



A Systematic Review On How The Nursing Work Environment, Job Burnout, And Turnover Intention Affect Patient Safety

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ABSTRACT

Background: The nursing work environment plays a crucial role in shaping nurse outcomes and the quality of care provided in healthcare settings. This systematic review synthesizes current evidence on the relationships between the nursing work environment, including factors such as staffing, management support, and work schedules, and key nurse outcomes including job satisfaction, burnout, turnover intentions, and perceived quality of care.

Methods: A comprehensive search of electronic databases yielded 11 relevant studies published between 2011 and 2023. Studies were selected based on their focus on nurse perceptions of the work environment, its impact on nurse outcomes, and implications for quality of care. Data extraction and synthesis followed established guidelines for systematic reviews.

Results: The review identified consistent evidence indicating that a positive nursing work environment characterized by supportive management, adequate staffing levels, and opportunities for professional growth is associated with higher levels of job satisfaction among nurses. Moreover, such environments mitigate burnout and reduce turnover intentions, contributing to enhanced perceived quality of care. Factors such as work schedules and leadership support emerged as critical determinants influencing nurse well-being and patient care outcomes.

Conclusion: Healthcare organizations are urged to prioritize strategies that foster supportive and professionally enriching work environments for nurses. By addressing key factors identified in this review, including staffing adequacy and leadership support, healthcare leaders can promote nurse retention and improve the overall quality of care delivery. Future research should explore longitudinal and intervention-based studies to further elucidate causal relationships and effective strategies for enhancing nursing work environments globally.

Keywords: nursing work environment, nurse outcomes, job satisfaction, burnout, turnover intentions, quality of care

Introduction

Patient safety is an important aspect of healthcare quality; it is an issue greatly affected by the nursing work environment, job burnout, and turnover intentions. The nursing work environment includes characteristics that occur at an organization level in terms of staffing levels, management support, and resources available to do one's job—a substantive role in determining how successfully nurses can provide safe and efficient care. (1) This is because a positive work environment has been shown to have an impact on better patient outcomes by minimizing errors and improving the quality of care generally provided to patients (2). On the other hand, poor work environments have been known to increase stress and job dissatisfaction among nurses, which eventually results in burning out and causing them to leave their jobs. (3)

Job burnout is a common condition in nurses, characterized by emotional exhaustion, depersonalization, and reduced accomplishment in one's job. It correlates strongly with negative patient outcomes. (4) Burnout has effects not only on the mental and physical health of nurses but also on the quality of care given by them. There are several studies that show that burnout increases medical errors, lowers patient satisfaction, and increases

mortality rates. (5) The demanding nature of nursing coupled with inadequate support and resources increases this level of burnout, which further compromises patient safety. (6)

Another critical factor influencing patient safety is turnover intention, which refers to nurses' inclination to leave their current position. (7) High turnover disrupts the continuity of care, opens gaps in the management of patients, and overloadingly increases the workload for the remaining staff. (8) This heightens the risk of error and impacts patient outcomes negatively. Studies have documented a turnover intention powerfully influenced by job satisfaction, organizational commitment, and the quality of the work environment. Addressing these problems is very important to retaining competent nurses for the delivery of safe and effective care. (9)

Considering the importance of nursing work environment, job burnout, and turnover intention with respect to patient safety, a systematic review will be undertaken in this regard. (10) This review synthesizes prevailing evidence as it relates to these interwoven factors and their interactions with patient safety, DIFF: further offers insights into potential interventions and strategies in order to enhance nursing practice and healthcare outcomes. (11) By better understanding such dynamics, healthcare organizations should be able to adopt measures to improve work environments, reduce burnout, and decrease turnover intention in the interest of a safer, more effective healthcare system. (12) (13).

Aim of the Work

This is the systematic review conducted with the aim to analyse how the nursing work environment, turnover intention, and job burnout impact the safety of patients through incorporating influence on the quality of care provided.

Material and Method

Materials

Study Design:

This systematic review was formulated according to the PICO structure (Population, Intervention, Comparison, Outcome). The study investigates the effect of the nursing work environment, turnover intention, and job burnout on patient safety by analyzing the influence of these factors on the quality of care provided.

