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Research Article

"The Impact of Nursing Mindful Presence on Clinical Decision Accuracy and Patient Safety in Emergency Departments"

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Abstract

This study explores the influence of mindful presence among emergency department nurses on the accuracy of clinical decision-making and subsequent patient safety outcomes. In high-pressure, fast-paced clinical environments such as emergency departments, cognitive load and fatigue threaten decision accuracy, increasing risks to patient safety. Mindful presence—a practice of focused, nonjudgmental awareness in the moment—has emerged as a promising intervention to mitigate these risks by enhancing nurses' attention control, emotional regulation, and situational awareness. Employing a mixed-method approach, the research analyzed observational and self-reported data from 150 emergency nurses across three urban hospitals. Results reveal that higher levels of mindful presence significantly correlate with improved clinical decision accuracy and reduced incidence of patient safety events. The findings advocate for mindfulness interventions integrated into nursing workflows to bolster care quality and safeguard patients under emergency care pressures. [8, 19, 23, 32]

Keywords: Mindful presence, nursing, clinical decision accuracy, patient safety, emergency department, mindfulness, healthcare quality

1. Introduction

Emergency departments (EDs) stand as frontline arenas for acute medical care, where rapid, critical decisions can mean the difference between life and death. Nurses in these environments are required to perform under intense pressure, balancing multiple competing priorities and managing unpredictable patient influxes. This high-demand setting subjects nurses to significant cognitive, emotional, and physical stressors that can impair their ability to consistently make accurate clinical decisions. Furthermore, the nature of ED work demands not only swift but also precise judgments regarding triage, medication administration, and patient monitoring, placing nurses at the core of patient safety and quality care delivery.One of the primary threats to clinical decision accuracy in the ED is cognitive fatigue. Prolonged exposure to stressful situations, extended working hours, and shift work challenges degrade attention, memory, and executive functioning.

Research reveals that fatigue can impair nurses' situational awareness, increase error rates, and diminish their capacity to respond adaptively to rapidly evolving patient conditions [4, 22, 45]. This is concerning as even minor lapses in judgment can precipitate serious adverse events such as medication errors, delayed treatment, and compromised patient outcomes. Addressing fatigue and its cognitive consequences is therefore critical for safeguarding patient safety in emergency care settings.

Mindful presence refers to a practice embodying focused, nonjudgmental awareness of the present moment—acknowledging thoughts, emotions, and sensory experiences without distraction or reactivity [8]. Originating within contemplative traditions and adapted for clinical use, mindfulness has emerged as an evidence-based approach to enhance cognitive control and emotional regulation. For nurses, cultivating mindful presence means sustaining attentive engagement with patients and clinical stimuli, reducing automaticity in responses, and fostering a deliberate, reflective stance conducive to accurate clinical judgments.The integration of mindfulness into healthcare practice has demonstrated promising outcomes including reduced burnout-

improved stress management, and heightened cognitive performance. Specifically, in fast-paced environments such as EDs, mindfulness may act as a cognitive refresher, countering the detrimental effects of fatigue by enhancing working memory, attention regulation, and emotional resilience. Despite growing interest, the direct impact of mindful presence on the accuracy of nurses' clinical decisions and measurable patient safety outcomes remains under-investigated. This study aims to fill this gap by empirically examining these relationships in emergency nursing practice.

The purpose of this research is to evaluate how mindful presence among ED nurses influences clinical decision accuracy and patient safety. By employing a mixed-methods approach to capture quantitative performance metrics and qualitative insights, this study seeks to provide a nuanced understanding of mindfulness as a protective factor against cognitive fatigue and error in one of healthcare's most demanding environments. Ultimately, findings aim to inform interventions that can be feasibly integrated into emergency nursing workflows to elevate care quality and safeguard patients amid the inherent pressures of acute care delivery.[6, 8, 12, 15, 21, 22, 23, 26, 28, 32, 45]

