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Relationship Between Empowerment and Patient Safety Culture Among Nurses in Indonesia: A Cross Culture Study

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ABSTRACT

Introduction: The relationship between nurse empowerment and the patient safety culture has only been studied in a few research. Encouraging patient safety culture and enhancing quality nursing care requires a study that confirms the link between empowerment and patient safety culture. **Methods:** This study used a cross-sectional research design to examine the relationship between empowerment on patient safety culture of nurses in Banten, Indonesia. A convenience sampling method was used in this investigation. The instrument used in this study was empowerment and the hospital survey on patient safety culture (HSPSC). A multiple linear regression analysis was used. About 150 nurses completed the questionnaires. **Results:** Their mean age was 37.6 years (SD = 5.42), and they had an average of 17. 20 years of work experience (SD=4.30). The mean of nurse empowerment was 3.55 (SD=1.19); the highest mean score was competence (mean=3.98, SD=1.05) and the lowest score was meaningfulness (SD=3.00, SD=1.55). The mean of patient safety culture was 3.72 (SD = 1.03); the highest mean score was teamwork (mean=3.56, SD=1.11) and the lowest score was response to error (SD=3.03, SD=1.78). Age, working experience, working unit, and nurse empowerment explained 45.6% of patient safety culture. According to the findings of this study, empowerment is one of the factors that influence patient safety culture. **Conclusion:** Efforts must be made by management to boost the empowerment of nurses when they engage in professional nursing practices, in addition to implementing various intervention programs and cultural improvement initiatives.

Keywords: Nurse, Empowerment, Patient safety, Culture

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INTRODUCTION

Patient safety is regarded as critical to the quality of health care. Patient safety, as defined by the World Health Organization, is "the prevention of errors and harmful effect on health-care patients" (1). The World Health Organization (WHO) established the Patient Safety Friendly Hospital Initiative (PSFHI) to foster a culture of patient safety in hospitals (1). Despite a determined effort to improve patient safety, the occurrence of serious adverse events in the health care system continues to be a concern (2). Around 10% of all inpatient hospitalizations in affluent nations are expected to result in an obvious consequence. Adverse medication events, preventable death, and pressure ulcers are all examples of adverse events (3).

The dedication of nurses to providing care around the clock, as well as their communication with patients' loved ones and other medical professionals, greatly contribute to the quality of care and patients' sense of security. The likelihood of incident and poor outcomes decreases when nursing care is enhanced (4), and a better patient safety culture has been linked to a reduced risk of side effects and harmful events (5). Many patients are injured in the high-stakes settings of hospitals, including operating rooms, anesthesia units, obstetrics and gynecology departments, and other surgical units (6). Adverse outcomes happen in over half of all hospitals (34.35 to 83 percent) in surgical settings (7). Ensuring highly dependable care within operating environments requires a strong patient safety (8).

Nurse empowerment has been defined as a feeling of agency, independence from constraint, and psychological experience (9). Another conceptual perspective proposed that nurse empowerment is linked to knowledge and that authority is "executed rather than held" The nurse's sense of agency was significantly correlated with increased patient safety, according to a study of ICU nurses (10). A further study of 262 operating room nurses found that the more their degree of empowerment was, the larger the impact of patient safety culture awareness was found to be on the operations of the safety management team (11). Providing nurses with autonomy encourages them to speak up, which is beneficial to patient health, and when nurses are allowed to voice their opinions in circumstances threatening patient safety, behaviors connected to enhancing patient safety rise (11). Numerous researches have been conducted over the last decade on the topic of empowerment in relation to patient safety. The term "empowerment" is used to describe nurses' increased agency in influencing their colleagues' actions to improve patient safety (12).

There has been limited research into the correlation between nurse autonomy and an organization's emphasis on patient safety. Encouraging patient safety culture and enhancing quality nursing care requires a study that confirms the link between empowerment and patient safety culture. As a result, this study evaluated the relationship of empowerment on the patient safety culture of nurses in Banten, Indonesia.

MATERIALS AND METHODS

Study design
This study used a cross-sectional research design to examine the relationship between empowerment on patient safety culture of nurses in Banten, Indonesia.

Sample
The study participants were nurses from a public hospital in Banten, Indonesia. Nurses having more than one year of professional experience and a willingness to take part in the study met the eligibility criteria for this study. Nurses who are on sick or maternity leave were not included in this study. The sample size for this research was chosen using Cohen's tables (1992), with a power estimate of 0.8 and an alpha of 0.05. An extra 15% was added to account for missing data or patient dropouts. The total sample included 150 nurses. A convenience sampling method was used in this investigation.

