

The Relationship between Staff Engagement and Patient Safety Outcomes: Literature Review

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Abstract

This literature review explores the intricate relationship between staff engagement and patient safety outcomes within healthcare settings. Drawing upon recent academic literature from 2015 to 2026, this paper synthesizes findings from systematic reviews, meta-analyses, and empirical studies to elucidate the mechanisms through which engaged staff contribute to a safer patient environment. Key findings indicate a consistent and statistically significant positive correlation between higher levels of staff engagement and improved patient safety culture, as well as a reduction in adverse events and medical errors. Conversely, factors such as professional burnout, stress, and fatigue are identified as significant detractors of patient safety. The review highlights the mediating roles of leadership, work environment, and organizational culture in fostering engagement and, consequently, enhancing safety outcomes. The methodology involved a comprehensive search across major health-related databases, focusing on studies that quantitatively and qualitatively assessed this relationship. The paper concludes by emphasizing the critical importance of cultivating an engaged workforce as a strategic imperative for healthcare organizations aiming to elevate patient safety standards and offers recommendations for future research and practical implementation.

Keywords: Staff Engagement, Safety, healthcare, Burnout, Fatigue

Introduction

In the complex and demanding landscape of modern healthcare, two critical concepts, staff engagement and patient safety, are increasingly recognized as inextricably linked. Staff engagement, often defined as the emotional commitment an employee has to their organization and its goals, extends beyond mere job satisfaction to encompass a sense of purpose, dedication, and active involvement in their work (Janes et al., 2021). Patient safety, on the other hand, refers to the prevention of errors and adverse events that could lead to patient harm (Agency for Healthcare Research and Quality, n.d.). The pursuit of high-quality healthcare necessitates a deep understanding of how these two elements interact, as medical errors continue to pose a significant global challenge, leading to preventable morbidity, mortality, and substantial economic burden (World Health Organization, 2019).

The importance of this relationship has gained considerable attention, particularly considering evolving healthcare dynamics, including workforce shortages, increasing patient acuity, and the ongoing pressures exacerbated by global health crises such as the COVID-19 pandemic (Scott et al., 2022). Healthcare organizations are continually seeking effective strategies to enhance patient outcomes and reduce harm, recognizing that a disengaged workforce can inadvertently contribute to systemic vulnerabilities. Conversely, an engaged workforce is often characterized by heightened vigilance, improved communication, and a proactive approach to identifying and mitigating risks, all of which are foundational to a robust patient safety culture (Press Ganey, 2022).

Despite the intuitive connection between a motivated workforce and safer patient care, the precise mechanisms and the extent of this relationship warrant thorough investigation. Previous research has suggested a positive correlation, yet a comprehensive synthesis of recent literature is essential to consolidate current understanding, identify emerging trends, and highlight areas for future inquiry. This paper aims to address this gap by conducting a comprehensive literature review to explore the relationship between staff engagement and patient safety outcomes. Specifically, it seeks to synthesize existing evidence, analyze the various facets of engagement and safety, and provide insights into how healthcare organizations can leverage staff engagement to foster a safer environment for patients. By examining the current body of knowledge, this review intends to underscore the strategic imperative of cultivating an engaged workforce as a cornerstone of effective patient safety initiatives.

Literature Review

The existing body of literature consistently highlights a significant and multifaceted relationship between staff engagement and patient safety outcomes. This section delves into the various dimensions of this relationship, examining how engagement is conceptualized, its direct and indirect impacts on safety culture and adverse events, and the mediating factors that influence these connections.

Conceptualizing Staff Engagement

Staff engagement in healthcare is not a monolithic concept; it is often understood through two primary lenses: engagement as a psychological state **and** engagement as an organizational practice (Janes et al., 2021). Engagement as a psychological state refers to an individual's personal investment and connection to their work, characterized by vigor, dedication, and absorption. Conversely, engagement as an organizational practice encompasses the strategies and initiatives implemented by healthcare institutions to foster a supportive and empowering work environment that encourages staff involvement and commitment. Janes et al. (2021) conducted a systematic review and meta-analysis, finding that while both conceptualizations of engagement were positively associated with patient safety, the specific approach to defining engagement did not differentially affect the strength of the observed relationship. Their meta-analysis indicated a small but consistent, statistically significant positive correlation ($r = 0.22$) between staff engagement and overall patient safety outcomes, with similar correlations for patient safety culture ($r = 0.22$) and a negative correlation with errors/adverse events ($r = -0.20$). Notably, unit-level studies within their review consistently reported stronger correlations, suggesting that collective engagement

within teams or departments might have a more pronounced impact than individual engagement alone.