2. Methodology

This study utilized a convergent mixed-methods design to explore the complex interplay between mindful presence, clinical decision accuracy, and patient safety among emergency department (ED) nurses. The mixed-methods approach—combining quantitative measures with qualitative insights—was selected to provide a comprehensive understanding of both the measurable outcomes and the lived experiences underlying mindfulness practices in high-stakes nursing environments. Quantitative data enabled objective assessment of associations and predictive relationships, while qualitative data yielded rich contextual details about how nurses perceive and enact mindfulness during clinical work. By triangulating these data sources, the study aimed to enhance validity and generate actionable conclusions applicable to real-world ED settings.The research was conducted across three large urban hospital EDs within a major metropolitan healthcare-system, each characterized by high patient volume, diverse clinical demands, and a multidisciplinary workforce. A total of 150 registered nurses (RNs) were recruited using stratified random sampling to ensure balanced representation across hospitals, nursing experience levels (novice, intermediate, expert), and shift types (day, evening, night). Inclusion criteria required active employment in the ED during the data collection period, direct patient care responsibilities, and willingness to engage in periodic mindfulness assessments and documentation audits. Exclusion criteria included temporary or per diem staff, administrative roles without clinical duties, and planned extended leave during the study period. Participant demographics spanned a range of ages, genders, and nursing tenures, reflecting the heterogeneous nature of ED nursing staff.

Mindful presence was measured using an adapted and standardized form of the Mindful Attention Awareness Scale (MAAS), specifically validated in healthcare worker populations. The MAAS is a 15-item self-report instrument that assesses the frequency of moment-to-moment awareness and attention to experiences with items rated on a Likert scale from 1 (almost never) to 6 (almost always). Items addressed attentional focus during workflow, recognition of distracting thoughts, emotional regulation in stressful incidents, and conscious awareness of environmental cues—all critical dimensions of mindful presence. To accommodate shift-based variability and temporal fluctuations, nurses completed the MAAS weekly over the 12-week study period during designated break times, minimizing interference with clinical duties.

Objective clinical decision accuracy was assessed by a blinded expert panel comprising three senior nurse educators with extensive ED experience and expertise in nursing clinical standards. The panel utilized a standardized audit tool developed from hospital protocol guidelines and national best practices, focusing on key decision domains: patient assessment accuracy, timely and correct medication administration, appropriate intervention selection, and documentation completeness. Expert reviewers independently evaluated nursing care-

records and electronic health documentation generated during participant shifts, identifying discrepancies, errors, or omissions. Inter-rater reliability was established through preliminary calibration exercises, achieving intraclass correlation coefficients (ICCs) above 0.85, ensuring consistent and reliable scoring across raters.

Patient safety outcomes were operationalized via nursing-sensitive hospital incident reports collected and maintained by each institution's safety and quality departments. Data extraction focused on events directly relevant to nursing care in the ED, including medication errors, procedural mistakes, near misses, and any reported adverse events during nurses' shifts over the 12-week timeframe. Incident data were anonymized and mapped at the individual nurse shift level to permit correlation analyses with mindful presence and clinical decision metrics. This approach enabled objective measurement of safety performance relative to mindfulness levels while controlling for confounding factors such as staffing ratios or acuity fluctuations.

The research protocol received approval from the Institutional Review Boards (IRBs) of all participating hospitals. Ethical principles of voluntary participation, informed consent, confidentiality, and data security were rigorously upheld. Participant consent forms clearly outlined the study's objectives, potential risks, and benefits, emphasizing the right to withdraw without penalty. Anonymization and secure storage of identifiable data ensured compliance with Health Insurance Portability and Accountability Act (HIPAA) guidelines and institutional policies. The study posed minimal risk to participants and prioritized their psychological and professional well-being throughout.[11, 15, 23, 32, 49]

3. Literature Review

The burgeoning interest in mindfulness within healthcare over recent decades has catalyzed a substantial body of research examining its effects on practitioner well-being, cognitive function, and patient outcomes. This literature review synthesizes current evidence relevant to the impact of mindful presence on clinical decision accuracy and patient-focusing on themes of mindfulness in healthcare, the cognitive burden of fatigue in emergency nursing, the nexus between mindfulness and decision-making, and implications for patient safety in high-pressure clinical settings.

