

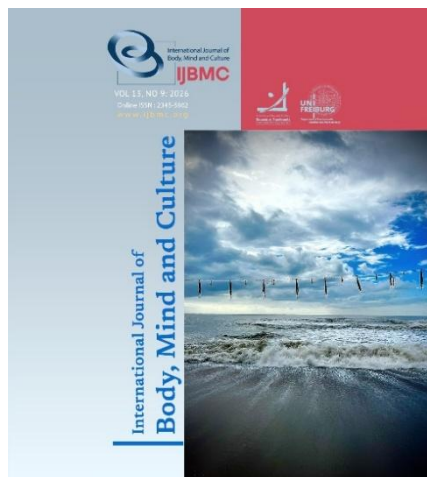
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Workplace Violence Experiences and Nurse-Reported Impact on Care in Emergency Departments: A Cross-Sectional Study

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ABSTRACT

Objective: To describe Workplace violence (WPV) related experiences among emergency-department nurses and their unadjusted association with nurses' perceived adverse impact of violence on care processes.

Methods and Materials: A cross-sectional descriptive-correlational study included 223 purposively sampled nurses from four teaching hospitals in Babylon Governorate, Iraq (28 December 2025-1 February 2026). An Arabic study-specific questionnaire assessed WPV-related items and a 10-item nurse-reported care-impact scale. Because WPV items combined exposure, consequences, and organizational perceptions and lacked a fixed recall period and explicit unexposed category, results are descriptive rather than prevalence estimates. Analyses used Spearman correlation, Mann-Whitney U, Kruskal-Wallis, and Holm correction.

Findings: Verbal violence was the most frequently recorded type (59.2%); patients' relatives were the most frequent source (63.7%), and workload/staff shortage was the most frequent perceived cause (63.2%). The care-impact mean was 2.18. The original 20-item WPV burden index had a small unadjusted association with care impact ($r = .235$, $p < .001$); verbal-domain $r = .145$ ($p = .030$), while physical-domain $r = .053$ ($p = .434$). After Holm correction, sex, years of experience, and hospital remained associated with the original WPV score; age did not.

Conclusion: The study-specific WPV burden index showed a small, unadjusted association with nurses' perceived adverse impact on care. Findings are neither causal nor objective quality-of-care estimates and support use of clearer event-based measurement and participant-level adjusted analyses in future research.

Keywords: Workplace violence, Emergency nursing, Nurse-reported care impact, Cross-sectional study.

Introduction

Workplace violence (WPV) in healthcare includes physical assault, threats, verbal aggression, harassment, and other behaviors that expose workers to harm. Nurses are particularly vulnerable because of sustained, close contact with patients and families, and the problem is especially prominent in emergency departments where care is urgent, uncertainty is high, waiting times can be prolonged, and clinical interactions frequently occur under stress (O'Brien et al., 2024; Spector et al., 2014).

Evidence from emergency settings consistently shows that nonphysical or verbal violence is more frequent than physical assault. Systematic reviews and cross-sectional studies from different health systems have also identified patients and accompanying relatives as major perpetrators, although the relative contribution of each group varies by context (Abdellah & Salama, 2017; Aljohani et al., 2021; Alyaemni & Alhudaithi, 2016; Spelten et al., 2020).

The consequences of WPV extend beyond the immediate incident. Exposure has been associated with psychological strain, burnout, reduced job satisfaction, turnover intention, and lower perceptions of patient safety and care quality. These effects may operate through impaired concentration, disrupted communication, emotional exhaustion, defensive interactions with patients, and reduced capacity to maintain therapeutic relationships (Agbornu et al., 2022; Choi & Lee, 2017; Liu et al., 2019).

Organizational conditions are also central. Heavy workload, staff shortages, overtime, night work, limited security, and weak reporting systems can increase exposure to conflict or make incidents more difficult to prevent and manage. Nurses may also underreport violence when incidents are normalized, reporting procedures are unclear, or staff doubt that reporting will lead to action (Giusti et al., 2024; Havaei & MacPhee, 2020; Spencer et al., 2023). Workload and emotional stress have likewise been associated with nursing care quality in Iraqi hospital settings (Karim Jabr et al., 2025).

