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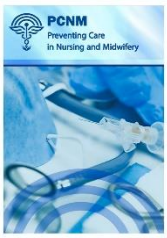

Original Article

The Correlation Between Burnout and Quality of Caring Behavior Among Nurses: A Cross-Sectional Study

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Abstract

Background: Occupational stress and burnout are significant issues in healthcare professions that can impact caring behaviors.
Objectives: The study aimed to investigate the correlation between burnout and the quality of caring behaviors among nurses working in hospitals affiliated with Kashan University of Medical Sciences.
Methods: This cross-sectional analytical study included 212 nurses from hospitals affiliated with Kashan University of Medical Sciences. Data were collected using demographic questionnaires, the Caring Behaviors Inventory, and the Maslach Burnout Inventory, and analyzed with SPSS version 26 using descriptive statistics, linear regression, and Pearson correlation.
Results: This study of 212 nurses found a favorable care quality score (M=209.96, SD=27.13). Burnout levels were M=46.24 (SD=19.20) for frequency and M=53.58 (SD=21.19) for intensity. Significant negative correlations emerged between both burnout dimensions and care quality (frequency: r=-0.327; intensity: r=-0.296, both p<.001). While personal accomplishment and depersonalization correlated with all care components (p<.01), emotional exhaustion showed no significant correlations (p>.05).
Conclusion: The study emphasizes that burnout negatively affects nurses' ability to provide empathetic, high-quality care. Organizational measures like workload management, resilience training, and team support can reduce burnout and enhance care quality in high-stress settings.

Implications for Nursing and Midwifery Preventive Care

- Reducing Burnout: Managing workload, providing resilience training, and enhancing team support reduce nurse burnout, maintaining the quality of preventive care.
- Enhancing Patient Satisfaction: Reducing organizational pressures and allowing more patient time improves satisfaction and the quality of preventive care.

Introduction

Burnout Syndrome (BOS) is a psychological condition that arises as a prolonged response to chronic occupational stress and interpersonal challenges. It is defined by three core dimensions: emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment [1]. This phenomenon is particularly prevalent in healthcare professions, such as nursing, where continuous and direct interactions with patients and their families are central to the role [2]. Burnout not only affects the psychological well-being of nurses but also has far-reaching consequences for the quality of care, patient safety, and overall organizational performance [3].

In many hospital departments, nurses who once entered the profession with compassion, discipline, and a strong motivation to provide care may become disillusioned over time. Prolonged exposure to high job demands and work-related stress can lead to emotional fatigue and even a desire to leave the profession altogether [2]. Evidence suggests that healthcare professionals are more susceptible to burnout due to unique stressors such as patient mortality, managing complex medical needs, interpersonal conflicts, low social support, excessive workloads, job insecurity, inadequate compensation, overcrowding, decision-making under uncertainty, accountability for critical outcomes, the pressure to avoid mistakes, workplace violence, and night shifts [4]. Compared to other professions, these cumulative stressors contribute to diminished job performance, increased psychological distress, and ultimately, higher levels of burnout. The adverse outcomes of burnout include increased absenteeism, greater intention to leave the profession, and diminished quality of patient care [5, 6]. Research conducted by Efil et al. indicates that nurses working in intensive care units exhibit significantly higher levels of burnout compared to those in general wards [7].

In recent years, global nursing shortages have emerged as a critical challenge in healthcare. An increased patient load, unfavorable working conditions, role ambiguity, interpersonal tensions, and the complex needs of patients and families all contribute to heightened burnout risk among nurses [8, 9]. These factors not only reduce productivity but also lead to maladaptive caregiving behaviors and increased risk of medical errors, thereby compromising patient safety [10]. Moreover, burnout has been associated with prolonged hospital stays, lower patient satisfaction, and increased mortality rates [11, 12].

