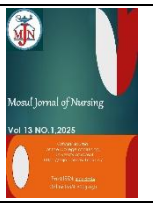
Mosul Journal of Nursing

Online ISSN: 2663-0311 - Print ISSN: 2311-8784
Website: https://mjn.uomosul.edu.iq



Prevalence of Hostile Behavior Among School-Age Children in Al-Najaf Governorate

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ARTICLEINFO

Keywords:

Hostile Behavior
School-Age Children
Prevalence
Al-Najaf Governorate
Aggression
School Intervention Programs

Abstract

Background: Hostile behavior in children, characterized by aggression, anger, and a desire to harm others, is a significant concern in educational and developmental settings. It can negatively impact a child's social relationships, emotional well-being, and academic performance. Several factors, including family dynamics, school climate, peer relationships, and societal influences, contribute to developing hostile behaviors. In conflict-affected regions like Iraq, the prevalence of hostile behavior among school-age children is likely exacerbated by factors such as exposure to violence, social instability, and cultural influences. Despite its importance, the extent of hostile behavior in Iraqi schoolchildren, particularly in Al-Najaf Governorate, remains insufficiently studied.
Aim: This study aimed to determine the prevalence of hostile behavior among school-age children in Al-Najaf Governorate and explore its association with demographic factors such as age, gender, education level, and family structure.
Methods: A descriptive, cross-sectional study design was used, involving a non-probability convenience sample of 384 children aged 7 to 12 years attending elementary schools in four districts of Al-Najaf Governorate. The data was collected using a two-part questionnaire: the first part gathered sociodemographic information, and the second part was an 18-item scale assessing hostile behavior symptoms. Data analysis was conducted using descriptive statistics, ANOVA, and odds ratio tests, with a significance level set at $p < 0.05$.
Results: The study found that 51.8% of children exhibited symptoms of hostile behavior. Females (53.8%) showed a slightly higher prevalence of hostile behavior than males (50.6%), although males were 1.4 times more likely to be at risk for hostile behavior symptoms. A significant relationship was found between age and the level of hostile behavior symptoms ($p = 0.02$). However, no significant relationship was observed with other demographic factors (gender, education level, and family structure) according to the ANOVA test ($p > 0.05$). The eta effect size for all demographic factors was weak.
Conclusion: The study concluded that hostile behavior is prevalent among school-age children in Al-Najaf Governorate, with a higher incidence observed in females, though males were more likely to be at risk. The weak association between demographic factors and hostile behavior suggests that additional factors beyond age, gender, and education level may contribute to the development of these behaviors. The study recommends the establishment of a hostile behavior prevention committee in schools to address the contributing factors and implement effective intervention programs.

What is already known about the topic?

- *Hostile behavior in school-age children is a common behavioral issue that can negatively affect their academic performance, peer relationships, and emotional well-being.*
- *Such behaviors may manifest as aggression, defiance, bullying, or verbal abuse and are often influenced by familial, social, and environmental factors..*

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DOI: 10.33899/mjn.2025.150459.1115 , Authors, 2025, College of Nursing, University of Mosul.
Date Received 2 June 2024; Received in revised form 11 September 2024; Accepted 22 November 2024, Available online January 2025

Introduction:

Hostile behavior, characterized by negative evaluations of others or things, often accompanied by an intention to harm or disagree, is a significant psychological concern in both children and adults (Ramirez & Andreu, 2006). In children, such behavior may persist throughout childhood and is linked to a range of psychiatric disorders, including Attention-Deficit Hyperactivity Disorder (ADHD) in children and adolescents, domestic violence in adults, and even dementia in older adults (Al-Fatlawi & Al-Dujaili, 2019; Falah Al-Zorfi & Muhammad Al-Ibrahimi, 2020). Psychologically, hostility is considered a multidimensional personality trait, commonly associated with anger and aggression (Eckhardt et al., 2004; Ramirez & Andreu, 2006; Beckmann et al., 2021).

Hostile behavior in children is particularly concerning due to its negative impact on both mental health and academic achievement. It is one of the leading reasons for children being referred for mental health consultations (Al-Hamoodi & Hasan, 2021; Hassan et al., 2019). Additionally, hostile behaviors in childhood can lead to long-term developmental challenges, including delinquency during adolescence (Reef et al., 2011). These behaviors are shaped by a combination of individual, familial, school, peer-related, community, and environmental factors, all of which contribute to the complexity of understanding and addressing childhood aggression (Valois et al., 2002).

Given the extensive literature on hostile behavior, multiple theories have been proposed to explain its development, including the frustration-aggression hypothesis, socioecological models, cognitive neoassociation theory, social learning theory, script theory, excitation transfer theory, and social interaction theory (DeWall et al., 2011). Understanding these theories helps explain why hostile behaviors emerge and persist in children, especially in challenging socio-cultural contexts.