Local evidence is important because the expression and reporting of violence are shaped by organizational, social, and cultural conditions. A prior study in Al-Hilla teaching hospitals documented workplace-violence concerns among

emergency nurses, supporting continued investigation in Babylon Governorate (Hrefish et al., 2025).

Accordingly, the present study described physical and verbal WPV-related experiences among nurses working in emergency departments in Babylon Governorate and examined their association with nurses' self-reported perceived adverse impact of violence on care processes. This study aims to describe physical and verbal workplace-violence-related experiences among participating nurses; to describe nurses' self-reported perceived adverse impact of workplace violence on care processes; To examine relationships between the original WPV burden score and nurses' demographic and occupational characteristics; and to estimate the unadjusted association between the original WPV burden score and the nurse-reported care-impact score.

Methods and Materials

Study Design and Setting

A cross-sectional descriptive-correlational design was used to examine associations between workplace-violence-related experiences and nurses' self-reported perceived adverse impact on care. The design does not establish temporal sequence or causality. Data were collected from 28 December 2025 to 1 February 2026 in the emergency departments of four teaching hospitals in Babylon Governorate: Al-Hilla General Teaching Hospital, Imam Al-Sadiq General Teaching Hospital, Teaching Hospital for Women and Children, and Marjan Teaching Hospital.

The hospitals used shift-based staffing systems and served a large volume of patients and families. The emergency-department context was selected because of frequent direct contact with patients and companions and the recognized risk of verbal and physical aggression in urgent-care environments.

Sample and Eligibility Criteria

A purposive sample of 223 nurses working in emergency departments and directly involved in patient care participated. The source study record states that sample size was determined with the Yamane approach, but the total eligible nurse population and the precision parameter used in that calculation were not retained in the manuscript file.

Eligible participants were male or female nurses with at least one year of nursing experience, assigned to an emergency department, working the relevant hospital shifts, and willing to participate.

Nurses were excluded if they declined participation, returned incomplete questionnaires, had less than one year of nursing experience, or had participated in the pilot study. The archived study record does not report the number approached or the number who declined, so an overall response rate cannot be calculated and the sample should not be interpreted as a probability sample of all emergency nurses in the governorate.

Instruments

The self-administered Arabic questionnaire was a study-specific adaptation informed by the ILO/ICN/WHO/PSI Workplace Violence in the Health Sector survey framework and related nursing literature (International Labour Office et al., 2003). Part I contained 14 demographic and professional items, including age, sex, marital status, educational level, residence, years of experience, source and type of violence, work shift, hospital, availability of reporting procedures, perceived causes of violence, perceived commonness of violence, and consequences for the assailant.

Part II contained 20 WPV-related items and Part III contained 10 care-impact items. Responses used a three-point ordinal scale (Never = 1, Sometimes = 2, Always = 3). Equal-width mean-score bands of 1.00-1.66, 1.67-2.32, and 2.33-3.00 were used only as descriptive low/moderate/high categories and are not clinical cut points. The care-impact items assess nurses' perceptions of changes in communication, concentration, decision-making, empathy, monitoring of patient needs, and performance; they are therefore described as a nurse-reported care-impact measure rather than an objective measure of care quality.

Measurement Provenance and Construct Handling

The WPV items were not treated as interchangeable indicators of a single latent exposure construct. Physical-domain items 1-4 represent direct physical-exposure events consistent with the physical-violence domain of the ILO/ICN/WHO/PSI framework; physical items 5-6 and 9-10 represent consequences (absence/reduced contact and injury), and items 7-8 represent perceived organizational

protection/recurrence. Verbal-domain items 1-3 and 5-10 represent verbal/psychological aggression, whereas verbal item 4 is a perceived consequence (reputational harm). Consequence dimensions are consistent with categories summarized in the workplace-violence aftermath literature (Lancot & Guay, 2014).

The 10 care-impact items were study-specific indicators informed by published evidence that WPV may affect nurse-patient relationships, communication, concentration, work functioning, and perceived care processes (Agbornu et al., 2022; Lancot & Guay, 2014). To reduce construct overlap, consequence/context items in the WPV section are described separately from core exposure items in the revised interpretation. The original 20-item combined score is retained only as an exploratory 'WPV burden index' because it was used in the archived statistical output; it is not presented as a validated pure exposure scale.