The Link between Engagement and Safety Culture

A robust patient safety culture is a cornerstone of high-reliability healthcare organizations, and staff engagement plays a pivotal role in its development and maintenance. A positive safety culture is characterized by open communication, mutual trust, shared perceptions of the importance of safety, and confidence in the efficacy of preventive actions (Sammer & James, 2011). Engaged staff are more likely to actively participate in safety initiatives, report errors and near misses without fear of reprisal, and contribute to continuous quality improvement efforts (Press Ganey, 2022). Zallman et al. (2020) found a close correlation between provider and staff engagement and perceptions of patient safety (POPS), underscoring that an engaged workforce is more attuned to safety protocols and more likely to perceive their environment as safe. Furthermore, Murray et al. (2024) emphasized that employee ratings of safety culture are negatively correlated with stress and burnout, suggesting that fostering engagement inherently strengthens the safety culture by mitigating factors that undermine it. The American Hospital Association (AHA) reported in 2025 that improvements in safety culture, which are intrinsically linked to engagement, lead to better patient and staff outcomes, particularly in the post-pandemic era.

Impact on Adverse Events and Medical Errors

The direct impact of staff engagement on reducing adverse events and medical errors is a critical aspect of its relationship with patient safety. Engaged healthcare professionals are more vigilant, attentive to detail, and proactive in identifying and addressing potential risks, thereby minimizing the likelihood of errors. Bragge et al. (2025), in an overview of reviews, identified 66 associations between staff experience and patient outcomes, with a recurring theme being the link between burnout, stress, and fatigue with adverse events. Conversely, positive staff experiences, fostered by engagement, were associated with reduced adverse events. For instance, leadership styles that promote empowerment and positive relationships were linked to fewer adverse events and enhanced patient outcomes. Specific outcomes such as reduced falls, infections, and medication errors have been consistently associated with higher levels of staff engagement and a positive safety culture (Finn et al., 2024).

Mediating Factors: Burnout, Leadership, and Work Environment

Several mediating factors significantly influence the relationship between staff engagement and patient safety. Professional burnout, characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment, stands as a direct antithesis to engagement and a significant threat to patient safety (Mossburg & Himmelfarb, 2021). Mossburg and Himmelfarb (2021) conducted a systematic review demonstrating that burnout is negatively associated with safety culture, while engagement is positively associated. More recently, Li et al. (2024) performed a systematic review and meta-analysis, concluding that nurse burnout is significantly associated with lower healthcare quality, worsened patient safety, and decreased patient satisfaction across various settings. Ajisekola (2025) further highlighted the critical role of mental health and burnout as determinants of safety performance.

Leadership plays a crucial role in fostering an engaged workforce and a strong safety culture. Transformational, servant, and ethical leadership styles have been shown to directly shape patient safety culture by creating an environment where staff feel valued, supported, and empowered to speak up about safety concerns (Althobaiti, 2026). Althobaiti (2026) confirmed that effective leadership creates a positive patient safety culture, which in turn enhances engagement. The World Health Organization (2024) also emphasized the global importance of leadership and workforce engagement in driving patient safety outcomes.

The work environment also acts as a powerful mediator. Laschinger and Leiter (2006) demonstrated that the quality of the nursing work environment, including factors such as staffing levels, resources, and organizational support, significantly impacts patient safety outcomes, with burnout and engagement playing mediating roles. A supportive work environment fosters engagement, which then positively influences safety behaviors and outcomes. Interventions designed to improve safety culture, often by enhancing the work environment and leadership support, have been shown to benefit both hospital staff engagement and patient outcomes (Clark, 2024).