Mindfulness, classically defined as attentive awareness of present-moment experience without judgment or distraction, has transitioned from contemplative practice into mainstream medical and psychological interventions. Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) program exemplifies its early formalization in clinical settings, highlighting benefits in stress reduction, emotional regulation, and pain management. Subsequent iterations have adapted mindfulness training for healthcare professionals to counter burnout, compassion fatigue, and attentional deficits endemic to demanding care roles.

Empirical studies reveal that healthcare workers engaging in mindfulness practices experience improvements in psychological well-being, decreased anxiety and depression symptoms, and enhanced resilience to occupational stressors. Meta-analyses further confirm that mindfulness-based interventions (MBIs) can reduce emotional exhaustion and improve job satisfaction among nurses, supporting sustained clinical engagement. These findings underscore mindfulness' potential not merely as a self-care tool but as a modifiable factor influencing professional performance.

Emergency nursing represents an especially challenging domain where rapid, accurate clinical decisions are paramount but frequently jeopardized by cognitive fatigue. Prolonged shift durations, high patient acuity, frequent interruptions, and emotional strain cumulatively impair working memory, attention, and executive functioning—the cognitive faculties essential for error-free decision-making. Research indicates that fatigue-related breakdowns in situational awareness heighten the risk of medication errors, delayed interventions, and compromised patient monitoring.

Despite compelling theoretical rationale and preliminary findings, significant gaps persist in understanding the direct impact of mindful presence on clinical decision accuracy and patient safety in the unique context of emergency nursing. Most existing studies either focus on general healthcare worker well-being or utilize proxy cognitive measures rather than objective clinical performance indicators. Furthermore, evidence integrating quantitative safety metrics with qualitative nursing experiences remains sparse. By addressing these gaps through a mixed-methods design, this study advances knowledge by linking mindfulness directly with actionable clinical outcomes in a high-stakes setting.

This literature review highlights that mindfulness offers a multidimensional intervention with the potential to alleviate fatigue-related cognitive impairments, promote accurate and reflective decision-making, and enhance patient safety in emergency nursing. While foundational work has laid the groundwork, empirical studies specifically targeting these relationships within ED environments are urgently needed. The present research responds to this call, building on established theory and preliminary evidence to explore how nursing mindful presence influences clinical effectiveness and safety outcomes.[6-49]

4. Results

The study cohort consisted of 150 registered nurses working in the emergency departments of three metropolitan hospitals. Participants' ages ranged from 24 to 57 years (M = 36.8, SD = 8.7), with nursing experience spanning from 1 to 30 years (M = 9.5, SD = 7.1). Shift distribution included 45% day, 35% evening, and 20% night shifts, reflecting typical emergency staffing patterns. Demographically, 68% identified as female, and 32% as male or non-binary, mirroring national nursing workforce statistics. Educational levels ranged from diploma nursing to master's degree holders, ensuring sample diversity representative of contemporary ED nursing staff.

Mindful presence scores, measured weekly using the adapted Mindful Attention Awareness Scale (MAAS), averaged 4.1 (SD = 0.7) on a six-point Likert scale, indicating generally moderate to high levels of present-moment awareness amongst participants. Clinical decision accuracy, as assessed by expert-panel audit of documentation, exhibited a mean accuracy rate of 87% (SD = 8.4%), reflecting a relatively high baseline level of performance in the cohort.Patient safety incidents linked to nursing care were extracted from hospital incident reporting systems. The average rate of nursing-sensitive incidents per 100 shifts was 3.5 (SD = 1.2), predominantly involving medication-related errors and procedural lapses.

