep patterns during weekend days	Low normal sleep range	1	0	0	4.95	6	0.550	NS
	Normal	55	18	15				
	Over normal sleep range	69	11	13				
	Hypersomnia	12	1	3				
Patterns day napping	No day napping	57	14	15	.769	4	0.943	NS
	Sometimes day napping	57	11	12				
	Always day napping	23	5	4				
Arrangement of sleep	Arrangement	55	17	15	3.02	2	0.221	NS
	Disarrangement	82	13	16				
Overall sleep habits	Good	55	17	15	3.02	2	0.221	NS
	Poor	82	13	16				

NS: Non-significance.

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educational grade significantly affected these symptoms, suggesting that developmental and maturation processes or gradual behavioral education might play a role. This finding is consistent with Kamphuis et al., who examined personal traits and their relevance to disruptive behaviors [15].

The study underscores the global significance of researching disruptive problems, highlighting that they are influenced by factors such as lack of parental nurturing, life stresses, modernization, and exposure to non-purposeful social media, video games, and movies. These factors contribute to the severity of disruptive behaviors and impact children's biological habits, including sleep and eating patterns. This perspective is supported by Touchette et al. and other studies, emphasizing the need for effective educational systems and teaching methods to mitigate these issues. Understanding and addressing these factors are crucial for improving children's well-being and developmental outcomes [20]. Additionally, personal characteristics lacked a significant effect on severity, possibly for the same reasons, as most individuals exhibited mild severity levels of disruptive and aggressive behaviors. However, the study revealed that age and educational grade had a significant effect on these symptoms, possibly because elementary children are in a developmental and maturation period, or they may be educated on how to control these behaviors gradually, maybe declining. These results are consistent with Kamphuis et al.'s study, which examined some personal traits and their relevance to disruptive behaviors [15].

Given the profound implications for children's physical and psychological development, the relationship between disruptive behavior and sleep patterns in children is a critical area of study. Numerous studies have explored this bidirectional relationship, revealing that sleep problems and disruptive behaviors often coexist and can exacerbate each other. A study by Owens et al. highlighted that sleep disturbances are prevalent among children with attention-deficit/hyperactivity disorder (ADHD), a condition characterized by disruptive behaviors. The researchers found that children with ADHD experienced more bedtime resistance, sleep onset delay, and night

Table 6. The correlation between severity of disruptive symptoms of elementary schools' children and their personal traits and sleep pattern habits domains (n=198)

Domains of Scales		No. (%)	P	Correlation Spearmans	Correlation
Age groups (y)	<8	43(21.7)	0.00	-0.30	Significant weak negative correlation
	8-10	87(43.9)			
	>10	68(34.3)			
Gender	Male	120(60.6)	0.47	0.05	No correlation
	Female	78(39.4)			
Level of education	1st grade	48(24.2)	0.01	-0.21	Significant weak negative correlation
	2nd grade	36(18.2)			
	3rd grade	27(13.6)			
	4th grade	26(13.1)			
	5th grade	27(13.6)			
	6th grade	34(17.2)			
Sleep patterns during school days attending	Low normal sleep range	7(3.5)	0.27	-0.08	No correlation
	Normal	146(73.7)			
	Over normal sleep range	39(19.7)			
	Hypersomnia	6(3.0)			
Sleep patterns during weekend days	Low normal sleep range	1(0.5)	0.33	-0.07	No correlation
	Normal	88(44.4)			
	Over normal sleep range	93(47.0)			
	Hypersomnia	16(8.1)			
Patterns day napping	No day napping	86(43.4)	0.44	-0.06	No correlation
	Sometimes day napping	80(40.4)			
	Always day napping	32(16.2)			
Arrangement of sleep	Arrangement	87(43.9)	0.21	-0.09	No correlation
	Disarrangements	111(56.1)			
Overall sleep habits	Good	87(43.9)	0.21	-0.09	No correlation
	Poor	111(56.1)			

waking compared to their peers without ADHD. These sleep issues contribute to increased daytime behavioral problems, creating a cycle of sleep disruption and behavioral dysregulation [21].