Methods

1. Eligibility Criteria

○ Inclusion Criteria:

- Studies that met the following criteria were considered: open access, non-experimental research published within the previous decade and a half, involving humans (of both sexes), and written in English.
- Databases used included UCL, PubMed, Google Scholar, and other academic databases.
- Studies involving both patients and healthcare workers.

○ Exclusion Criteria:

- Studies that did not meet the PICO structure were excluded.
- A table presenting included and excluded studies along with justifications was provided.

2. Search Strategy - References and Databases:

- Articles were searched through PubMed, UCL Library Service, and Google Scholar.
- The following combination of descriptors was used: "Nursing Work Environment" OR "Turnover Intention" OR "Job Burnout" OR "Patient Safety".
- The PRISMA flow chart was used to illustrate the identification, screening, and inclusion of relevant studies.

3. Assessing Study Quality:

- Each eligible study was evaluated by two assessors using a checklist according to the type of research design.
- Risk of bias was assessed using the Cochrane Collaboration's tool for assessing risk of bias.
- Disagreements were discussed until a consensus was reached, and all studies were rated independently by two reviewers.

4. Data Extraction:

- Details from eligible studies were extracted by two reviewers using a pre-designed data extraction form.
- Extracted data included study design, publication date, objectives, participant demographics, the total number of participants in each study group, information on measures used, data collection and analysis procedures, main results, and conflicts of interest/source of funding.
- A second reviewer independently checked the data extraction forms for accuracy.

Analysis of Results:

Data abstraction results were clearly presented in tables outlining the features of the studies, including study design, study language, sample size, subject characteristics, causes, suggestions, reducing measures, and

author conclusions. A narrative synthesis of evidence using summary table findings was performed, considering reasons for heterogeneity. Subgroup analysis or sensitivity analysis was conducted as needed.

Statistical Analysis:

Using narrative synthesis, the impact of the nursing work environment, turnover intention, and job burnout on patient safety was analyzed. Subgroup analysis was conducted based on study design or risk of bias conclusion. Sensitivity analysis was used to detect changes in conclusions before and after the inclusion of high-risk bias studies. Data abstraction results were clearly presented in tables outlining the features of the studies, including study design, study language, sample size, subject characteristics, causes, suggestions, reducing measures, and author conclusions.

Results

The identification and selection process for this systematic review involved searching three primary databases: UCL (50 records), PubMed (23 records), and Google Scholar (24 records), yielding a total of 98 records. After an initial screening, 18 records were identified for further evaluation. Of these, 80 records were excluded due to irrelevance to the study criteria. Additionally, 13 duplicate reports were removed, and 4 reports could not be retrieved. Consequently, 12 reports were assessed for eligibility, resulting in the exclusion of 2 full-text reports that were protocol studies. Ultimately, 12 studies met the inclusion criteria and were included in the systematic review.