Pearson correlation coefficients revealed statistically significant associations between mindful presence and the principal outcome variables. Higher mindfulness scores correlated positively with clinical decision accuracy ($r = 0.45$, $p < 0.001$), suggesting that nurses reporting increased mindful presence during shifts tended to make more accurate clinical decisions. Conversely, mindful presence correlated negatively with patient safety incidents ($r = -0.38$, $p < 0.01$), indicating that greater mindfulness was associated with fewer reported adverse events.Additionally, clinical decision accuracy and patient safety incidents were inversely correlated ($r = -0.52$, $p < 0.001$), supporting the notion that improved decision-making directly relates to safer patient outcomes.

Multiple linear regression models were employed to assess the predictive power of mindful presence on clinical decision accuracy and patient safety, controlling for nurse experience, shift length, and patient acuity as covariates.For clinical decision accuracy, the overall model was significant ($F(4, 145) = 15.32$, $p < 0.001$), with mindful presence emerging as a strong positive predictor ($\beta = 0.38$, $t = 5.03$, $p < 0.001$). Nurse experience also contributed modestly ($\beta = 0.22$, $p = 0.015$), while shift length and acuity were not significant predictors.The patient safety outcome model also reached statistical significance ($F(4, 145) = 10.47$, $p < 0.001$). Mindful presence inversely predicted incident rates ($\beta = -0.29$, $t = -3.56$, $p = 0.001$), accounting for a meaningful proportion of variance in safety outcomes. Neither shift length nor patient acuity showed significant effects, although greater nursing experience trended toward fewer incidents ($\beta = -0.15$, $p = 0.08$).

Collectively, the results demonstrate that higher levels of nursing mindful presence significantly correlate with increased clinical decision accuracy and decreased patient safety incidents in emergency departments. Both quantitative and qualitative data converge to suggest that mindfulness promotes cognitive clarity, emotional resilience, and situational awareness critical for accurate, safe patient care under demanding conditions.[11, 15, 23, 32, 45, 49]

5. Discussion

The findings of this study provide compelling evidence that mindful presence among emergency department nurses plays a significant role in enhancing clinical decision accuracy and improving patient safety outcomes. Quantitatively, the positive correlation between mindful presence and decision accuracy indicates that nurses who are more frequently attentive and aware in the moment tend to make better clinical judgments. Simultaneously, the negative association between mindful presence and patient safety incidents suggests that this focused awareness may directly contribute to reducing errors and adverse events.

These outcomes align with and extend previous research demonstrating mindfulness's cognitive benefits, such as improved attention regulation and emotional control, which are critical in the fast-paced, high-stakes environment of emergency nursing. The regression analyses underscore the independent predictive power of mindfulness, affirming that its influence on accuracy and safety is not merely a byproduct of nurse experience or shift characteristics but a distinct cognitive resource.

Qualitative insights from nurse participants illuminate how mindful presence exerts these effects in practice. Enhanced focus and sustained concentration help overcome common distractions and cognitive overload inherent in ED settings, allowing nurses to process complex clinical information more thoroughly. Emotional regulation acquired through mindfulness practices reduces stress reactivity, preventing hurried or impulsive decisions driven by anxiety or frustration. Increased situational awareness fosters proactive patient monitoring and timely interventions.Together, these psychological and attentional mechanisms build a cognitive scaffold that supports reflective, deliberate clinical decision-making rather than automatic, error-prone responses. This supports theoretical models positing mindfulness as a metacognitive process that heightens executive control and reduces cognitive fatigue.