Recent Trends and Post-COVID-19 Perspectives

The COVID-19 pandemic has underscored the critical importance of staff engagement and resilience in maintaining patient safety amidst unprecedented challenges. Scott et al. (2022) highlighted that a positive and powerful relationship between employee engagement and patient safety has been suggested in the research literature, emphasizing that employers can enhance engagement to improve safety, particularly in the context of global health crises. While the pandemic initially strained healthcare systems and exacerbated burnout, it also brought renewed focus on workforce well-being and the need for robust safety cultures. Industry reports from Press Ganey (2024/2025) indicate a slight dip in workforce engagement in 2024, raising concerns about its potential impact on safety culture performance. This trend underscores the ongoing need for strategic interventions to bolster engagement and ensure patient safety in a continuously evolving healthcare landscape. Clark (2024) further asserted that positive employee engagement is a prerequisite for achieving organizational safety outcomes, reinforcing the idea that investment in staff engagement is an investment in patient safety.

Methodology

This literature review was conducted to systematically identify, evaluate, and synthesize existing research on the relationship between staff engagement and patient safety outcomes. The methodology employed aimed to ensure a comprehensive and rigorous approach to evidence gathering and analysis.

Search Strategy

A comprehensive search strategy was developed and executed across several prominent electronic databases relevant to healthcare and social sciences. These included PubMed, PMC (PubMed Central), Google Scholar, and academic search engines like ResearchGate. The search was limited to peer-reviewed articles published between January 2015 and February 2026 to ensure the inclusion of the most recent and relevant literature. Keywords and phrases used in various combinations included: "staff engagement," "employee engagement," "healthcare workforce engagement," "patient safety," "patient safety outcomes," "medical

errors," "adverse events," "safety culture," "nurse burnout," "leadership in healthcare," and "work environment."

Inclusion and Exclusion Criteria

Studies were included if they:

- Were published in English.
- Focused on the relationship between staff engagement (or related concepts such as staff experience, burnout, or leadership impacting engagement) and patient safety outcomes.
- Utilized quantitative, qualitative, or mixed-methods approaches.
- Were systematic reviews, meta-analyses, empirical studies, or comprehensive literature reviews.

Studies were excluded if they:

- Were opinion pieces, editorials, or conference abstracts without full papers.
- Did not directly address both staff engagement and patient safety outcomes.
- Were published outside the specified timeframe (2015-2026).

Data Extraction and Synthesis

Relevant articles identified through the search were screened based on their titles and abstracts. Full-text articles were then retrieved and assessed for eligibility against the predefined inclusion and exclusion criteria. Data extracted from the included studies comprised: author(s), publication year, study design, sample size, key definitions of staff engagement and patient safety outcomes, main findings, and conclusions. The synthesis of the extracted data involved a narrative approach, categorizing findings into thematic areas to identify recurring patterns, correlations, and mediating factors influencing the relationship between staff engagement and patient safety. Quantitative data, such as correlation coefficients from meta-analyses, were noted to provide an indication of the strength and consistency of the observed relationships. This systematic approach allowed for a structured overview of the current evidence base, facilitating the identification of gaps and informing future research directions.

Data Analysis

The analysis of the collected literature revealed a consistent pattern of findings across various study designs and methodologies, underscoring the robust nature of the relationship between staff engagement and patient safety outcomes. The studies reviewed encompassed a range of approaches, including systematic reviews, meta-analyses, cross-sectional studies, and qualitative inquiries, providing a comprehensive perspective on the subject.

Summary of Study Types and Methodologies

The majority of the high-quality evidence was derived from systematic reviews and meta-analyses, which provided a quantitative synthesis of multiple primary studies. For instance, Janes et al. (2021) conducted a meta-analysis of 11 studies involving over 30,000 participants, yielding a pooled correlation coefficient (r) of 0.22 between staff engagement and overall patient safety. This statistical aggregation provided a strong empirical basis for the positive association. Similarly, Li et al. (2024) utilized a systematic review and meta-analysis to quantify the negative impact of nurse burnout on patient safety, quality of care, and patient satisfaction, demonstrating consistent associations across diverse nursing populations.

Cross-sectional studies were prevalent in examining the immediate correlations between engagement levels, safety culture perceptions, and reported adverse events. These studies often employed surveys and questionnaires to gather data from healthcare professionals, allowing for the identification of associations at a specific point in time. Zallman et al. (2020), for example, used such an approach to demonstrate the close correlation between provider/staff engagement and perceptions of patient safety.

Qualitative studies and narrative reviews, such as those by Ajisekola (2025) and Bragge et al. (2025), provided deeper insights into the lived experiences of healthcare staff and the nuanced mechanisms through which engagement (or its absence, like burnout) influences safety behaviors and outcomes. These studies often highlighted the importance of communication, teamwork, and leadership support in shaping both engagement and safety culture.