The available source record documents Arabic administration and expert linguistic/content review but does not preserve a formal forward-translation/back-translation log. It also does not document a fixed 6- or 12-month recall period. Accordingly, response distributions are interpreted as ordinal endorsements rather than event rates, and the study does not report WPV incidence or prevalence. The source/type fields also did not preserve a distinct 'none/no exposure' category in the archived dataset, so source/type percentages describe the analytic sample rather than the underlying workforce prevalence.

Validity, Pilot Testing, and Reliability

Content and face validity were evaluated by a panel of 14 experts from nursing colleges at the Universities of Babylon, Baghdad, Kufa, Kerbala, Mosul, and Al-Diwaniyah. Items were revised in response to expert feedback regarding clarity, relevance, and appropriateness. Because the WPV section contains heterogeneous events, consequences, and organizational perceptions, no unidimensional factor structure is claimed for the 20-item set. A cross-cultural validation of the source WHO/ILO framework in another language reported strong internal consistency for physical-violence and verbal-abuse domains ($\alpha = .879$ and $.934$, respectively), but those values are external evidence for the source framework and are not reliability estimates for this Arabic study-specific adaptation (Khaiw-im et al., 2022).

A pilot study was conducted with 20 nurses who were not included in the final sample; completion required approximately 15-30 minutes. The archived pilot output reported Cronbach's $\alpha = .742$ for the original 20-item WPV item set and $\alpha = .807$ for the 10-item care-impact scale. Separate study-sample α coefficients for the physical and verbal core-exposure subsets were not retained. Given the conceptual heterogeneity of the WPV item set, the .742 coefficient is reported only as an overall consistency descriptor and is not used as evidence that all 20 items form a single exposure construct.

Ethical Considerations and Data Collection

Ethical approval was obtained from the Research Ethics Committee, College of Nursing, University of Babylon, before data collection. The numeric approval identifier and exact approval date were not included in the archived manuscript materials available for this revision. Participants received an explanation of the study purpose, were informed that participation was voluntary, and provided verbal consent. Confidentiality and anonymity were maintained; the analytical dataset did not use personal names, results were reported in aggregate, and individual responses were not presented to employers or supervisors.

Following administrative authorization from the Babylon Health Directorate and participating hospitals, the researcher distributed and collected 223 questionnaires directly from eligible nurses. Participation decisions and questionnaire responses were handled confidentially to reduce employment-related concerns, and participants were given adequate time to respond.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics version 27. Descriptive statistics included frequencies, percentages, means, standard deviations, and observed ranges. Normality was examined with the Kolmogorov-Smirnov test. Because the data were not normally distributed, Spearman rank correlation, Mann-Whitney U tests, and Kruskal-Wallis H tests were used as appropriate. The overall WPV-burden/care-impact correlation was treated as the primary association; component correlations were exploratory. For the 14 demographic and occupational comparisons, familywise multiplicity was addressed with the Holm

procedure. Statistical significance was set at two-sided $p < .05$. The archived manuscript contained only aggregate outputs rather than participant-level records, so a valid multivariable model adjusting simultaneously for age, sex, experience, and hospital could not be reconstructed; all reported WPV-care associations therefore remain unadjusted.

Findings and Results

The sample comprised 223 nurses. Most were 25-35 years old (69.1%; mean age 26.57 $\pm$ 3.10 years), 52.5% were male, 57.0% were single, 74.9% held a bachelor's degree, and 61.4% lived in urban areas. Nearly half (49.8%) had three to four years of nursing experience. As shown in [Table 1](#), patients' relatives were the most frequently recorded source category (63.7%); 56.5% worked evening shifts; 57.8% reported no workplace reporting policy/procedure; and workload combined with nursing staff shortages was the most frequently recorded perceived cause (63.2%). The recorded type categories were verbal (59.2%), physical (24.7%), and both (16.1%). Because the archived instrument lacks a fixed recall period and an explicit preserved unexposed category, these percentages should not be interpreted as population prevalence estimates.

