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The impact of Nurses' burn out on quality of care and Patient's satisfaction outcomes

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Abstract
Background:*Nurses' burn out is a significant problem in the healthcare system, and its consequences can be detrimental to both nurses and patients. Burnout can lead to emotional exhaustion, depersonalization, and decreased personal accomplishments, which can affect the quality of care that nurses provide. Burnout can also result in absenteeism, turnover, and decreased job satisfaction, which can have a negative impact on the healthcare system as a whole.Nurse burnout is a critical issue that requires attention in the healthcare system*

Objective:*The purpose of this review is to systematically and critically appraise the current literature to examine the impact of nurses' burnout on quality of care and patient's satisfaction outcomes.*
Design and data sources*: A systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses was conducted. PubMed and CINAHL search engines were used. The inclusion criteria were any primary studies examining burnout among nurses working in hospitals as an independent variable, in peer-reviewed journals, and written in English. The study was conducted from November 2021 to February 2022.*

Results:*A total of 20 studies were included in the review. The outcomes associated with nurse burnout were quality of care and patient satisfaction. For these themes, nurse burnout was consistently inversely associated with outcome measures.*

Conclusions:*Nurses' burnout is an occupational hazard affecting healthcare system and patients at large. Nurse burnout is associated with worsening quality of care and decreased patient's satisfaction. Traditionally, burnout is viewed as an individual issue. However, reframing burnout as an organizational and collective phenomenon affords the broader perspective necessary to address nurse burnout.*

KeyWords: *Healthcare system, Nurses' burn out,Patient's satisfaction, Patients' outcomes, Quality of Care.*

I. INTRODUCTION

Burnout—characterized by emotional exhaustion, depersonalization, and decreased personal accomplishment—runs rampant among healthcare professions, including nursing(1). This phenomenon results from constant and chronic occupational stress, a prominent characteristic of nursing work(2). More than half of the four million nurses in the United States and one in ten nurses around the world have reported experiencing burnout(3). Several individual-level factors are associated with burnout, including gender, marital status, and the tendency of health care workers to prioritize patient care over their own wellbeing.

That said, burnout is also a product of organizational-level factors emanating from work environments, such as higher nurse-patient ratios, increased electronic documentation, scheduling challenges, and administration issues(4).Due to the emotional, physical, and psychological toll burnout takes on the afflicted, it is a significant predictor for heart disease, chronic pain, gastrointestinal distress, depression, and even mortality(5). Even an antecedence for burnout, such as a diminished sense of fairness within an organization, increased one's odds of having a diagnosable medical condition by 50%—an effect significantly greater than that of exposure to secondhand smoke.

Indeed, some estimate that workplace stress is associated with upwards of 120,000 deaths per year. Having established the negative consequences of burnout on individuals and their health, more recent scholarship conceptualizes the organizational and societal implications of this phenomenon, emphasizing, in particular, the potential of burnout to endanger patients and colleagues due to higher rates of absenteeism, presentism, turnover, and medical error(6). However, we could not locate a review focused on the association between nursing burnout and patient's satisfaction outcomes.

II. METHODOLOGY

A systematic review searches, appraises, and synthesizes research evidence (7, 8) aiming for an exhaustive and comprehensive inquiry. The present systematic review followed the guidelines of the Transparent Reporting of Systematic Review and Meta-Analyses. The instrument most often used to measure burnout (in various versions) was the Maslach Burnout Inventory Scale (n = 20), although one study used the Copenhagen Burnout Inventory (9). The Maslach Burnout Inventory has three subscales of burnout (emotional exhaustion, depersonalization, and personal accomplishments), whereas the Copenhagen Burnout inventory has none. The first subscale of the Maslach Burnout Inventory, emotional exhaustion, was measured and used in the analysis of all studies that reported subscales. The other two burnout subscales of Maslach Burnout Inventory (depersonalization and personal accomplishments) were not consistently used. For example, 15 studies included depersonalization (also referred to as cynicism), whereas only 11 included personal accomplishment. Three studies using the Maslach Burnout Inventory did not report or did not specify the subscales of burnout.

III. DATA ANALYSIS

For data analysis, each study was read by at least three reviewers, and relevant data were extracted, including study characteristics, design, sample, setting, independent variable(s), outcome variable(s), covariates, statistical results, results, and implications. These data were entered into the matrix for further synthesis