This study advances understanding of the critical role mindful presence plays in emergency nursing by demonstrating its positive associations with clinical decision accuracy and patient safety. Through enhancing cognitive focus, emotional resilience, and situational awareness, mindfulness emerges as a promising avenue to bolster nurse performance and reduce error risk in demanding acute care settings. Integrating mindfulness into emergency nursing education and practice holds potential to elevate care quality, support nurse well-being, and ultimately improve patient outcomes. [12, 23, 24, 28, 32, 35, 49]

6. Conclusion

The present study contributes significantly to the growing body of evidence recognizing the crucial role of mindful presence in the demanding environment of emergency nursing. Mindfulness—encompassing focused attention, emotional regulation, and an acute awareness of the present moment—emerged as a powerful factor positively influencing clinical decision accuracy and patient safety. By equipping nurses with the cognitive tools to sustain mental clarity amidst distractions, emotional upheaval, and workload pressures, mindful presence serves as a vital counterbalance to the cognitive fatigue that too often compromises care quality in fast-paced emergency departments.

Throughout this research, a multi-faceted picture of mindful presence has emerged. Quantitative data revealed robust and statistically meaningful relationships linking higher mindfulness scores with superior decision-making performance and fewer patient safety incidents.

These findings underscore that mindful presence transcends being merely a personal wellness strategy; it is an integral cognitive resource directly impacting clinical effectiveness and patient outcomes. Moreover, regression models confirmed that these effects persist even when accounting for nurse experience and shift characteristics, highlighting mindfulness as a distinctive and influential contributor to nursing excellence.

Complementing these quantitative insights, qualitative narratives from practicing nurses illuminated how mindfulness manifests in the chaos of emergency care. Nurses described the tangible benefits of mindfulness in sharpening focus amidst incessant disruptions, fostering emotional calm despite distressing clinical scenarios, and heightening their sensitivity to subtle patient cues often lost in the noise of emergency settings. These lived experiences offer invaluable context, demonstrating that mindfulness goes beyond abstract theory to become a practical, embodied approach that transforms how nurses engage with their work and their patients.

The implications of these findings reach far beyond individual practice. Emergency nursing is characterized by relentless cognitive demands, high emotional stakes, and rapidly shifting priorities that challenge even the most seasoned clinicians. In such an environment, the risk of cognitive overload and burnout looms large, threatening not only nurse well-being but also the safety and quality of patient care. By introducing mindfulness as a cognitive and emotional scaffold, healthcare organizations have the opportunity to enhance nurse resilience and decision-making capacity sustainably and cost-effectively.

Integrating mindfulness into nursing education and ongoing professional development can cultivate these skills systematically rather than leaving them to chance or personal initiative. Structured mindfulness training programs, supported by leadership endorsement, can empower nurses to incorporate mindful presence into their routine practice. Moreover-embedding mindfulness into the organizational culture through policies that recognize its value, sanctioned mindfulness breaks during shifts, and peer support mechanisms can foster an environment where mindful practice is normalized and encouraged rather than sidelined.

Such systemic adoption is essential because, despite its benefits, mindfulness practice in the hectic emergency department is not without challenges. Nurses in this study reported difficulties maintaining mindfulness consistently during peak workloads, indicating that individual effort alone is insufficient without organizational frameworks that prioritize cognitive health and create space for mindful engagement. Addressing these barriers will be crucial to realizing the full potential of mindfulness to improve clinical outcomes.

From a patient safety perspective, the demonstrated association between mindful presence and reduced incidence of nursing-sensitive adverse events signals a path forward in combating preventable errors—a persistent and costly problem in emergency care. Mindfulness enhances situational awareness and reduces cognitive biases, which are known contributors to errors, positioning it as a proactive safety intervention. As healthcare systems increasingly emphasize safety culture and quality improvement, mindfulness offers a complementary strategy that aligns with these goals while supporting the workforce delivering care.

While this study offers substantive advances in understanding, it also opens several avenues for future inquiry. Longitudinal randomized controlled trials are needed to establish causality and refine intervention designs tailored to emergency nursing realities. Research expanding diverse healthcare settings will illuminate how contextual factors influence mindfulness implementation and outcomes. Exploring technology-assisted mindfulness tools, such as mobile apps or wearable biofeedback devices, could further enhance accessibility and adherence. [8, 19, 23, 32]

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