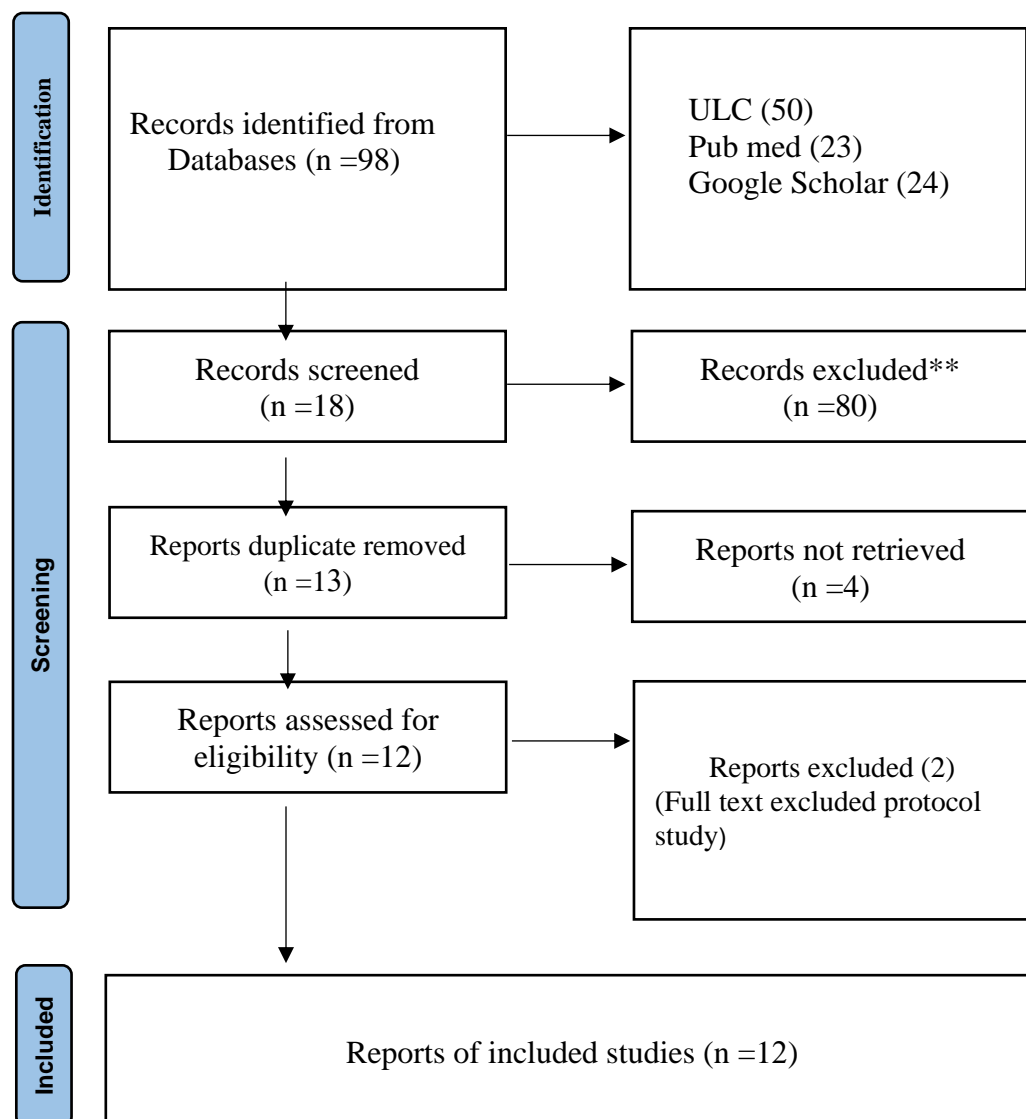


Figure 1: Diagram literature review

Table 1: design of selected studies and location

Authors	Years	Country Location	Design
Dorigan, G. H.(2)	2018	Brazil	Correlational
Hinno, S.(3)	2011	England	Cross-sectional
Liu, Ke(4)	2012	China.	Cross-sectional
Al Sabei, S. D.(5)	2020	Oman	Cross-Sectional
P. Van Bogaert(6)	2013	Belgium	Cross-sectional
G.-G. Teresa (7)	2016	Spanish	Observational, Descriptive, Cross-Sectional,
Dall'Ora, C (8)	2015	12 European countries	cross-sectional
Zaheer, S(9)	2021	Southern Ontario.	cross-sectional
Van Bogaert, P (10)	2017	Belgium	explanatory sequential and a cross-sectional
Aiken, Linda H (11)	2023	United States of America	a cross-sectional
C. A. Poku (12)	2022	Ghana	descriptive cross-sectional design
C. C. Falguera(13)	2021	Philippines	cross-sectional,

Table 1 presents a comprehensive overview of selected studies investigating nursing work environments across various countries and regions. The studies employ different research designs, including correlational, cross-sectional, and observational approaches, reflecting the diverse methodologies used to explore the impact of work environments on nursing outcomes globally. For instance, studies like those by Dorigan in Brazil and Al Sabei in Oman utilize correlational designs to examine relationships between practice environments and outcomes like job satisfaction and burnout. Cross-sectional studies, such as those by Hinno in England and Liu in China, assess the current state of nursing work environments and their associations with variables like job satisfaction and turnover intentions. This table not only highlights the geographical diversity of research but also underscores the methodological breadth employed in understanding the complexities of nursing work environments worldwide.