Similarly, Corkum et al. emphasized sleep's role in regulating children's behavior and emotions. They found that sleep problems, including insufficient sleep and poor sleep quality, were strongly associated with higher levels of oppositional defiant behavior and aggression. The researchers suggested that addressing sleep issues through behavioral interventions could significantly reduce disruptive behaviors in children [22]. Also, Astill et al. conducted a meta-analysis examining the effects of sleep duration on cognitive performance and behavior in children. Their findings indicate that shorter sleep duration is consistently linked to worse behavioral outcomes, including increased hyperactivity, conduct problems, and emotional deregulation. This study underscored the importance of ensuring adequate sleep for maintaining optimal behavioral and cognitive functioning in children [23]. However, Gruber et al. investigated the impact of experimentally restricting sleep in typically developing children. Their study demonstrated that even modest reductions in sleep duration led to significant increases in emotional labiality and impulsivity. These changes in behavior suggest that sleep plays a crucial role in supporting children's emotional and behavioral regulation, and disruptions to sleep can quickly manifest as disruptive behaviors [24]. These studies are inconsistent with the current study's result, which may return that most children who participated in the study had mild severity of disruptive behaviors (69.2%), so their sleep patterns and other sleep issues are few. The weak correlation results revealed in the study may be related to the residual ratio of children with moderate to severe disruptive behaviors. These results agree with the fact that sleep patterns are affected by behavior.

Finally, the paper confirms the importance of studying disruptive problems, as they are common in Al-Najaf and Iraq. This may be attributed to many previously mentioned factors or the lack of an effective educational system and teaching methods. All of these factors increase the severity of disruptive behaviors and influence individuals, especially children, leading to changes in their biological habits, eating, and sleep patterns. Also, Gregory and Sadeh supported these findings by highlighting the bidirectional relationship between sleep and behavioral problems in children. They emphasized that insufficient sleep could exacerbate behavioral issues, while behavioral problems could, in turn, lead to poorer sleep quality. This interplay suggests that interventions aimed at improving sleep hygiene might also reduce disruptive behaviors in children. Gregory and Sadeh's work underlines the importance of simultaneously addressing sleep and behavioral issues to promote better health outcomes in children [25]. So, the study underscores the global significance of researching disruptive problems, highlighting that unhealthy factors that influence them contribute to an increase in the severity of disruptive behaviors and impact children's biological habits. These findings are supported by Touchette et al. and other studies, emphasizing the need for effective educational systems and teaching methods to mitigate these issues. Understanding and addressing these factors are crucial for improving children's well-being and developmental outcomes [20].

Conclusion

This paper concludes that disruptive behaviors are prevalent among elementary school children in Al-Najaf Province, although the severity is mild and somewhat impacts them. These behaviors are not primarily associated with personal characteristics but decrease as children age and progress to the next stage of education. Additionally, the paper observes that the sleep patterns of elementary school children are disorganized and show no significant correlation with disruptive behaviors. This paper recommends increasing awareness among elementary school children regarding disruptive behaviors and how to control them. It advocates for teaching them about the importance of sleep for development at this age, which affects physical and psychological health. Finally, it suggests conducting further extensive studies in the future to explore the causes and impacts of these behaviors, considering other biological and psychological variables.

Ethical Considerations

Compliance with ethical guidelines

The College of Medicine, University of Kufa Ethics Committee was responsible for all medical faculties, including the College of Nursing. It examined the study protocol and granted official clearance for the study to be carried out (Code: MEC-0081-2023). After receiving the study's title, objectives, and questionnaire, the Medical Ethics Committee evaluated the study's instruments (questionnaire) and approved the conduct of the study. The Declaration of Helsinki was followed throughout the entire study protocol.

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Authors' contributions

Conceptualization: Mansour Abdullah Falah; Methodology: Rawnaq Hussain; Investigation: Astabrak Ali Naji and Rawnaq Hussain; Data collection, and writing the original draft: Astabrak Ali Naji; Final approval: All authors.

Conflict of interest

The authors declared no conflict of interest.

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