Nurses are fundamentally committed to delivering high-quality care, aiming to maximize patient survival. Nonetheless, nurses may hold diverse perspectives on caregiving [13]. The study by Azimilolaty et al. (2021) found an inverse correlation between burnout and the quality of nursing care. Therefore, providing quality care to hospitalized patients increases their satisfaction with hospitals [14]. Qualitative studies have revealed that many nurses perceive caregiving as a core component of their professional identity and inherently therapeutic. Moreover, the rising cost of healthcare has led to shorter hospital stays, potentially altering patients' perceptions of nursing care and satisfaction with healthcare services [15]. At the same time, the time previously allocated to direct patient care has diminished due to numerous internal and external organizational challenges and burnout, likely affecting the perceived impact of nursing care and patient satisfaction. Given that burnout can reduce nurses' commitment to fulfilling caregiving roles, it may lead to a sense of detachment from their professional responsibilities [16, 17]. Conversely, a positive attitude toward the supportive role of nursing has been shown to enhance professional autonomy, self-confidence, environmental control, and job satisfaction—factors that may mitigate burnout [18]. Considering the detrimental effects of burnout on caregiving behavior, job satisfaction, and patient outcomes, regular evaluation of burnout levels and identification of related risk factors is of critical importance.

Objective

This study aimed to evaluate the prevalence of burnout and its effect on the quality of nursing care behaviors at Shahid Beheshti Hospital in Kashan.

Methods

Study Design and Setting

This cross-sectional analytical study was conducted on 213 nurses working in hospitals affiliated with Kashan University of Medical Sciences from June to September 2022. Sampling was carried out at Shahid Beheshti, Kargarnejad, Matini, and Naghavi hospitals.

Participants and Sampling

Participants were selected using convenience sampling based on the inclusion criteria: nurses working in hospitals affiliated with Kashan University of Medical Sciences (Shahid Beheshti, Kargarnezhad, Matini, and Naghavi) with at least one year of clinical experience in their current ward. Exclusion criteria included a history of severe mental illness and unwillingness to participate in the study. To determine the sample size with a 95% confidence level and 80% test power, assuming that the correlation coefficient between nursing care quality and each dimension of job burnout is at least r = 0.25, the initial sample size was estimated to be 193 participants based on the correlation study formula. Considering a possible 10% attrition rate, the final required sample size was increased to 213 participants.

Data Collection Tools

The demographic information questionnaire included a personal characteristics form for the samples (age, gender, marital status, education level, Number of Children, Employment Status, Work Shift, Nursing Work Experience, Experience in Current Ward).

The Maslach Burnout Inventory (MBI), Standard Form 1, consists of 22 items designed to assess three dimensions of burnout: emotional exhaustion (9 items), depersonalization (5 items), and reduced personal accomplishment (8 items). Each item is scored on two scales: frequency (ranging from 0=never to 6=every day) and intensity (ranging from 0=none to 7=very high) [1]. High scores in emotional exhaustion and depersonalization, combined with a low score in personal accomplishment, indicate a high level of burnout. Scores for each dimension are calculated separately and are not combined into a single total score. The maximum scores for each dimension are as follows: Emotional exhaustion: frequency 54, intensity 63. Depersonalization: frequency 30, intensity 35Personal accomplishment: frequency 48, intensity 56.

The questionnaire was psychometrically evaluated by Dehghani et al. (2017), demonstrating convergent validity. Its reliability, assessed using Cronbach's alpha, was reported as 0.73 and 0.89, respectively [11]. Rostami and Khandan also psychometrically evaluated the tool and confirmed its reliability with a Cronbach's alpha of 0.91 [12].

The reliability of the questionnaire was assessed in the present study using Cronbach’s alpha, yielding a coefficient of 0.87.

The Caring Behaviors Inventory (CBI), Standard Form 2, was developed by Wolf in 1998 with 75 items and later revised to 42 items. This questionnaire comprises 42 items and 5 subscales: Respect for others (items 1–12), Assurance of human presence (items 13–24), Positive connectedness (items 25–33), Professional knowledge and skill (items 34–38), Attention to others’ experiences (items 39–42). The scoring method involves calculating the mean score for each subscale by summing the scores of its respective items and dividing by the number of items. Each item is rated on a six-point Likert scale (from 1=never to 6=always). The total score ranges from a minimum of 42 to a maximum of 252, with higher scores indicating more desirable caring behaviors [19]. The questionnaire was translated into Persian by Hajinezhad et al. (2021), reporting a Cronbach’s alpha of 0.92 [20]. In the present study, a Cronbach’s alpha of 0.85 was obtained.