Statistical Trends and Thematic Analysis

The statistical trends observed across the quantitative studies consistently pointed towards a positive and significant relationship. The correlation coefficients, though sometimes described as 'small' for individual-level studies, became more pronounced and impactful when aggregated at the unit or organizational level (Janes et al., 2021). This suggests that while individual engagement is important, the collective engagement of a team or department has a more substantial influence on patient safety metrics. The negative correlation between burnout and patient safety outcomes was also a recurring statistical finding, reinforcing the idea that these two concepts operate on a continuum.

From a thematic perspective, several key themes emerged from the qualitative and narrative analyses:

- **Proactive Safety Behaviors:** Engaged staff are more likely to proactively identify and report safety concerns, participate in safety improvement initiatives, and adhere to safety protocols (Press Ganey, 2022).
- **Communication and Teamwork:** High levels of engagement foster better communication and teamwork among healthcare professionals, which are critical for preventing errors and managing adverse events effectively (Bragge et al., 2025).
- **Leadership Influence:** Supportive and transformational leadership styles were consistently identified as crucial in cultivating both staff engagement and a strong patient safety culture (Althobaiti, 2026; World Health Organization, 2024).
- **Work Environment Factors:** The quality of the work environment, including adequate staffing, resources, and a culture of psychological safety, directly impacts staff engagement and, consequently, patient safety (Laschinger & Leiter, 2006; Clark, 2024).
- **Burnout as a Detractor:** Burnout was universally recognized as a significant barrier to both engagement and patient safety, leading to increased errors, reduced quality of care, and lower patient satisfaction (Mossburg & Himmelfarb, 2021; Li et al., 2024).

In summary, the data analysis reveals robust and consistent evidence base supporting the positive relationship between staff engagement and patient safety outcomes. The interplay of individual and organizational factors, mediated by leadership and the work environment,

underscores the complexity and strategic importance of fostering engagement in healthcare settings.

Findings

The synthesis of the reviewed literature unequivocally demonstrates a significant and multifaceted relationship between staff engagement and patient safety outcomes. The findings can be broadly categorized into direct correlations, the influence of unit-level versus individual engagement, specific safety outcomes affected, and the critical role of burnout as a counterpoint to engagement.

Direct Relationship between Engagement and Safety Outcomes

Numerous studies have established a direct and positive correlation between higher levels of staff engagement and improved patient safety. Janes et al. (2021) provided compelling meta-analytic evidence, reporting a statistically significant correlation of $r = 0.22$ between staff engagement and overall patient safety outcomes. This correlation extended to specific aspects of safety, with a similar positive association ($r = 0.22$) found with patient safety culture and a negative association ($r = -0.20$) with errors and adverse events. These findings suggest that as engagement increases, the likelihood of a strong safety culture and a reduction in harmful incidents also increases. Scott et al. (2022) further supported this, noting a "positive and powerful relationship" where enhanced employee engagement directly contributes to the safety and quality of care.

The Role of Unit-Level vs. Individual Engagement

An important nuance in the findings is the distinction between individual and unit-level engagement. While individual engagement is valuable, several studies indicate that collective engagement within teams or units exerts a more substantial influence on patient safety outcomes (Janes et al., 2021). Janes et al. (2021) highlighted that unit-level studies consistently reported stronger correlations between engagement and patient safety compared to individual-level analyses. This suggests that a cohesive, engaged team environment, where shared commitment to organizational goals and patient well-being is prevalent, creates a more resilient safety net. This collective efficacy translates into better communication, coordinated care, and a shared responsibility for identifying and mitigating risks, which are all crucial for patient safety (Bragge et al., 2025).

Specific Outcomes: Reduced Falls, Infections, and Medication Errors

The positive impact of staff engagement is evident across a spectrum of specific patient safety outcomes. Engaged healthcare professionals, operating within a supportive and safety-conscious environment, contribute to a reduction in preventable adverse events. Bragge et al. (2025) identified that positive staff experiences, often a byproduct of engagement, were associated with reduced adverse events, including falls, infections, and medication errors. For instance, a positive culture that includes stress recognition and effective leadership has been linked to a decrease in falls, infections, and pressure injuries. Similarly, interventions aimed at improving safety culture, which inherently boost staff engagement, have been shown to lead to tangible improvements in these critical patient safety metrics (Finn et al., 2024).