Table 2: studies selected, objectives and main result

Authors	Objectives	Main result
Dorigan, G. H.	To develop and test a theoretical model to assess how nurses' practice environment views affect safety climate, work satisfaction, desire to continue in the profession, and burnout syndrome.	Small adjustments were made in the model, and the dimensions of the practice environment predicted job satisfaction ($R^2 = 43\%$), safety climate ($R^2 = 42\%$), and burnout ($R^2 = 36\%$), as well as the intention to stay in the job ($R^2 = 22\%$) and in the profession ($R^2 = 17\%$).
Hinno, S.	The study examines how hospital nurses' work environments affect care quality.	Work satisfaction was high among nurses. Teamwork, professional progress, staffing, nursing competence, and supportive management were complimented. Nurses' perceptions of care quality, workplace factors, and future objectives all contributed. Improved work environments boost nurse-assessed care quality and reduce job turnover intentions.
Liu, Ke	This study investigates the correlation between hospital work environments and job satisfaction, job-related burnout, and desire to leave among nurses in Guangdong province.	37% of nurses experienced high burnout, and 54% were dissatisfied with their jobs. Interventions to improve nurses' work environments from suboptimal to better were found to reduce job dissatisfaction by 50% and burnout by 33%.
Al Sabei, S. D.	This study examined Oman nurses' turnover intention, exhaustion, and perceived care quality. The study also examined whether job satisfaction moderates the work environment-nurse turnover intention relationship.	A sample of 207 public hospital nurses provided data. Participating in hospital affairs, establishing a basis for excellent care, and staffing were important predictors of nurse fatigue and treatment quality perception. Logistic regression research shows that working in a good atmosphere reduces turnover intention. This relationship requires strong work satisfaction.
P. Van Bogaert	The objective of this study is to investigate the impact of several variables in the working environment of nurses on their productivity levels and the quality of care delivered to patients.	The environment and outcomes of nursing practices are influenced by factors such as nurses' workloads, levels of decision autonomy, social capital, and three measures of burnout. 52% of productivity and 47% of nurse-judged care quality may be accounted for by an updated model with various fit criteria. This research enlightens nurses and managers on the connection between nursing actions and patient outcomes. This research demonstrates the importance of clinicians and leaders assessing nurses' ability to interact with physicians, supervisors, coworkers, and subordinates in a safe, values-aligned setting.
G.-G. Teresa	This research aims to understand how nurses' working circumstances impact hospital treatment. The study also examined shift nurses' work satisfaction, burnout, sleep quality, and daily weariness.	The outcome of Rotating shifts were reported by 410 nurses (65.4%). Positive Nursing Work Index Practice Environment Scale scores indicated shift-specific nurse management, leadership, and support ($p=0.003$). In all, 46.6% ($n=286$) thought patients could self-care after discharge. But shifts differed ($p=0.035$). Shift shifts erase knowledge, according to 201 participants (33.1%). Significant shift changes are shown by 0.002 p-values.