Aim:

This study aims to determine the prevalence of hostile behavior among school-age children in Al-Najaf Governorate, shedding light on the extent and contributing factors of this concerning issue.

Methods

2.1 Study Design and Setting

This study employed a descriptive, cross-sectional design to assess the prevalence of hostile behavior among school-age children in Al-Najaf Governorate. The research was conducted in the southern sector of Al-Najaf Al-Ashraf Governorate, specifically targeting children aged 7 to 12 years who were attending government-run elementary schools. The study was carried out in January 2024 and aimed to provide a comprehensive snapshot of hostile behavior in the population under study.

2.2 Sampling Method

The study utilized a non-probability convenience sampling approach. This method was chosen to select a sample from children attending public elementary schools in the southern sector of Al-Najaf Governorate. The target population consisted of children between the ages of 7 and 12 years. A total of 384 children from 21 different elementary schools were included in the study, with the sample size determined using standard sample size calculation formulas (Hassan et al., 2019; Charan & Biswas, 2013) to ensure that the sample adequately represented the population. These 384 children were chosen based on their availability and willingness to participate in the study, ensuring the inclusion of diverse socio-demographic backgrounds.

2.3 Data Collection Tools

Data were collected using a structured questionnaire that consisted of two main sections:

1. **Sociodemographic Data:** This section included questions aimed at gathering general and socio-economic information about the children and their teachers. It included questions on the child's date of birth, gender, place of residence, level of education, family size, order among siblings, the gender of the child's school, and the school shift (morning or afternoon). The socio-economic status of the teachers was also assessed, including their gender, age, subject specialization, years of teaching experience, level of education, and the number of classes they taught.

2. **Hostile Behavior Assessment:** The second part of the questionnaire was focused on assessing the child's hostile behavior, using an 18-item scale designed to measure various dimensions of aggression and hostility. Each item was scored on a scale from 1 (never) to 3 (always). A mean score (MS) was calculated for each child, with a score less than 1.67 indicating the absence of hostile behavior symptoms, and a score equal to or greater than 1.67 indicating the presence of such symptoms.

The validity of the hostile behavior scale was assessed by 13 expert specialists in psychiatry and mental health, each with at least 10 years of experience in the field. These experts reviewed the questionnaire, provided feedback, and confirmed its relevance and clarity. The reliability of the scale was tested using Cronbach's Alpha coefficient, which yielded a value of 0.92, indicating excellent internal consistency.

2.4 Quantitative Variables

The study considered various quantitative variables, including the children's personal information such as age and gender, as well as the socio-economic data of their teachers. The hostile behavior scale was composed of 18 items, three of which were graded as "never," "sometimes," or "always" (scored as 1, 2, and 3, respectively). These indices were crucial for understanding the intensity and frequency of hostile behavior symptoms in the children.

2.5 Statistical Methods

The data were organized and cleaned using Microsoft Excel 2013. Statistical analyses were performed using SPSS software, version 23. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated for all variables. Inferential statistics were employed to test the relationships between hostile behavior symptoms and demographic characteristics of the children. Specifically, the study used the following statistical tools:

- **Cronbach's Alpha:** To assess the internal consistency of the hostile behavior scale.
- **ANOVA Test:** To determine the relationship between hostile behavior symptoms and demographic variables (e.g., age, gender, family structure).
- **Odds Ratio (OR) Test:** To assess the likelihood of hostile behavior symptoms based on gender and other categorical variables.
- **Eta Squared (η^2):** To measure the effect size of the relationship between demographic factors and hostile behavior.

The significance level for all statistical tests was set at $p < 0.05$.

2.6 Ethical Considerations

This study was conducted in full compliance with ethical research standards. Ethical approval was obtained from the Ethics and Approval Committee at the College of Nursing, University of Kufa, which ensured the protection of the rights of all participants. Informed consent was obtained from both the children and their teachers prior to participation in the study. Participation was voluntary, and participants were assured that their involvement would not affect their relationship with the school or teachers.

The study adhered to the principles of confidentiality and anonymity, ensuring that no personally identifiable information was collected. Participants were informed of their right to withdraw from the study at any point without any consequence. Prior to data collection, the purpose and objectives of the study were explained to the participants, and they were encouraged to ask any questions about the study procedure.