The Negative Impact of Burnout as the Antithesis of Engagement

Conversely, the literature strongly emphasizes the detrimental effects of professional burnout on patient safety, positioning it as the direct opposite of engagement. Burnout, characterized by emotional exhaustion and depersonalization, significantly erodes the capacity of healthcare professionals to provide safe and high-quality care (Mossburg & Himmelfarb, 2021). Mossburg and Himmelfarb (2021) explicitly demonstrated that burnout is negatively associated with safety culture, directly undermining the foundations of patient safety. The systematic review and meta-analysis by Li et al. (2024) provided robust evidence that nurse burnout is consistently linked to lower healthcare quality, worsened patient safety, and reduced patient satisfaction. This finding is further supported by Ajisekola (2025), who highlighted that the mental well-being of nurses, and the presence of burnout, are critical determinants of their ability to maintain safety performance. The decline in workforce engagement observed by Press Ganey (2024/2025) serves as a stark reminder that neglecting staff well-being and engagement can have direct and adverse consequences for patient safety outcomes. These findings collectively underscore that fostering engagement is not merely a human resources initiative but a fundamental strategy for safeguarding patients from harm.

Conclusion

This comprehensive literature review has systematically explored the profound and intricate relationship between staff engagement and patient safety outcomes in healthcare settings. The synthesis of recent academic research, spanning from 2015 to 2026, unequivocally demonstrates that a highly engaged workforce is a critical determinant of a robust patient safety culture and a significant factor in reducing adverse events and medical errors. The findings consistently reveal a positive and statistically significant correlation between staff engagement and improved safety metrics, with unit-level engagement often exhibiting a more pronounced impact than individual engagement alone (Janes et al., 2021).

Conversely, the review has highlighted the severe repercussions of professional burnout, stress, and fatigue, identifying them as direct antagonists to engagement and potent threats to patient safety. Burnout not only diminishes the quality of care but also directly contributes to an increase in errors and a decline in patient satisfaction (Li et al., 2024). The mediating roles of effective leadership, a supportive work environment, and a proactive safety culture have emerged as crucial elements in fostering engagement and, by extension, enhancing patient safety (Bragge et al., 2025; Althobaiti, 2026; Laschinger & Leiter, 2006).

Practical Implications for Healthcare Administrators

The findings of this review carry significant practical implications for healthcare administrators and policymakers. Prioritizing and investing in strategies that cultivate staff engagement should be recognized as a strategic imperative for patient safety. This includes:

- **Fostering Supportive Leadership:** Implementing leadership development programs that emphasize transformational, servant, and ethical leadership styles to create an empowering and psychologically safe environment (Althobaiti, 2026).
- **Optimizing Work Environments:** Ensuring adequate staffing levels, providing necessary resources, and promoting a culture of open communication and teamwork to reduce stress and burnout (Laschinger & Leiter, 2006; Clark, 2024).

- **Promoting Well-being Initiatives:** Developing and implementing programs to support staff mental health and prevent burnout, recognizing that a healthy workforce is a safer workforce (Ajisekola, 2025).
- **Encouraging Staff Involvement:** Actively involving staff in safety improvement initiatives and decision-making processes, leveraging their frontline insights to identify and mitigate risks (Press Ganey, 2022).

Recommendations for Future Research

While the evidence for the engagement-safety link is strong, several areas warrant further investigation:

- **Longitudinal Studies:** More longitudinal research is needed to establish causality and track the long-term impact of engagement interventions on patient safety outcomes.
- **Cost-Benefit Analysis:** Studies quantifying the economic benefits of investing in staff engagement programs in terms of reduced adverse events and improved patient outcomes.
- **Diverse Healthcare Settings:** Further research across a wider range of healthcare settings (e.g., primary care, long-term care, outpatient clinics) to understand context-specific nuances.
- **Impact of Technology:** Exploring how technological advancements and digital health tools influence staff engagement and, consequently, patient safety.

Conflicts of Interest

The author declares no conflicts of interest regarding the authorship or publication of this article.

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Availability of Data and Materials

All data generated or analysed during this study are included in this published article and its supplementary information files or are publicly available through the cited sources.

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