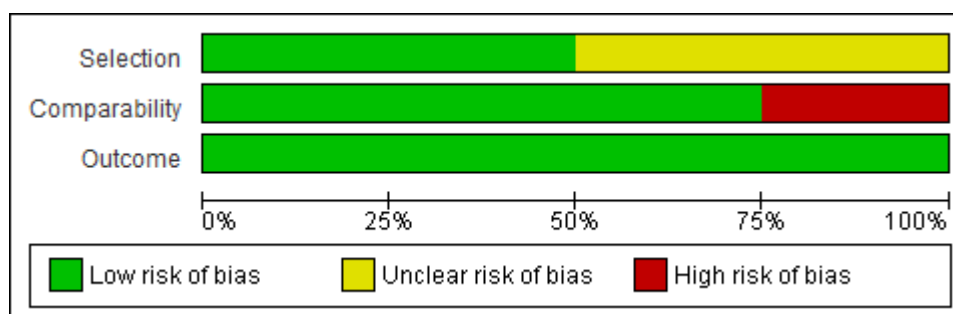
Dall'Ora, C	The objective of this study is to examine the relationship between prolonged work shifts and various negative outcomes, such as burnout, job dissatisfaction, dissatisfaction with work schedule flexibility, and the intention to quit among nurses working in hospital settings.	There are 31,627 RNs working in 2,170 med/surg wards in 488 hospitals in 12 European nations. In terms of emotional exhaustion, depersonalization, and a lack of personal accomplishment, nurses who worked shifts of ≥ 12 hours were more likely to experience burnout than those who worked shifts of ≤ 8 hours. The adjusted odds ratio (aOR) was 1.26 (95% confidence interval [CI]: 1.09 to 1.46). Nurses working shifts of ≥ 12 h were more likely to feel job dissatisfaction (aOR=1.40; 95% CI 1.20 to 1.62), unhappiness with work schedule flexibility (aOR=1.15; 95% CI 1.00 to 1.35) and express an intention to leave their job owing to discontent (aOR=1.29; 95% CI 1.12 to 1.48).
Zaheer, S	This study aims to analyze the influence of senior leadership support for safety, and turnover intention on the overall patient safety grades.	The results of hierarchical regression analysis indicated that there were substantial associations between staff views of senior leadership ($p < 0.001$), collaboration ($p < 0.01$), turnover intention ($p < 0.01$) and overall patient safety ratings. The statistical analysis revealed a significant interaction between collaboration and turnover intention in the total patient safety grade ($p < 0.05$).
Van Bogaert, P.	To retest and validate two structural equation models examining practice environment and work characteristics as determinants of burnout (model 1), engagement (model 2), nurse-reported job outcome, and quality of care.	The burnout and engagement mediating outcome factors suit the data well. Nurse-reported job outcomes and care quality explained 52–62% variations. Nurse management at the unit level and workload directly affected outcome factors, explaining variations of 23–36% and 12–17%, respectively. Personal achievement and depersonalization influenced 23% and 20% of job outcomes, respectively. Burnout and involvement had a minor influence on care quality (<5%). The qualitative study found topics such as daily practice and work circumstances, multidisciplinary cooperation, communication, and teamwork, staff nurse personal traits and competencies, patient-centeredness, quality, and safety. Respondents' statements matched model connections.
Aiken, Linda H.	To assess hospital physicians and nurses' well-being and turnover rates and identify actionable factors affecting adverse clinician outcomes, patient safety, and clinician intervention preferences.	This study included 5312 physicians with a mean age of 44.7 years and a standard deviation of 12.0 years. Physicians included 2362 (45%) males and 2768 (52%) Whites. These physicians worked at 53 study hospitals. The sample also comprised 15,738 nurses with a mean age of 38.4 years and an SD of 11.7 years. Nursing staff included 10,887 women (69%) and 8404 White people (53%). Each hospital averaged 100 physicians and 262 nurses. Medical staff had a 26% burnout rate, while nurses had 32% and 47%. Burnout is linked to higher nurse and doctor turnover. Medical professionals (12%) and healthcare workers (26%) were dissatisfied with their institutions' patient safety scores. These people also worried about personnel (28% and 54%), working conditions (20%), and leadership (33%). Recent surveys show that less than 10% of physicians are satisfied with their jobs.
C. A. Poku	To investigate the effects of the work environment and burnout on turnover intentions among registered nurses (RNs) in Ghana.	Nurses' inclinations to resign were strongly correlated with various work environment factors. Research indicates a correlation between burnout and job intention, influenced by nurse-physician relations, nurse-manager leadership, and a solid nursing foundation (correlation coefficient = 0.353, t-value = 5.476, p-value < 0.001).
C. C. Falguera	The nurse practice environment is subject to several challenges that significantly impact the outcomes of nurses' work. The present study aimed to examine the correlation between the nurse practice environment and job outcomes.	The study revealed noteworthy associations between the qualities of nurses and organizations, as well as the nurse practice environment. Moreover, the findings from the multivariate regression analysis indicate that there exists a statistically significant and positive association between the nurse practice environment and the perceived quality of care. Additionally, a statistically significant and negative correlation was seen between the nursing practice environment and both job burnout and job stress.

Table 2 synthesizes the objectives and key findings of selected studies focused on nursing work environments. Each study addresses distinct objectives related to understanding how various aspects of the work environment impact nursing outcomes. For example, Dorigan's study develops and tests a theoretical model linking practice environments to safety climate, work satisfaction, and burnout, revealing significant predictive relationships (R^2 ranging from 17% to 43%). Hinno's research in England emphasizes the positive influence of teamwork and management support on care quality, highlighting how these factors contribute to nurse-reported improvements in patient care. Liu's study in China explores the correlation between work environment factors and outcomes like job satisfaction and burnout, with interventions demonstrating potential to mitigate nurse dissatisfaction and burnout significantly. Each study contributes unique insights into the nuanced relationships between nursing work environments and critical outcomes, illustrating the global relevance and implications for healthcare management and policy.