Results

Table 1: Relationship Between Hostile Behavior Symptoms and Demographic Characteristics of School-Age Children

Demographic Characteristic	Frequency	Percentage	Overall Hostile Behavior	Mean	SD	F	P-value	Sig.
Age Groups								
< 8 years	77	20.1%	2.01	1.12	4.17	0.02	HS	
8-10 years	177	46.1%	1.73	0.91				
> 10 years	130	33.9%	1.65	0.74				
Total		100%	1.76	0.91				
Gender								
Male	239	62.2%	1.72	0.88	0.88	0.35	NS	
Female	145	37.8%	1.81	0.96				
Total	384	100%	1.76	0.91				
Level of Education								
First Stage	86	22.4%	1.95	1.05	1.46	0.20	NS	
Second Stage	77	20.1%	1.68	0.88				
Third Stage	58	15.1%	1.72	0.97				
Fourth Stage	45	11.7%	1.87	0.94				
Fifth Stage	55	14.3%	1.62	0.76				
Sixth Stage	63	16.4%	1.67	0.74				
Total	384	100%	1.76	0.91				
Residence								
With Parents	322	83.9%	1.78	0.92	0.73	0.54	NS	
With Father	14	3.6%	1.64	0.50				

Demographic Characteristic	Frequency	Percentage	Overall Hostile Behavior	Mean	SD	F	P-value	Sig.
With Mother	46	12.0%	1.67	0.92				
With Relatives	2	0.5%	1.00	0.00				
Total	384	100%	1.76	0.91				
Number of Family Members								
< 4 members	71	18.5%	1.76	0.89	1.06	0.37	NS	
4-5 members	187	48.7%	1.81	0.95				
6-7 members	101	26.3%	1.69	0.89				
> 7 members	25	6.5%	1.36	0.50				
Total	384	100%	1.76	0.91				
Order Among Siblings								
First	131	34.1%	1.82	0.96	0.54	0.66	NS	
2nd-3rd	172	44.8%	1.79	0.91				
4th-5th	70	18.2%	1.67	0.85				
> 5	11	2.9%	1.68	0.99				
Total	384	100%	1.76	0.91				

The majority of the children in the study were aged between 8-10 years (46.1%), with 62.2% being male. A significant portion of the children belonged to the first educational stage (22.4%), and most lived with their parents (83.9%). The majority of the children came from families with 4-5 members (48.7%), and 44.8% were ranked 2nd or 3rd among their siblings.

There was a significant relationship between hostile behavior symptoms and age groups, with children aged less than 8 years displaying the highest mean score (2.01), followed by

the 8-10 years group (1.73), and children aged over 10 years exhibiting the lowest mean score (1.65) ($p = 0.02$). However, no significant relationships were observed for gender, education level, family structure, or sibling order with hostile behavior ($p > 0.05$).

Table 2: T-test Value for Hostile Behavior Symptoms Among School-Age Children

Hostile Behavior Symptom	Mean	SD	t	df	Sig.	Assessment
Hostile behavior symptom	1.5182	0.50032	57.506	383	0	Abnormal

The T-test results indicate a statistically significant difference in hostile behavior symptoms among children ($p < 0.05$), suggesting that the presence of hostile behavior symptoms is abnormal and more frequent among the study population.

Table 3: Contingency of Odds Ratio for Gender and Hostile Behavior

Hostile Behavior Symptom	Normal	Abnormal	Total
Male	118	121	239
Female	67	78	145
Total	185	199	384

The odds ratio (OR) shows that females (53.8%) are more likely to exhibit abnormal hostile behavior compared to males (50.6%). The overall prevalence of abnormal hostile behavior symptoms in the study was 51.8%.

Table 4: Eta Effect Size Between Demographic Factors and Hostile Behavior Symptoms

Measures of Association	Eta Squared	Effect Size (Eta)
Age Class and Hostility	0.018	Weak
Gender and Hostility	0.031	Weak
Education Level and Hostility	0.004	Weak

The eta effect size is weak for all demographic factors, including age, gender, and education level, suggesting that these factors have minimal influence on hostile behavior symptoms in this sample.

Table 5: Odds Ratio of Gender and Hostile Behavior Symptoms

Value	95% Confidence Interval	Lower	Upper
Odds Ratio for Gender	1.00/2.00	1.135	0.751
For Cohort Hostile Behavior Symptom (M=1)	1.069	0.860	1.328
For Cohort Hostile Behavior Symptom (M=2)	0.941	0.774	1.145

The odds ratio suggests that males are 1.4 times more likely to exhibit hostile behavior symptoms than females, though the 95% confidence interval (0.860-1.145) indicates that this result is not statistically significant at the 95% confidence level.

Discussion

Hostile behavior in school-aged children is a widespread issue that impacts educational systems globally. It presents challenges not only to teachers and school administrators but also to society at large. Hostile behavior negatively influences children's academic performance, mental health, and social relationships, and it often requires significant time and effort to address effectively (Iyappan, 2020). The aim of this study was to determine the prevalence of hostile behavior among school-aged children in Al-Najaf Governorate, and the findings indicate a concerning rate of hostility in this population.

