

Research Article

Relationship Between Burnout and Quality of Care in Nurses in Banten, Indonesia: A Cross-Sectional Study

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Abstract. Nurses are legally liable and morally responsible for the quality of the care they provide to patients. Nursing is considered to be a high-risk working group, that is high pressure and involves constantly having to handle the needs and emergency conditions of patients. This puts them in conditions with a higher risk of burnout. This cross-sectional study was carried out with nurses at general public hospitals in Banten, Indonesia. Data were collected from January to March 2021. All participants were staff nurses in either the medical, surgical, obstetric, or pediatric care units working in direct care. The total sample was 180. Convenience sampling was used. Burnout was measured using the Maslach Burnout Inventory Human Service Survey. The patient's perception of nursing care quality was measured using a modified instrument. Linear regression analyses were used to investigate the factors associated with quality of care. Most of the nurses (58.33%) had a nursing diploma, and 7% had been married. Approximately 70% were nurses at the level 1 to 3 range. The mean score was 3.56 (SD = 1.33). The highest domains score was comfort (4.24, SD = 1.44), and the lowest score was physical environment (2.89, SD = 0.81). Burnout and quality of care showed a significant correlation with r ranging from 0.37 to 0.65, with $p < 0.05$. Nurses are the largest segment of healthcare professionals and so measuring the quality of nursing care is critical for improving practice. Interventions to improve nursing care quality by considering nurse burnout are needed.

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1. Introduction

Nurses are legally liable and morally responsible for the quality of the care they provide to patients [1] They are aware of its responsibility for the quality of its care provision to the patients, the institution, ethics, laws and professional standards, and how its performance contributes to the assessment of care and patient satisfaction. Patient can experience negative healthcare when nursing care is sub-optimal [2]. Previous studies have found that a lack of high-quality nursing care increases the risk of negative outcomes for patients, including urinary tract infections, falls, pressure ulcers, critical

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incidents, readmission, failure to rescue and mortality rates [3–5]. In addition, study suggested that improving the quality of care is important worldwide, which cost about \$1.3 trillion and takes care of about 1.5 million over 65-year-olds each year [6].

The international study was carried out in South Korea, Japan, China and Germany identified that the standard of nursing care was as good or as poor as 68%, 60%, 30% and 20% respectively [7]. Studies in Tanzania reported that more than half described staff interactions that were disrespectful, not polite, or not helpful only 51% of patients had time to ask questions [8]. Moreover, in in-depth interviews and birth narratives, 46% of patients highlighted harassing or disrespectful care and 38% reported ignoring or dismissing their queries. Similarly, in other settings, negative nursing quality reporting seems to be mainly based on qualitative methods [9]. Moreover, a study of user satisfaction predictors in nursing showed that very higher customer satisfaction ratings can represent an incomprehension of exposure, particularly in low-income patients [10].

Nursing is considered to be a high-risk working group, high pressure and constantly having to handle the needs and emergency conditions of patients, perhaps putting them in a condition with a higher risk of burnout profession [11]. Among young nurses, study reported that short-staffing and work-life interference are important factors influencing burnout. Developing nurse managers' authentic leadership behaviours and working with them to create and sustain empowering work environments may help reduce burnout, increase nurse job satisfaction and improve patient care quality [12]. A study in Oman reported that a foundation for quality of care, and staffing adequacy were predictors of burnout among nurses and perceived quality of care [13]. Therefore, this study aimed to explore relationship between burnout and quality of care among nurses in Banten, Indonesia.

2. Methods

2.1. Study design

A cross-sectional study was carried out the Nurses at general public hospitals in Banten, Indonesia. Data was collected from January to March 2021.

2.2. Sample

The target population of this study was a nurse and patients at two general public hospital located in Serang Banten, Indonesia. Banten general public hospital with 500

to 6000 beds respectively. In total there were about 518 nurses working at two general public hospital in Serang, Banten Indonesia. All participants were staff nurses in either the medical, surgical, obstetric, and pediatric care units working in direct care. One of the investigators invited participants to volunteer to take part in the study. Respondents could electronically complete the self-report questionnaires either at home and/or in the hospital.

The sample size was calculated using G-Power Software version 3.1.6 using the F test assumed to be $\alpha = 0.05$, effect size = 0.15 (Cohen et al 1995 medium effect size), power level = 0.95. It was result in an estimate of 150 for the minimum sample and assuming an attrition rate of 15 percent, so the total minimum sample is 180. Convenience sampling technique was used. Participants was recruited from medical surgical, obstetric, and pediatric care units.

2.3. Instrument

The patient's perception of nursing quality care which is a modified instrument originally developed by Senarath et al. (2011). This instrument measure quality of care according to interpersonal aspects (.68–.85), efficiency (.62–.79), competency (.66–.68), comfort (.60–.84), physical environment (.65–.82), cleanliness (.81–.85), personalized information (.76–.83), and general instructions (.61–.78). The 5-point Likert scale ranged from fully agree (5) to fully satisfied (1), with an alternative one "do not know" (0). A high score meant high quality nursing care and was divided into three levels. The instrument had high Internal consistency (Cronbach's alpha = .91). (Senarath, 2011).

Burnout was measured using the Maslach Burnout Inventory Human Service Survey (MBI) [14], a 22-part survey of tested subscales [15,16] using 20 items covering three separate dimensions: emotional exhaustion (8 items), depersonalization (5 items) and personal execution (7 items). Respondents rated the frequencies with which they experience different job-related feelings on a scale of seven points, ranging from never to every day. High scores on emotional exhaustion and depersonalization, and low scores on the scale of personal accomplishment are considered burnout indicative.