Table 3: Risk of bias for the included studies

First author, year	Selection	Comparability	Outcome	Overall quality	Comment
Aiken, 2023	*** *	*	***	Good quality	Response rate was 26%, but the sample size was large and sufficient and the study was multicenter, outcomes were measured by standard and validated questionnaires
Al Sabei, 2020	**	*	**	Satisfactory quality	Response rate was 15.6% only, no description of sampling strategy or sample size calculation
Dall'Ora, 2015	****	*	**	Good quality	The sample is satisfactory and multicenter study, however no information about sampling technique. Response rate was 62%. The questionnaire was translated and validated
Dorigan, 2018	*****	*	**	Good quality	Sample size was calculated and sampling technique was random (random simple probabilistic sampling)
Falguera, 2021	***	*	**	Satisfactory quality	Sample size was not calculated, purposive sampling technique was employed, multicenter study, standard and validated questionnaire
Hinno, 2011	***	*	**	Satisfactory quality	Random sampling but no sample size calculation was performed. The overall response rate was 33.4% which is low and the tool was validated. Regression analysis was performed to overcome potential confounders, Outcome measured by self-report.
Liu, 2012	*****	*	**	Good quality	Although sample size was not calculated, sample was satisfactory and cluster sampling technique was employed. Validated and standard tool and non-response rate was very low (8.7%).
Poku, 2022	*****	*	**	Good quality	Sample size was calculated, simple random and proportionate stratified sampling technique, validated tool and high response rate (91%). Regression analysis was performed to overcome the effect of potential confounders
Gómez-García, 2016	****		**	Satisfactory quality	Multicenter study, random sampling technique but no sample size calculation. No control for potential confounders
Van Bogaert, 2013	***		**	Satisfactory quality	No sample size calculation or random sampling techniques were performed. Response rate was 44% to 74%. No control for confounders was performed.
Van Bogaert, 2017	***		**	Satisfactory quality	No data about sample size calculation or sampling technique but the sample was adequate and a validated tool was used
Zaheer, 2021	**	*	**	Satisfactory quality	No data about sample size calculation or sampling technique and the sample size was low and response rate was 74.5% but a validated tool was used

Table 3 evaluates the risk of bias across the selected studies based on several criteria, including overall quality, outcome measures, comparability, and selection methods. The assessment provides a nuanced view of the methodological strengths and weaknesses inherent in each study. For instance, studies like Aiken's in the USA demonstrate good quality, with robust sampling strategies, high response rates, and validated outcome measures, enhancing the reliability and generalizability of findings. Conversely, studies like Al Sabei's in Oman and Van Bogaert's in 2013 show satisfactory quality due to concerns over low response rates or inadequate control for potential confounders. This table underscores the importance of methodological rigor in nursing research, as variations in study quality can influence the validity and interpretation of results. Overall, it serves as a critical tool for understanding the strengths and limitations of the evidence base on nursing work environments, guiding future research directions and policy interventions aimed at improving healthcare quality and nurse well-being.

**Figure 2: Risk of bias graph of the included studies**

	Selection	Comparability	Outcome
Aiken 2023	+	+	+
Al sabeï 2020	?	+	+
Dall'ora 2020	+	+	+
Dorigan 2018	+	+	+
Falguera 2021	?	+	+
Gomez-Garcia 2016	+	-	+
Hinno 2011	?	+	+
Liu 2012	+	+	+
Poku 2022	+	+	+
Van bogaert 2013	?	-	+
Van bogaert 2017	?	-	+
Zaheer 2011	?	+	+