The majority of the children in the study were male (62.2%), with the remaining participants being female. This gender distribution is consistent with traditional cultural preferences in Iraq, where male children are often favored over females (Al-Hamoodi & Hasan, 2021). Most of the children were aged between 8 and 10 years (46.1%), and many were in the first stage of their schooling (22.4%), which could reflect a demographic trend in Iraq due to increased birth rates in recent years (Fayyad, 2022). Most children in the study came from families of 4-5 members (48.7%), and the majority lived with both parents (83.9%), with many falling between the 2nd and 3rd sibling rank in their family (44.8%).

A striking finding of this study is that 51.8% of the children exhibited abnormal hostile behavior. This figure is notably higher than that reported in other parts of Iraq (24.3%–30%) (Hafedh, 2017; Yahya et al., 2015; Hassan et al., 2019), as well as in other Arab countries like Lebanon (45.9%), Jordan (46.6%), UAE (43.2%), Saudi Arabia (47.3%), and Egypt (23.7%) (Al Matroushi & Fikry, 2005; Al-Qaseer et al., 2007; Assaf et al., 2018). The elevated prevalence in Al-Najaf may be attributed to several factors, including continuous exposure to violence resulting from political unrest, wars, and socio-economic instability. Moreover, the educational system's approach, which mixes boys and girls, and societal attitudes toward children's behavior may contribute to the observed hostility levels. In contrast, hostile behavior prevention programs in developed countries may have helped mitigate such issues in those regions (Hahn et al., 2007). This aligns with findings from Fleming and Jacobsen (2010) and Chaux and Castellanos (2015), who noted similar patterns in other conflict-affected regions.

While females exhibited a slightly higher level of hostile behavior (53.8% vs. 50.6% in males), the males in this study were found to be 1.4 times more likely to exhibit hostile behavior symptoms. This may be due to biological factors, as suggested by previous studies (Harachi et al., 2006; Hess & Hagen, 2006), which indicate that females may express hostility more indirectly than males. However, the observed gender difference in this study was not statistically significant. This is in contrast to some findings where gender and age have a significant interaction effect on hostile behavior (Hassan et al., 2019; Tsorbatzoudis et al., 2013; Al-Tameemi & Khudair, 2016).

Age was found to have a weak effect on the prevalence of hostile behavior, with children younger than 8 years showing higher levels of hostility (mean score = 2.01). However, this study’s results suggest that age and gender alone are not sufficient to explain variations in hostile behavior, as individual experiences, familial context, and social influences also play significant roles in shaping behavior.

Moreover, the weak association between education level and hostile behavior in this study contrasts with findings from Hassan et al. (2019), who reported a significant relationship between education level and hostility. This discrepancy may suggest that other

unmeasured factors, such as home environment and community influences, may be more pertinent in this context.

Conclusion

This study concludes that hostile behavior is prevalent among school-aged children in Al-Najaf Governorate, with a notably higher incidence in females compared to males. However, males were found to be at greater risk for exhibiting hostile behavior symptoms. The weak effect of demographic factors such as age, gender, and education level on hostile behavior suggests that additional environmental, familial, and social factors may be contributing to the high prevalence observed.

Recommendations

1. **Develop and Implement Intervention Programs:** The study recommends the development and implementation of targeted intervention programs aimed at addressing hostile behavior among school-aged children, particularly for high-risk groups such as younger children and males. Given the higher prevalence of hostile behavior among females in this study, it is essential to design interventions tailored to the specific needs of girls, focusing on strategies to manage and reduce hostility.
2. **Teacher Training Programs:** Training programs for teachers should be implemented to improve their ability to identify and manage hostile behavior effectively in the classroom. These programs should include techniques for classroom management, conflict resolution, and fostering a positive and supportive learning environment.
3. **Parenting Support Programs:** Given the role of family dynamics in children's behavior, it is crucial to provide parenting programs that promote positive discipline strategies, effective communication, and healthy emotional development in children. These programs can help parents create an environment that reduces the likelihood of hostile behaviors developing.

What is Known About This Topic

- Hostile behavior in school-aged children is a common issue worldwide, but in Al-Najaf Governorate, it has not been extensively studied or diagnosed.
- Hostility in children in this region is often unrecognized by mental health professionals, and the severity of the issue is not adequately assessed.

What This Study Adds

- This study provides new insights into the high prevalence of hostile behavior among school-aged children in Al-Najaf Governorate, contributing to the growing body of research on childhood aggression in conflict-affected regions.

Further Research

- Further studies are needed to explore the precise risk factors contributing to the development of hostile behavior in Iraqi children. Longitudinal research could help identify the underlying causes and evaluate the effectiveness of various intervention strategies aimed at reducing the prevalence and severity of hostile behavior in school-aged children.

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