Table 1.*Sociodemographic and employment characteristics of participating nurses (N = 223).*

Characteristic	Subgroup	n	%
Age group	<25 years	69	30.9
	25-35 years	154	69.1
	Total	223	100.0
	Mean +/- SD: 26.57 +/- 3.097; range: 21-35 years		
Sex	Male	117	52.5
	Female	106	47.5
	Total	223	100.0
Marital status	Single	127	57.0
	Married	96	43.0
	Total	223	100.0
Education level	Diploma	55	24.7
	Bachelor's degree	167	74.9
	Master's degree	1	0.4
	Total	223	100.0
Residence	Rural	86	38.6
	Urban	137	61.4
	Total	223	100.0
Nursing experience	1-2 years	48	21.5
	3-4 years	111	49.8
	>4 years	64	28.7
	Total	223	100.0
Source of violence	Patients	18	8.1
	Patients' relatives	142	63.7
	Both	63	28.3
	Total	223	100.0
Work shift	Morning	97	43.5
	Evening	126	56.5
	Total	223	100.0
Hospital	Teaching Hospital for Women and Children	33	14.8
	Al-Hilla General Teaching Hospital	85	38.1
	Imam Al-Sadiq General Teaching Hospital	67	30.0
	Marjan Teaching Hospital	38	17.0
	Total	223	100.0
Reporting policy/procedure	Yes	94	42.2
	No	129	57.8
	Total	223	100.0
Reported cause of violence	Late arrival to shift	6	2.7
	Increased workload and nurse shortages/delayed care	141	63.2
	Carelessness/malpractice	1	0.4
	Stressful events such as a patient's death	75	33.6
	Total	223	100.0
Type of violence experienced	Physical	55	24.7
	Verbal	132	59.2
	Both	36	16.1
	Total	223	100.0
Violence considered common at workplace	Yes	51	22.9
	No	172	77.1
	Total	223	100.0
Consequence for assailant	None	117	52.5
	Verbal warning	75	33.6
	Reported to police	31	13.9
	Total	223	100.0

Table 2 presents item-level WPV-related responses with each item labeled as a core exposure, consequence, or context/organizational-perception indicator. The original physical-domain mean was 2.23 and the original verbal-domain mean was 2.30; these domain means are descriptive only because the item sets include conceptually different

content. Among verbal items, insults, fabricated statements detrimental to work, ridicule/criticism, and verbal threats had the highest means. Among physical-domain items, perceived insufficient protection and perceived recurrence had the highest means, but these are context/perception indicators rather than direct assault events.

Table 2.

Item-level WPV-related indicators, separated conceptually as exposure, consequence, and context items.

WPV-related indicator	Never %	Sometimes %	Always %	Mean	Level
Core physical exposure: physically assaulted/pushed while on duty	14.3	64.1	21.5	2.07	M
Core physical exposure: physically restrained or forcibly held down	23.3	47.1	29.6	2.06	M
Core physical exposure: attempted direct physical harm	22.9	58.7	18.4	1.96	M
Core physical exposure: sudden attack causing strong physical threat	12.6	42.6	44.8	2.32	M
Physical consequence: absence or sick leave after violence	12.1	48.4	39.5	2.27	M
Physical consequence: reduced interaction/contact with patients	15.2	42.2	42.6	2.27	M
Organizational/context perception: protection felt insufficient	7.6	26.5	65.9	2.58	H
Context perception: physical assaults perceived as recurrent	8.1	29.1	62.8	2.55	H
Physical consequence: minor injuries (aches, scratches, bruises)	5.8	59.2	35.0	2.29	M
Physical consequence: severe injuries (deep cuts, fractures, head/visceral injury)	37.2	33.2	29.6	1.92	M
Original physical-domain mean (descriptive only)				2.23	M
Core verbal exposure: verbal threats from patients or family	9.0	29.6	61.4	2.52	H
Core verbal exposure: insults demeaning dignity	8.5	55.6	35.9	2.27	M
Core verbal exposure: disrespectful/degrading verbal treatment	29.6	67.7	2.7	1.73	M
Verbal consequence: perceived reputational harm	13.5	52.0	34.5	2.21	M
Core verbal exposure: reprimanded/demeaning language	13.0	69.5	17.5	2.04	M
Core verbal exposure: threats related to property safety	8.5	50.2	41.3	2.33	H
Core verbal exposure: loud, aggressive voices	13.0	58.7	28.3	2.15	M
Core verbal exposure: fabricated statements detrimental to work	7.2	26.9	65.9	2.59	H
Core verbal exposure: ridicule or criticism for work	9.4	25.6	65.0	2.56	H
Core verbal exposure: insults	7.6	25.1	67.3	2.60	H
Original verbal-domain mean (descriptive only)				2.30	M
Original 20-item WPV burden index (exploratory)				2.27	M

Item-level categories are descriptive ordinal bands: L = low (1.00-1.66), M = moderate (1.67-2.32), H = high (2.33-3.00). Consequence items, including absence/sick leave and injury, are not interpreted as direct exposure frequency. In particular, the severe-injury item showed an implausibly high 'Always' endorsement if read as repeated clinical injury; without the raw Arabic forms, event counts, or a documented recall interval, it is reported only as an ordinal response distribution and is excluded from prevalence interpretation.