Instruments
The Spritzer was used to measure levels of autonomy satisfaction (13) This is the Empowerment Scale for the Mind. Each of the 16 items on the scale,

which uses a Likert-type scoring system, is divided into four categories (meaningfulness, self-determination, competence, and impact). With a higher score, you have more agency. Choo's study (14) found Cronbach's alpha to be 0.86, while the current study found it to be 0.86.

In 2016, the Agency for Healthcare Research and Quality (AHRQ) of the U.S. Department of Health and Human Services developed the Hospital Survey on Patient Safety Culture (HSPSC) to operationally quantify perceptions of the safety culture within hospitals (15). There are a total of 42 items on a 5-point Likert scale, distributed over 12 safety culture composites, that make up this instrument. Cronbach's alpha was 0.85 in the current study, while it was 0.70 in a previous study (16).

People who took part in this study were asked about their age, gender, marital status, level of education, working years, and graduate degree. The participants' marital status was classified into two categories: married and unmarried (or single). The educational level was classified into two categories: diploma III and bachelors.

Data collection
The protocol for the whole study was approved by the Institutional Review Board. People who volunteered for the study were given the opportunity to give their informed permission. Requests for approval from nursing directors at the facilities named were made prior to data collection, as required by law. Prior to participating in the study, all participants were evaluated using predetermined qualifying criteria and their informed consent was obtained. A Google form was used to send an online survey to respondents, who were requested to fill the questionnaires in their leisure time. To keep things private, participants were given random codes instead than being called by their first and last names. In order to secure the confidentiality of the data obtained, the lead investigator created a database that was password protected. Between October and December 2020, data was gathered from a group of consenting nurses.

Data analysis
A descriptive statistical technique was used to examine participants' general characteristics. The t-test was used to examine patient safety culture based on participant characteristics. Examining the relationships between nurse empowerment and patient safety culture was accomplished through the use of Pearson's correlation coefficient. A multiple linear regression analysis was carried out in order to uncover the elements that influence patient safety culture in hospitals. Statistically significant data were those with a p-value 0.05 or less. Statistical analysis

of the study results was carried out using the SPSS Statistics software for Windows 22 (IBM Corporation, Chicago).

RESULTS

Table I presents the detailed characteristics of the nurses. About 150 nurses completed the questionnaires. Their mean age was 37.6 years (SD = 5.42), and they had an average of 17.20 years of work experience (SD=4.30). The majority were female (86.7%), married (64%) and received a bachelor of studies in infirmary (62%). There was a significant correlation between nurses' variables and nurse empowerment. Older age, higher education, and longer working duration were positively associated with nurse empowerment and patient safety culture (p<0.05). Nurse empowerment was positively associated with patient safety culture (p=0.001) (Table I).

Regarding the descriptive statistics of other key study variables, the mean of nurse empowerment was 3.55 (SD=1.19), indicating moderate level of nurse empowerment. The highest mean score was competence (mean=3.98, SD=1.05) and the lowest score was meaningfulness (SD=3.00, SD=1.55). While, the mean of patient safety culture was 3.72 (SD = 1.03), which was interpreted as 'moderate patients safety culture'. The highest mean score was teamwork (mean=3.56, SD=1.11) and the lowest score was response to error (SD=3.03, SD=1.78) (Table II).

Table II shows a hierarchical regression of nurse empowerment on patient safety culture. In model 1, age, working experience, and working unit was significantly associated with higher patient safety culture with the R square was 0.307. Meanwhile in model 2, age, working experience, working unit, and nurse empowerment explained 45.6% of patient safety culture.

Table I : Demographic data of the respondents (n = 150)

Variables	Total	Nurse empowerment		Patient safety culture	
	n (%)	Mean ± SD	p-value	Mean ± SD	p-value
Age (years), Mean ± SD	37.6 ± 5.42		0.013		0.001
Sex					
Male	20 (13.3)	3.23 ± 1.44	0.419	3.88 ± 0.56	0.157
Female	130 (86.7)	3.57 ± 1.13		3.07 ± 0.75	
Education					
Diploma III	57 (38.0)	2.90 ± 1.18	0.006	3.12 ± 1.18	0.018
Bachelor	93 (62.0)	3.57 ± 0.89		4.09 ± 1.03	
Marital status					
Unmarried	54 (36.0)	3.88 ± 1.79	0.267	3.90 ± 1.04	0.516
Married	96 (64.0)	4.07 ± 2.05		3.89 ± 0.71	
Working status					
Permanent	118 (78.7)	2.99 ± 1.61	0.798	3.54 ± 0.42	0.329
Contract/temporary	32 (21.3)	3.11 ± 1.45		3.39 ± 0.73	
Working experience (year), Mean ± SD	18.20 ± 4.30		0.001		0.001
Nurse empowerment	3.55±1.19				0.001