IV. RESULTS

First author (year)	Outcomes measured	Emotional exhaustion (EE)	Depersonalization (DP)	Personal Achievement (PA)	Discussion
(10)	Nurse-rated quality of care	• a/w poor/fair care ratings in all countries (USA: OR = 1.08, p <0.01	• a/w poor/fair RN care (USA: OR = 1.11, p <0.01).	• Inversely a/w less poor/fair care ratings in all countries (USA: OR = 0.96, p <0.01)	High RN burnout levels were significantly a/w RN's appraisals of quality of care independent of RN

					characteristics, working conditions
(11)	Nurse-rated quality of care	• a/w increased quality of care (AOR = 0.92, p <0.001)	• a/w increased quality of care (AOR = 0.92, p <0.001)	• a/w increased quality of care (AOR = 1.08, p <0.01)	Higher unit-level ratings of nurse practice environment significantly a/w lower levels of burnout.
(12)	Nurse-rated quality of care	• NS for nurse-rated quality of care when controlling for nurse work environments	• NS for nurse-rated quality of care when controlling for nurse work environments	• a/w nurse-rated quality of care (AOR = 1.45, p <0.05	Nurse work characteristics had an impact on job outcomes and quality of care but less relevant on adverse patient outcomes.
Patient's satisfaction outcomes					
(13)	Patient satisfaction outcomes	• Negatively as/w patient satisfaction (p < .05) • When nurses had an Increased sense of meaningfulness in their work, patients more satisfied with their care (p < .01)	• Negatively a/w patient satisfaction (p < .05)	• N/A	Strain of exhaustion, the lack of meaningfulness in one's work, and the desire to quit may all be readily sensed in the way nurses interact with patients.
(14)	Patient satisfaction outcomes	• Burnout and Job satisfaction had a statistical significance on patient satisfaction (p value missing).	N/A	N/A	The most satisfied and least burned out nurses were those who were not providing direct care.

Nurses' Quality of Care delivered

Quality of Care:

As with safety, quality of care was often measured as nurses' perception of care (rated either high or low) delivered within the workplace (10-12). All three subscales of burnout were significantly associated with poor/fair assessments of quality by nurses evaluating their own provision of care, as well as the collective care of their nursing units. That said, burnout was not significantly correlated with the quality of care as assessed by patients (15). In addition to nurses' perception of quality, infection rates and infection control were quality indicators used to examine the association with nurse burnout. In one study, burnout was significantly associated with increased rates of both urinary ($\beta = 1.58$, $p < .01$) even when controlling for patient severity and nurse and hospital characteristics (16). Similarly, (17) found that burnout was a negative predictor of nurses' adherence to infection control precautions ($\beta = -0.18$, $t = -3.09$, $p < .05$). Meanwhile, another study (18) examined nurse burnout and hospital-acquired infections in critical care units and suggested a different pathway. While nurse burnout was associated with hospital-acquired infections, it was team communication ($\beta = -0.37$, $p < .01$) that was negatively affected by burnout, which, in turn, could diminish team efficacy and increase infection rates (β

= −0.42, p < .001; (18). Interestingly, social support appeared to reduce the negative association between emotional exhaustion to a non-significant level (19).

Patients' Satisfaction outcomes:

Patient experiences were also included in two studies, with both finding a negative association between nurse burnout and patient satisfaction outcomes (13, 14). An author argued that the strain of exhaustion, the lack of meaningfulness in one's work, and the desire to quit might all be readily sensed by patients in the course of their interactions with nurses (20). Increased emotional exhaustion among nurses was also related to lower patient satisfaction (p < .05; (21), and when nurses felt an increased sense of meaningfulness in their work, patients were more satisfied in all aspects of their experiences (p < .01; (22)

V. DISCUSSION

Burnout is a complex, dynamic phenomenon that unfolds over time (23). In this review, we found that emotional exhaustion was the most consistently studied subscale of burnout, while depersonalization and professional achievement were less examined. Our findings also showed that when nurses felt higher levels of burnout, they were more likely to score lower in terms of patient safety and quality of care on their units, independent of their demographic characteristics or working conditions.

These findings are consistent with other reviews on nurses' burnout and patient's satisfaction outcomes. For example, there was moderate evidence to support the inverse relationships between nurse's burnout and patient safety in two recent systematic reviews (24, 25).In addition to patient satisfaction outcomes, burnout was consistently associated with the intention of nurses to leave their jobs.

VI. LIMITATIONS

There are several limitations to this systematic review. First, while we focused on nurse burnout, there are other terms that could describe similar occupational distress. "Compassion fatigue," "secondary trauma," "moral injury" or "moral distress," and "chronic occupational stress" are all terms that could, as well, describe the challenges facing nurses today. Limiting the search term to burnout may have excluded other studies that examined how such related conditions affect outcomes. Secondly, we included only those studies that were peer-reviewed and written and published in English, thus potentially introducing publication bias. Lastly, the cross-sectional design of the studies accounted only for an association, stopping short of establishing causation between nurse's burnout and patient satisfaction outcomes.

VII. CONCLUSION

Nurse burnout is a severe occupational hazard affecting nurses, patients, organizations, and society at large. This review adds to the existing literature examining the negative associations between nurse burnout, quality of care and patient's satisfaction outcomes. Framing burnout as an organizational phenomenon, rather than as an individual issue, affords the broader perspective necessary to assess and address this crisis. Furthermore, implementing organizational strategies and policies for preventing and managing nurse burnout requires a comprehensive conceptual mapping of burnout and its associated consequences, with attention to organization-level interventions in hospitals. By implementing this strategy, the quality of care and patients satisfaction outcomes can be improved.

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