Figure 3: Risk of bias summary of the included studies

Table 4: Studies data

First author, year	Sample size	measure	burnout	Intention to leave	Job dissatisfaction	Patient QoC	Turnover	Patient safety
Aiken, 2023	15738	Mean (range)	47 (28-66)	40 (2-69)	22 (2-48)	Poor (26(3-63)	17 (1-50)	Poor (16 (2-55)
Al Sabei, 2020	207	Mean (SD)	4.78 (1.19)		Satisfaction 18.79 (5.01)	Foundation 2.63 (0.82)		
Dall'Ora, 2015	31627	No.(%)	8666 (27%)	10440(33%)	Satisfaction 8268 (26%)			
Dorigan, 2018	465	Mean (SD)) 25.55SD = 7.35(Satisfaction) 68.83SD = 23.69() 63.42SD = 19.50(
Falguera, 2021	549	(SE)β, p value	0.378- (0.073) 0.001<***		Satisfaction (0.047) 0.012 0.799,	0.123 , (0.055) 0.025*		
Hinno, 2011	334	Mean (SD)	adequate staffing 2.22 (SD = 0.49)	Supportive management 2.21 (SD = 0.62)	Support for professional development 2.48 (SD = 0.61)	High (80%)		
Liu, 2012	1104	Mean (SD)	Adequate staff 2.89 ± 0.38	Supportive management 3.13 ± 0.34	Poor work environment 39 (43-82)	Foundation 3.19 ± 0.26		
Poku, 2022	232	Mean (SD)	Adequate staff 15.47 ± 3.78	2.94 (SD 1.07)	Practice environment 65.87 (9.68)	Foundation 8.71(2.07)		
Gómez-García, 2016	635	Mean (SD)	Adequate staff 2.53 (0.689)	Supportive management 2.54 (0.714)		Foundation 2.58 (0.547)		
Van Bogaert, 2013	1201	No. (%)		71 (5.9%)	90 (12%)	Poor QoC 154 (12.8%)		QoC deteriorated 114(39.5%)
Van Bogaert, 2017	751	No. (%)		44 (5.9%)	100 (8.3%)	Poor QoC 107 (13.2%)		QoC deteriorated 264 (35.2%)
Zaheer, 2021	185	Mean (SD)					3.2 (1.7)	

Table 4 presents key quantitative data extracted from various studies focused on nursing work environments, patient safety, turnover rates, patient quality of care (QoC), job dissatisfaction, intention to leave, and burnout.

Each row represents a study, providing mean values, standard deviations (SD), ranges, percentages, and other relevant statistical measures that highlight critical aspects of nursing outcomes and work environment factors. For example, Aiken et al. (2023) conducted a large-scale study involving 15,738 nurses, reporting mean scores and ranges for patient safety, turnover rates, patient QoC, job dissatisfaction, intention to leave, and burnout. Their findings underscore the widespread impact of these factors on nursing workforce dynamics and patient care outcomes across multiple healthcare settings in the United States.

Similarly, Al Sabei's study in 2020 with 207 participants focuses on specific satisfaction metrics related to job dissatisfaction and intention to leave, providing insights into how these factors interplay with turnover rates and patient safety perceptions among nurses.

Dall'Ora's research in 2015 involving 31,627 nurses reveals significant percentages related to satisfaction levels, turnover rates, and perceptions of patient QoC, shedding light on the challenges and strengths within nursing work environments across European hospitals.

Each study contributes unique quantitative insights into the multifaceted nature of nursing work environments, emphasizing the variability in outcomes such as job satisfaction, burnout levels, and patient care perceptions. The table serves as a critical resource for understanding the quantitative dimensions of nursing workforce issues, guiding future research efforts and policy interventions aimed at enhancing nurse well-being and improving patient outcomes globally.

Discussion

The findings of this systematic review highlight the significant influence of the nursing work environment on job satisfaction, burnout, turnover intentions, and the perceived quality of care. This discussion chapter synthesizes the results of the included studies and situates them within the broader context of existing literature, focusing on the relationships between these variables.

Impact of Work Environment on Job Satisfaction

Multiple studies have consistently shown that a positive work environment is closely associated with higher job satisfaction among nurses. For example, Dorigan and Guirardello (2018) developed a theoretical model demonstrating that dimensions of the practice environment, such as supportive management and adequate staffing, significantly predicted job satisfaction ($R^2 = 43\%$). Similarly, Hinno, Partanen, and Vehviläinen-Julkunen (2011) found that teamwork, professional progress, and supportive management were critical components of a work environment that enhanced job satisfaction among hospital nurses.