Data Collection Procedure

Participants were instructed to complete the questionnaires thoughtfully and in a quiet environment to ensure data quality. All responses were anonymized and coded for analysis.

The procedure was conducted as follows: after obtaining a list of eligible nurses from the nursing office of each hospital, the researcher visited the

wards and approached the nurses. The purpose of the study was explained to them, and assurances were given regarding confidentiality and anonymity. After obtaining informed consent, the questionnaires were distributed to the participants. The average time required to complete the questionnaire was 10 to 15 minutes, and it was completed by nurses during a single work shift.

Data Analysis

Data were analyzed using SPSS software (version 26). Descriptive statistics (frequency, mean, percentage, and standard deviation). were used to summarize the demographic characteristics of the participants and the distribution of variables. In the inferential analysis, Pearson's correlation coefficient was used to examine the relationships between burnout and caring behaviors, and simple and multiple linear regression analyses were performed to assess the predictive power of burnout dimensions on the quality of caring behaviors.

A significance level of $P < 0.001$ was considered for all statistical tests. One questionnaire with incomplete responses was excluded from the final analysis out of 213 questionnaires, leaving 212 for analysis. As the data missingness was completely random (MCAR), the results remain valid and unbiased.

Results

In this study, a total of 212 nurses participated (186 from Shahid Beheshti Hospital, 6 from Kargarnejad Hospital, 9 from Matini Hospital, and 11 from Naghavi Hospital). The mean age of the participants was 33.62 years (SD = 7.17). Table 1 presents the frequency distribution of participants based on demographic variables.

The mean scores for the frequency and intensity of burnout among nurses were 46.24 (SD = 19.20) and 53.50 (SD = 21.19), respectively. The mean score for the quality of caring behaviors was 209.96 (SD = 27.13) (Table 2).

Table 1. Frequency Distribution of Demographic Characteristics of Participants (N = 212)

Variable	Category	Frequency	%
Gender			
	Male	53	25.0
	Female	159	75.0
Age (years)			
	Under 30	68	32.1
	30-35	53	25.0
	36-40	55	25.9
	Over 40	37	17.5
Marital Status			
	Single	46	21.6
	Married	165	77.5
	Widowed/ Divorced	2	0.9
Number of Children			
	None	90	42.5
	One	47	22.2
	Two	60	28.3
	Three	15	7.1
Education Level			
	Master's	23	10.8
	Bachelor's	183	85.9
	Associate	7	3.3
Employment Status			
	Permanent	127	59.8
	Contractual	17	8.0
	Temporary	29	13.7
	Internship	38	17.9
Work Shift			
	Morning	35	16.4
	Evening	3	1.4
	Rotating	174	81.7
	Other	1	0.5
Nursing Work Experience (years)			
	< 5	54	25.5
	5-10	58	27.4
	> 10	100	47.2
Experience in Current Ward (years)			
	< 5	118	55.7
	5-10	69	32.5
	> 10	25	11.8

Table 2. Mean and Standard Deviation Scores for Burnout and Caring Behavior Quality

Variable	Component	Mean	SD
Burnout (Frequency)			
	Emotional Exhaustion	23.66	12.45
	Personal Accomplishment	31.14	9.96
	Depersonalization	5.73	6.84
	Total Score	**46.24**	**19.20**
Burnout (Intensity)			
	Emotional Exhaustion	26.67	14.00
	Personal Accomplishment	35.24	11.08
	Depersonalization	6.43	7.16
	Total Score	**53.58**	**21.19**
Quality of Caring Behaviors			
	Respect for Others	60.58	8.21
	Assurance of Human Presence	62.74	8.47
	Positive Connectedness	39.38	6.37
	Professional Knowledge and Skill	26.45	3.59
	Attentiveness to Others' Experiences	20.81	3.09
	Total Score	**209.96**	**27.13**

Reveals significant negative correlations between both burnout measures (frequency and intensity) and care behavior quality (P<0.001), indicating that as nurses' burnout increases, their care quality significantly decreases (Table 3).