2.4. Procedure

Nurses completed self-report surveys after providing written, informed consent. In the study period from January to March 2021, the total 518 nurses as well as 180 participants who participated in an online questionnaire. It was only after the researcher had

TABLE 1: Demographic and clinical characteristics and the score of quality of care among nurses (n=180)

	n	%	Quality of care			
			Mean	SD	t	p-value
Age, Mean ± SD	30.98±7.86					
Gender						
Male	120	66.67	3.67	1.02	2.65	0.006
Female	60	33.33	4.08	2.11		
Education level						
Diploma III	105	58.33	3.31	1.76	1.55	0.002
Bachelor	75	41.67	4.44	1.32		
Marital status						
Married	97	53.89	3.32	1.06	0.47	0.312
Single	83	46.11	3.64	1.43		
Working position						
Nurse level 1-3	126	70.00	3.44	1.17	0.47	0.010
Nurse level 3-5	54	30.00	4.29	1.45		
Working experience, Mean ± SD	10.34 ± 3.87					

fully discussed the aims of the investigation and gained managerial consent that he published information about the study. If any participants had questions as they went through the survey, the researcher was there to help them immediately.

2.5. Data analysis

This study was employed by the independent t test to describe different demographic of quality of care. Linear regression analyses were used to investigate the factors associated with quality of care. The statistical analyses were performed using SPSS for Windows (22.0), with 0.05 being considered statistically significant.

3. Results

Most of them (58.33%) had a nursing diploma, and 7% had been married. Approximately 70% were nurses at the level 1 to 3 range. Participants had an average of 18.87 years of nursing experience (SD = 6.34). Gender, education level, and working position was significantly different in terms of quality of care (Table 1).

Table 2 shows descriptive analysis of quality of care. The mean score was 3.56 (SD=1.33). The highest domains score was comfort (4.24, SD=1.44), with the lowest

TABLE 2: A descriptive statistic of quality of care (n=120)

	Mean \pm SD	Burnout r	p-value
Overall score	3.56 \pm 1.33	0.45	0.001
Interpersonal efficiency	3.02 \pm 1.51	0.65	0.001
Competency	3.65 \pm 1.87	0.38	0.001
Comfort	4.24 \pm 1.44	0.54	0.001
Physical environment	2.78 \pm 1.57	0.38	0.001
Cleanliness	2.89 \pm 0.81	0.44	0.001
Personalized information	3.54 \pm 1.03	0.52	0.001
General instructions	2.88 \pm 1.56	0.37	0.001

TABLE 3: Simple linear regression analysis results of quality of care among nurses (n=120)

Variable	Overall score β (SE)	p-value
Gender	0.113 (0.044)	0.001
Education level	0.245 (0.056)	0.001
Working position	0.299 (0.076)	0.001
Burnout	-0.308 (2.09)	0.001
R ²	0.327	

score was physical environment (2.89, SD=0.81). Burnout and quality of care showed a significant correlation with r ranged from 0.37 to 0.65, with $p < 0.05$.

Table 3 shows simple linear regression analysis results of quality of care. Gender, education level, working positions, and burnout was associated contributed significantly to the variance in quality of care with R square was 32.7% (Table 3).

4. Discussion

This study found that nurse has higher level of burnout. Recent study conducted in the US reported that higher prevalence of personal burnout was 52.7% (95%CI 50% to 55%), work-related burnout 47.5% (95%CI 45% to 49%) and patient/client-related burnout 20.3% (95%CI 18% to 22%) among clinicians and scientists [17]. Previous study found that the nurse burnout occurs not only with the freshly graduated nurses but also with the senior nurses, including the head nurses [18]. Research [19] about burnout in nurses in Taiwan, the results of his study obtained 54.0% of 1,846 nurses in Taiwan experienced burnout syndrome. Similar research was also carried out in Brazil which states that around 55.3% of 130 nurses experienced burnout, especially in the Intensive Care Unit [20]. In Indonesia, previous study reported that many of nurses (42.9%), especially in intensive care unit experienced emotional exhaustion and depersonalization [21].

Another study conducted in Jakarta found that the level of nurse burnout was higher and there was a significant relationship between burnout and nurse performance [22].

Findings of this study found that burnout significantly associated with quality of care. Prior studies have also examined the relationship between nurse burnout and quality of care. Findings indicated that across countries, higher levels of burnout were associated with poor quality of care [23,24]. [25] suggested that positive work environments were associated with lower nurse job dissatisfaction, less burnout, higher quality of care, and safer care. Burnout largely and directly influenced quality nursing care, which was followed by work environment and patient-to-nurse ratio. Job satisfaction indirectly affected quality nursing care through burnout [26]. Among young nurses, study reported that short-staffing and work-life interference are important factors influencing burnout. Developing nurse managers' authentic leadership behaviours and working with them to create and sustain empowering work environments may help reduce burnout, increase nurse job satisfaction and improve patient care quality [12]. A study in Oman reported that a foundation for quality of care, and staffing adequacy were predictors of burnout among nurses and perceived quality of care [13].

5. Conclusion

This study found that nurse's quality of care was moderate. Gender, education level, and working position was significantly different in terms of quality of care. Burnout was significantly associated with nursing quality of care. Nurses are the largest segment of healthcare professionals and so measuring the quality of nursing care is critical to improving practice. Poor nursing quality can significantly increase negative outcomes for patients, such as infection with the urinary tract, falling patients, pressure ulcers, critical incident and readmission. Intervention to improve nurse quality of care by considering nurse burnout is needed.

Conflict of interest

None.

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