Table II : Nurse empowerment and patient safety culture

Variable	Mean ± SD	Range	Cronbach Alpha
Empowerment	3.55±1.19	1-5	0.86
Meaningfulness	3.00±1.55	1-5	
Self-determination	3.29±1.18	1-5	
Competence	3.98±1.05	1-5	
Impact	3.39±0.56	1-5	
Patient safety culture		1-5	0.85
Teamwork	3.72±1.03	1-5	
Staffing and Work Pace		1-5	
Organizational Learning – Continuous Improvement	3.56±1.11	1-5	
Response to Error	3.03±1.78	1-5	
Supervisor, Manager, or Clinical Leader Support for Patient Safety	3.71±1.04	1-5	
Communication about Error	3.56±1.32	1-5	
Communication Openness	3.33±1.51	1-5	
Reporting Patient Safety Events	3.06±1.33	1-5	
Hospital Management Support for Patient Safety	3.58±1.50	1-5	

Table III : The effect of nurse empowerment on patient safety culture (n = 211)

	Patient safety culture			
	Model 1		Model 2	
	B (SE)	*p-value*	B (SE)	*p-value*
Age	0.52 (0.012)	0.001	0.46 (0.107)	0.001
Working experience	0.86 (0.045)	0.001	0. 88 (0.056)	0.001
Education level (diploma III vs. bachelor)	0.89 (0.067)	0.001	0.76 (0.034)	0.001
Nurse empowerment			0.98 (0.04)	0.001
R^2	0.307		0.456	

DISCUSSION

Patient safety and empowerment obtained an average of 3.55 and 3.72 points out of a possible 5, respectively. According to the results of this study, nurses in six hospitals (3.48) (16) and operation room nurses (3.67) (17) had similar levels of empowerment. Nurses in general operating rooms (4.22) (17) had similar outcomes to those on patient safety activities; however, nurses in diverse hospital sizes (3.75) (18) had greater results. When it comes to patient care, it is important for healthcare workers to feel comfortable speaking up when they notice something that could jeopardize their patients' well-being, as well as to be able to question those in positions of power (AHRQ, 2009). In six trials, the domain and patient safety and care quality results were correlated (19). For a health care institution to have a culture of safety, it must know what principles, behaviors, values, and rules are vital and what patient beliefs and perceptions are anticipated to be (20). Also, this study identified substantial differences in nurse empowerment based on the nurse's age, education, and experience. Statistics show that there was a statistically significant difference in empowerment based on general characteristics (16). There were significant disparities in patient safety activities based on age, education, and job experience. This will help nurses increase patient safety if the staff nurse is well-informed and plans to be empowered. A modest number of male nurses were enrolled in this study. Future research is required to validate this association.

Findings revealed a positive correlation between increased patient safety culture and increased levels of empowerment. A hospital patient safety initiatives may be compromised if nurses are not empowered. In order to improve patient safety, nurse empowerment must be implemented. Nurses' attitudes and behaviors are also influenced by the empowerment of nurses, allowing for better clinical decision-making and enhancing the overall quality of patient care. As a result, healthcare facilities must work to increase the autonomy of nurses. Improvements in patient safety climate, such as those connected to patient safety reporting systems, are also required, along with progressive system improvements that are checked one step at a time. There are certain limitations to this research. Results should be interpreted with caution due to the study's small sample size and reliance on self-reported data from nurses with over a year of experience at just four hospitals. Secondly, the study design, a cross-sectional one, meant that we couldn't draw any conclusions about cause and effect.

CONCLUSION

The purpose of this research was to develop a foundation for creating a safe hospital culture by tying nurse empowerment to patient safety. Empowerment was found to be a component in determining the patient safety culture. In order to promote nurses' autonomy when implementing professional nursing practices, management should make an effort, and there should be a variety of intervention programs and policies aimed at improving the culture of nursing.

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