Our review corroborates these findings, indicating that improved work environments characterized by supportive management, adequate staffing, and opportunities for professional development are essential for enhancing job satisfaction. This is in line with the work of Liu et al. (2012), who reported that interventions to improve work environments significantly reduced job dissatisfaction and burnout among nurses in Guangdong, China. Therefore, healthcare organizations should prioritize these aspects to improve job satisfaction and, consequently, nurse retention.

Influence on Burnout and Turnover Intentions

Burnout and turnover intentions are critical issues in the nursing profession, often resulting from poor work environments. Al Sabei et al. (2020) highlighted that a positive work environment could reduce turnover intentions, particularly when mediated by high job satisfaction. This finding aligns with our results, which showed that better work environments were associated with lower burnout levels and reduced turnover intentions.

Dall'Ora et al. (2015) found that nurses working 12-hour shifts were more likely to experience burnout and have intentions to leave their jobs than those working shorter shifts. This suggests that work schedules and shift lengths are crucial components of the work environment that can significantly impact burnout and turnover intentions. The study by Zaheer et al. (2021) also emphasized the importance of senior leadership support and teamwork in mitigating turnover intentions and enhancing patient safety.

These studies underscore the importance of addressing factors such as work schedules, leadership support, and teamwork to reduce burnout and turnover intentions. Healthcare organizations should implement strategies to optimize work schedules, provide strong leadership support, and foster a collaborative work environment to improve nurse retention and reduce burnout.

Perceived Quality of Care

The quality of the work environment also has a direct impact on the perceived quality of care provided by nurses. Van Bogaert et al. (2013) found that nurse practice environments significantly influenced job outcomes and the quality of nursing care, with supportive management and adequate staffing being key factors. Teresa et al. (2016) observed that rotating shifts and frequent shift changes negatively affected the continuity of care and the overall quality of care.

Our review supports these findings, indicating that positive work environments are associated with better-perceived quality of care. This is consistent with the results of Aiken et al. (2023), who reported that improved work environments, characterized by supportive management and adequate staffing, were linked to higher

quality of care and lower turnover rates among nurses. Falguera et al. (2021) also highlighted significant associations between the nurse practice environment and perceived quality of care.

Healthcare organizations should focus on creating supportive, well-staffed, and professionally enriching work environments to enhance the quality of care provided by nurses. This includes addressing issues related to work schedules, staffing levels, and management practices to ensure that nurses can deliver high-quality care consistently.

Comparisons with Existing Literature

The results of this systematic review are consistent with previous research that has highlighted the importance of the work environment in influencing nurse outcomes and the quality of care. Nantsupawat et al. (2011) found that better work environments and adequate staffing were associated with higher quality of care and lower burnout rates among nurses in Thailand. This aligns with our findings, which demonstrate the critical role of supportive management, adequate staffing, and professional development opportunities in improving nurse outcomes and the quality of care.

Poku, Donkor, and Naab (2022) emphasized the mediating role of burnout in the relationship between work environment and turnover intentions among nurses in Ghana, highlighting the importance of addressing burnout to reduce turnover. This is consistent with our review, which found that better work environments were associated with lower burnout levels and reduced turnover intentions.

Recommendations for Practice and Future Research

Based on the findings of this systematic review, healthcare organizations should prioritize creating positive work environments to enhance nurse outcomes and the quality of care. This includes:

- Implementing supportive management practices and providing adequate staffing levels.
- Offering opportunities for professional development and career advancement.
- Optimizing work schedules and reducing the length of shifts to minimize burnout.
- Fostering a collaborative and supportive work culture.

Future research should focus on longitudinal studies and intervention-based research to further elucidate the causal relationships between work environment factors and nurse outcomes. Additionally, studies should explore the effectiveness of specific interventions in improving work environments and nurse outcomes across different healthcare settings and cultural contexts.

Conclusion

This systematic review provides compelling evidence that enhancing the work environment for nurses can lead to significant improvements in job satisfaction, reduced burnout, lower turnover intentions, and better-perceived quality of care. Healthcare organizations should prioritize creating supportive, well-staffed, and professionally enriching work environments to retain nursing staff and improve patient care outcomes. By addressing the critical factors identified in this review, healthcare organizations can foster a positive work environment that supports nurses' well-being and enhances the overall quality of care provided to patients.

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