Table 3. Correlations Between Job Burnout and Quality of Caring Behaviors (N=212)

Variable	*r*	95% CI	*P**
Burnout Frequency	-0.327	[-0.453, -0.213]	< .001
Burnout Intensity	-0.296	[-0.412, -0.169]	< .001

Note. CI = confidence interval; * p<.00.1

The coefficient of determination (R^2) indicates that the frequency and intensity of burnout independently explain 10.7% and 8.8% of the variance in the quality of nurses' caring behaviors, respectively. Furthermore, based on the regression coefficients and considering that the p-values were less than the significance level of 0.001, it can be concluded that burnout (both frequency and intensity) significantly predicts the quality of nurses' caring behaviors. In other words, burnout has a statistically significant impact on the quality of caring behaviors provided by nurses (Table 4).

Table 4. Multiple Regression Analysis Predicting Caring Behavior Quality from Burnout Dimensions (N=212)

Predictor	*R2*	*β*	*t*	95% CI	*p*
Burnout Frequency	.107	-0.327	-5.026	[-0.463, -0.175]	< .001
Burnout Intensity	.088	-0.296	-4.506	[-0.432, -0.160]	< .001

Note. CI = confidence interval. The reported R^2 values represent the proportion of variance uniquely explained by each predictor. The beta (β) coefficients are standardized.

The components of personal accomplishment and depersonalization (both frequency and intensity) have a significant correlation with all components of caring behaviors (P < 0.01). However, the component of emotional exhaustion (both frequency and intensity) shows no significant correlation with any of the caring behavior components (P > 0.05) (Table 5).

Discussion

The present study investigated the relationship between burnout and the quality of caring behaviors among nurses employed in hospitals affiliated with Kashan University of Medical Sciences. The findings indicated that the level of burnout among participating nurses ranged from moderate to high, particularly in the dimensions of emotional exhaustion and depersonalization. Meanwhile, the average score for caring behaviors was reported to be relatively moderate, consistent with the findings of Askari et al., who similarly observed moderate levels of caring behavior among nurses under occupational stress [21].

In the study by Tesema et al., although nurses' perception of caring behavior was reported as acceptable, it was comparatively lower than in

previous studies, reflecting significant psychological stress among the nursing staff [22].

Table 5. Correlation Matrix between Burnout Components and Caring Behaviors (N = 212)

Caring Behavior Component	Burnout (Intensity)			Burnout (Frequency)		
	Personal Accomplishment	Depersonalization	Emotional Exhaustion	Personal Accomplishment	Depersonalization	Emotional Exhaustion
Respect for Others	.282**	-.333**	-.095	.283**	-.348**	-.115
Assurance of Human Presence	.341**	-.287**	.007	.301**	-.327**	-.035
Positive Connectedness	.347**	-.225**	.041	.303**	-.237**	-.019
Professional Knowledge and Skill	.353**	-.331**	.035	.313**	-.361**	-.025
Attentiveness to Others' Experiences	.303**	-.284**	.070	.259**	-.324**	-.018

Note. $^{**}p < .01$.

Another study in the United States on oncology nurses also indicated a negative relationship between burnout and the quality of nursing care delivery [23]. Similarly, a study on nurses working in nursing homes reported consistent findings [24]. Begjani et al. also highlighted that nursing is an inherently high-stress profession, where elevated stress can lead to burnout and a decline in care quality [25].

These findings align with the current study, reinforcing the notion that nursing is intrinsically stressful and that burnout adversely impacts caring performance.

A systematic review further supported these findings by reporting moderate levels of emotional exhaustion and high levels of depersonalization and reduced personal accomplishment among emergency nurses [26].