The archived scoring algorithm also classified the original physical- and verbal-domain totals into equal-width descriptive bands. Table 3 reproduces those distributions for transparency: 68.6% were in the original physical-domain moderate band and 30.0% in the high band (mean = 22.30, SD = 2.43); 58.7% were in the original verbal-domain moderate band and 40.8% in the high band (mean = 23.00, SD = 1.94). These bands are not validated prevalence or clinical categories.

Table 3.

Distribution of the original physical- and verbal-domain scores (descriptive score bands only).

Original domain	Level	Range	n	%	Min	Max	Mean	SD
Physical-domain score*	Low	10-16	3	1.3	15	29	22.30	2.430
	Moderate	17-23	153	68.6				
	High	24-30	67	30.0				
Verbal-domain score*	Low	10-16	1	0.4	16	28	23.00	1.944
	Moderate	17-23	131	58.7				
	High	24-30	91	40.8				

Table 4 summarizes the nurse-reported care-impact items. The overall care-impact mean was 2.18, within the descriptive moderate band. The highest item means concerned the perception that violence reduced the quality of nursing services (mean = 2.63) and that anxiety/fear affected

concentration while providing care (mean = 2.61). These responses represent nurses' perceptions of care-process impact and should not be interpreted as independently observed patient-care quality.

Table 4.

Nurse-reported perceived adverse impact of workplace violence on care processes

Care-impact item	Never %	Sometimes %	Always %	Mean	Level
Violence affected ability to provide high-quality care	10.3	48.0	41.7	2.31	M
Decrease in positive interactions with patients	12.6	46.6	40.8	2.28	M
Difficulty maintaining effective communication because of psychological stress	13.0	54.3	32.7	2.20	M
Ability to make sound nursing decisions affected	13.5	47.1	39.5	2.26	M
Empathy/compassion decreased after violent incidents	15.2	61.9	22.9	2.08	M
Anxiety/fear affected concentration during care	6.7	26.0	67.3	2.61	H
Violence reduced the quality of nursing services provided	5.8	25.6	68.6	2.63	H
Hesitancy/over-caution with patients affected care	38.1	53.8	8.1	1.70	M
Ability to monitor patients' needs accurately was affected	35.4	57.8	6.7	1.71	M
Current nursing performance lower than before exposure to violence	23.3	47.1	29.6	2.06	M
Overall care-impact scale				2.18	M

Higher scores indicate a greater reported adverse impact on care. L = low (1.00-1.66); M = moderate (1.67-2.32); H = high (2.33-3.00).

Table 5 presents the descriptive total care-impact score: 74.0% of participants fell in the moderate band, 22.9% in the high band, and 3.1% in the low band (mean = 21.84, SD =

2.66). The bands are study-specific descriptive categories rather than validated clinical thresholds.

Table 5.

Total nurse-reported care-impact score (descriptive bands).

Level	Range	n	%	Min	Max	Mean	SD
Low	10-16	7	3.1				
Moderate	17-23	165	74.0				
High	24-30	51	22.9				
Total	10-30	223	100.0	13	30	21.84	2.661

As shown in Table 6, the original 20-item WPV burden index had a small positive unadjusted association with the nurse-reported care-impact score (Spearman $r = .235$, $p < .001$). The original verbal-domain score showed a weaker exploratory association ($r = .145$, $p = .030$), whereas the original physical-domain score was not associated with care

impact ($r = .053$, $p = .434$). The magnitude of $r = .235$ should be interpreted as modest rather than strong or clinically established, and the conceptual overlap between some WPV consequence items and care-impact items may have inflated the observed association.

Table 6.

Unadjusted associations between original WPV domain/index scores and nurse-reported care impact (N = 223).