The results of the present study revealed a significant negative correlation between both the frequency and intensity of burnout and the quality of caring behaviors ($P < 0.01$). This indicates that as nurses experience higher levels of burnout, their ability to provide empathetic, respectful, and professionally competent care diminishes. This inverse relationship supports earlier findings that job burnout weakens nurses' ability to maintain compassionate professionalism and adequately respond to patients' needs [27]. Among the burnout dimensions, reduced personal accomplishment and depersonalization exhibited the strongest correlations with all subdomains of caring behaviors. This suggests that lower self-efficacy and greater emotional detachment are associated with reduced engagement in caring behaviors.

Similarly, the study by Efıl et al. reported weak correlations between emotional exhaustion and depersonalization with poor caring behaviors, but a strong negative correlation between low personal accomplishment and poor caring behavior [7].

Heidari et al. also found that care quality had a significant inverse relationship with the subscales of burnout—namely emotional exhaustion and depersonalization—and a positive correlation with personal accomplishment. Their findings further revealed an inverse relationship between care quality and the severity dimensions of burnout [28].

Interestingly, emotional exhaustion was not significantly correlated with any of the caring behavior dimensions in this study, despite being frequently identified in previous research as a primary factor in diminished nursing performance [3, 29]. This discrepancy may reflect coping mechanisms among nurses, cultural expectations of the nursing profession, or organizational norms that prioritize task completion over emotional interaction.

Several factors may contribute to high burnout in the domain of personal accomplishment, such as limited professional experience among younger nurses, patient aggression or abuse, and a lack of assertiveness. Psychosocial factors-including lack of family support, spousal unemployment, excessive

workload, and low workplace control-also exacerbate this issue.

Regression analysis confirmed the predictive role of burnout on the quality of caring behaviors. Burnout frequency and intensity explained 10.7% and 8.8% of the variance in caring behavior scores, respectively, indicating a statistically significant but moderate effect. This suggests that while burnout is a key predictor, other organizational and interpersonal factors also influence variations in caring behaviors.

Many participants worked rotating shifts and had extensive job tenure, which are known risk factors for chronic stress and burnout, consistent with findings by Chirico et al. Additionally, high levels of depersonalization may indicate a defensive mechanism used by nurses to cope with heavy workloads and systemic challenges [30]. Belay et al. also reported high levels of burnout among nurses, suggesting the need to improve educational opportunities and strengthen social support systems to enhance healthcare quality, job satisfaction, and nursing care [31].

The present study has several limitations. The study population was limited to nurses working in teaching hospitals, excluding those in private hospitals, which restricts the generalizability of the findings to similar settings in Iran.

Additionally, data were collected using self-reported questionnaires, which may introduce response bias due to over- or under-reporting of burnout symptoms, and this bias could not be controlled. Furthermore, individual personality traits and levels of family support were not considered in the analysis. Future studies are recommended to investigate the impact of workplace conditions across diverse nursing settings and explore the role of individual personality traits in relation to occupational burnout.

Conclusions

The findings underscore the detrimental impact of job burnout on the quality of nurses' caring behaviors and highlight the urgent need for organizational interventions to prevent burnout and enhance care quality. Targeted strategies—such as workload management, emotional resilience training, strengthened team support, and recognition of clinical performance—can help sustain high standards of nursing care in high-stress environments.

Ethical Consideration

The Ethics Review Board of the Kashan University of Medical Sciences approved the present Study with the following number: IR.KAUMS.NUHEPM.REC.1398.037.

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Conflict of interest

The authors declare that they have no competing interests.

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Author Contributions

M.A. and M.T. supervised all of the stages of the data collection and data analysis, and provided critical points during the manuscript. F.M.A. performed the study conception, data collection, and analysis, and wrote the first draft of the manuscript. All authors have read and agreed to the published version of the manuscript.

Artificial intelligence utilization for article writing

Artificial intelligence was used to assist with the translation and editing of this manuscript. All content was reviewed, verified, and final edited by the authors.

Data availability statement

The data are available from the corresponding author

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