Original domain/index	Spearman r	p value	Interpretation
Physical-domain score	.053	.434	No clear association
Verbal-domain score	.145	.030	Weak positive; exploratory
20-item WPV burden index	.235	<.001	Small positive; unadjusted

Table 7 presents the demographic and occupational comparisons. Before multiplicity control, age ($p = .012$), sex ($p < .001$), years of nursing experience ($p < .001$), and hospital

($p < .001$) were associated with the original WPV score. After Holm adjustment across 14 comparisons, sex, years of experience, and hospital remained statistically significant,

whereas age did not (Holm-adjusted $p = .132$). Descriptively, Al-Hilla General Teaching Hospital had the highest mean WPV score (2.31) and the Teaching Hospital for Women and

Children the lowest (2.18); however, pairwise Dunn post-hoc statistics cannot be validly reconstructed from the aggregate table, so only the omnibus hospital difference is interpreted.

Table 7.

Original WPV score according to demographic and occupational characteristics, with Holm-adjusted p values

Characteristic	Subgroup(s)	Mean(s)	Test	p value	Holm-adjusted p
Age group	<25 / 25-35	2.21 / 2.29	$r = .169$	.012	.132
Sex	Male / Female	2.30 / 2.23	$Z = -3.874$	<.001	<.014
Marital status	Single / Married	2.27 / 2.26	$Z = -.349$	.727	1.000
Education level	Diploma / Bachelor / Master	2.25 / 2.27 / 2.35	$H = 1.182$	.554	1.000
Residence	Rural / Urban	2.25 / 2.27	$Z = -.548$	.583	1.000
Years of nursing experience	1-2 / 3-4 / >4 years	2.18 / 2.28 / 2.31	$r = .266$	<.001	<.014
Source of violence	Patient / Relative / Both	2.29 / 2.27 / 2.25	$H = .433$	.805	1.000
Work shift	Morning / Evening	2.27 / 2.26	$Z = -.505$	.614	1.000
Hospital	THWC / Al-Hilla / Imam Al-Sadiq / Marjan	2.18 / 2.31 / 2.25 / 2.25	$H = 28.739$	<.001	<.014
Reporting protocol	Yes / No	2.26 / 2.27	$Z = -.394$	.694	1.000
Cause of violence	Four reported categories	2.22-2.45	$H = 5.676$	.128	1.000
Type experienced	Physical / Verbal / Both	2.25 / 2.27 / 2.26	$H = 2.369$	.306	1.000
Violence considered common	Yes / No	2.26 / 2.27	$Z = -.639$	.523	1.000
Consequence for assailant	None / Warning / Police	2.26 / 2.26 / 2.28	$H = .552$	.759	1.000

r = Spearman rank correlation; Z = Mann-Whitney U standardized statistic; H = Kruskal-Wallis statistic; THWC = Teaching Hospital for Women and Children. Holm-adjusted p values control the familywise error rate across the 14 demographic/occupational comparisons. No pairwise hospital post-hoc inference is reported because participant-level ranks were unavailable in the archived output.

Discussion and Conclusion

The participants were predominantly young nurses, with 69.1% aged 25-35 years and a mean age of 26.57 years. This pattern resembles regional reports in which younger nurses constitute a substantial share of frontline staff exposed to WPV (Al Khatib et al., 2023; Alnaeem et al., 2025). These demographic findings describe the sampled workforce and should not be treated as causal risk factors.

Men represented 52.5% of the sample and 57.0% of participants were single. Most held a bachelor's degree (74.9%), lived in urban areas (61.4%), and had three to four years of nursing experience (49.8%). These characteristics should be understood primarily as features of the sampled emergency-department workforce rather than as universal predictors of violence. Studies across countries have reported varying demographic patterns, indicating that workplace context can be as important as individual characteristics in shaping exposure (Alameddine et al., 2015; Zhang et al., 2017).

The source/type distributions in the analytic dataset suggest that verbal aggression was more prominent than physical aggression, a pattern consistent with reviews of emergency and nursing settings (Aljohani et al., 2021; Ekpore et al., 2024; Spector et al., 2014). However, the present data cannot provide a defensible prevalence estimate because the archived questionnaire record lacks a fixed recall interval and a preserved no-exposure category. The findings are therefore best interpreted as patterns among participating nurses rather than occurrence rates in the underlying workforce.

Patients' relatives were the most frequently recorded source category (63.7%). In emergency settings, relatives may experience fear, uncertainty, grief, frustration about waiting or treatment, and heightened expectations of immediate care. Similar research has identified patients and relatives as major perpetrators of violence against nurses (Alyamni & Alhudaithi, 2016; Spelten et al., 2020). Because source was recorded without a preserved unexposed category, this percentage is descriptive of the analytic dataset rather than a population rate.

The frequency of verbal violence is also consistent with research in emergency departments in neighboring settings. In Egypt, verbal violence substantially exceeded physical violence among emergency healthcare workers, while studies in Saudi Arabia and Jordan similarly documented a large burden of verbal aggression (Abdellah & Salama, 2017; Al Khatib et al., 2023; Alkorashy & Al Moalad, 2016). These comparisons suggest that the predominance of verbal violence in the present study is not an isolated finding.

Increased workload and nursing staff shortages were the most frequently recorded perceived cause (63.2%). Heavy workload can extend waiting time, reduce opportunities for communication, and increase strain on staff and families. Research has linked workload and patient/family complaints with WPV, and ecological evidence has associated staffing-related factors, overtime, and night work with violence risk (Giusti et al., 2024; Havaei & MacPhee, 2020). In Iraqi hospitals, workload and emotional stress have also been associated with perceived nursing-care quality (Karim Jabr et al., 2025). These comparisons are contextual and do not establish causation in the present cross-sectional data.

More than half of respondents (57.8%) reported no formal reporting policy or procedure, and 52.5% indicated that no action was taken against the assailant. Weak reporting systems can make the true burden of violence difficult to measure and can contribute to normalization. A systematic review found that nurses often underreport patient- and visitor-perpetrated WPV because of perceived futility, lack of support, uncertainty about what constitutes a reportable event, and organizational barriers (Spencer et al., 2023). Clear reporting pathways, feedback after reports, and visible organizational responses are therefore central to prevention.

The care-impact measure indicated a moderate level of self-reported adverse effect on care processes, particularly concentration and perceived quality of nursing services. This measure captures nurses' perceptions rather than independently observed quality, patient outcomes, errors, or safety events. The distinction is important because self-report may be influenced by common-method variance and by the salience of recent or severe incidents.

The pattern is consistent with literature linking WPV to nurse-patient relationships, work functioning, burnout, and nurse-reported patient-safety perceptions (Agbornu et al., 2022; Liu et al., 2019; Lanctot & Guay, 2014). These external studies support plausibility of an association, but they do not convert the present self-reported care-impact score into an objective quality-of-care measure.

The present study's moderate rather than uniformly high care-impact level may reflect professional commitment, adaptive coping, team support, or variation in the severity and frequency of incidents. Nevertheless, the coexistence of ongoing care delivery with moderate impairment should not be interpreted as evidence that violence is tolerable. Repeated exposure can accumulate over time and affect staff well-being, retention, communication, and patient safety (Brunero et al., 2025; O'Brien et al., 2024).

Relationship Between Workplace Violence and Care Quality

The original 20-item WPV burden index was positively associated with the care-impact score ($r = .235$, $p < .001$), but the magnitude was small. The verbal-domain association was weaker ($r = .145$, $p = .030$), and the physical-domain association was not significant. Because the original WPV index includes consequences and organizational perceptions in addition to direct exposure, and because some of those consequences overlap conceptually with care-process items, $r = .235$ may partly reflect shared content or common-method variance. It should therefore be interpreted as an exploratory unadjusted association rather than evidence of a strong or clinically established effect.

The direction of the association is compatible with previous evidence linking WPV with adverse occupational and care-related perceptions (Agbornu et al., 2022; Choi & Lee, 2017; Liu et al., 2019). Nevertheless, temporality cannot be established, residual confounding is likely, and the archived aggregate output did not permit multivariable adjustment for sex, experience, hospital, and other covariates. The study therefore does not claim that WPV independently caused deterioration in care.

Multiplicity-adjusted analyses narrowed the demographic findings. Sex, years of experience, and hospital remained associated with the original WPV score after Holm

correction, whereas the age association did not. Hospital-level differences are plausible because emergency departments vary in patient volume, staffing, security, organizational culture, reporting practices, and patient-family interaction. The significant omnibus hospital test should not be translated into specific pairwise claims because post-hoc rank comparisons were not available.

No Holm-adjusted evidence was observed for marital status, education, residence, work shift, reporting protocol, source or type of violence, perceived cause, perceived commonness, or consequences for the assailant. These null findings should be interpreted cautiously because purposive sampling, category sizes, and the measurement structure may limit statistical power and generalizability.

A prior study by Hrefish et al. (2025) examined attitudes toward WPV among 80 emergency nurses at Imam Al-Sadiq and Al-Hilla Teaching Hospitals during October 2023–April 2024. The present study was conducted later (December 2025–February 2026), included 223 nurses across four hospitals, and focused on WPV-related experiences and nurse-reported care impact rather than attitudes. Two recruitment sites therefore overlap, but the periods, sample sizes, instruments/constructs, and analytic aims differ. Because the archived datasets are anonymized and contain no cross-study identifiers, individual participant overlap cannot be determined from the available records; no earlier published dataset was merged into the present aggregate analysis.

Methodological Considerations and Limitations

Several limitations materially affect interpretation. First, the WPV instrument was a study-specific Arabic adaptation. The archived record supports expert content/face review and pilot reliability, but it does not preserve a formal translation/back-translation log, item-level source documentation beyond the conceptual mapping described above, separate physical/verbal reliability coefficients, or a factor analysis. The 20-item WPV set also combines direct events with consequences and organizational perceptions; accordingly, its original total is treated only as an exploratory burden index rather than a pure exposure scale.

Second, the instrument record lacks a fixed recall period and the archived source/type variables do not preserve a no-exposure category. The study therefore cannot estimate 6- or 12-month prevalence or incidence, and suspiciously high endorsement of some consequence items (notably severe injury and violence-related absence) cannot be clinically interpreted without verification against the raw Arabic questionnaires and coding file. Third, the care-impact outcome is self-reported and overlaps conceptually with some WPV consequence items, creating potential common-method and construct-overlap bias.

Fourth, purposive sampling limits generalizability, and the source record does not contain the total eligible nurse population, number approached, number declining, or a calculable response rate. Fifth, the available revision package contains aggregate output rather than participant-level data, preventing a valid multivariable model and preventing Dunn-type post-hoc hospital comparisons. The principal $r = .235$ association is therefore small, unadjusted, and potentially confounded. Finally, the cross-sectional design cannot establish temporal or causal effects.

Among participating emergency-department nurses in Babylon Governorate, verbal aggression was more prominent than physical aggression within the recorded WPV categories; patients' relatives were the most frequently recorded source and workload/staff shortage the most frequently recorded perceived cause. Because exposure was not anchored to a documented recall period and an unexposed category was not preserved, these findings describe the analytic sample and are not prevalence estimates.

Nurses reported a moderate perceived adverse impact of violence on care processes. The original 20-item WPV burden index had a small positive unadjusted association with the care-impact score ($r = .235$); this association should be interpreted cautiously because of construct overlap and unmeasured confounding. After Holm correction, sex, years of experience, and hospital remained associated with the original WPV score, whereas age did not.

The findings support continued organizational attention to WPV through adequate staffing, clear confidential

reporting and follow-up, de-escalation and communication training, and support for affected nurses. Stronger future studies should use a validated event-based Arabic instrument with a defined recall period, preserve an explicit unexposed category, verify injury coding, and analyze participant-level data with multivariable adjustment.

More broadly, contemporary occupational health perspectives emphasize that workplace safety should be addressed through proactive organizational policies that integrate psychosocial risk management, mental health support, employee well-being, and adaptive workplace-safety strategies rather than relying solely on responses after adverse events occur (Parsakia & Seyed Ali Tabar, 2024).

Recommendations

1. Healthcare organizations should provide regular training in communication, de-escalation, anger management, and prevention and management of workplace violence.
2. Hospitals should establish clear, confidential, and easy-to-use systems for reporting, documenting, investigating, and responding to violent incidents, with feedback to staff after reports are made.
3. Staffing and workload should be reviewed in high-pressure emergency settings, particularly where shortages and delayed care increase conflict risk.
4. Educational initiatives should inform patients, families, and communities about appropriate conduct, realistic care processes, and the consequences of violence toward healthcare workers.
5. Nurses exposed to violence should have access to psychological support, professional development, managerial follow-up, and meaningful participation in workplace-safety decisions.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

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