Resident Safety Culture and Quality of Care in Nursing Homes

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Abstract: Nursing home residents are a vulnerable population to treatment errors and incidents. To reduce errors and incidents, a positive safety culture needs to be established. The study assessed the relationship between safety culture and quality of care (QOC) in a nursing home of East Java, Indonesia. This cross-sectional study involved 219 respondents recruited through multistage cluster samplings. This study included 13 nursing homes: 8 government-owned and 5 private nursing homes. SAQ-INA was used to assess safety culture, and questionnaires on perceived-based quality of care was used to assess QOC. The data were then analyzed using table frequencies, descriptive statistics, and the spearman test to determine the relationship between safety culture and quality of care. Safety culture was found to be significantly related to the quality of care (r = 0.000; p < 0.05). The highest and lowest mean (±SD) scores of safety culture were and quality of care were 55.93±5.844 and 21.50±2.327, respectively. The nursing homes need to improve service quality by increasing the resident safety through education or training in new staff orientation session.

1 INTRODUCTION

Issues around safety culture of nursing homes receive little attention. However, several organizations, such as The Joint Commission and the Institute of Medicine (IOM), are dedicated to improving patient safety, making patient safety a top care priority. Safety culture is an organization's commitment to health and safety management based on principles, behaviors, perceptions, and competencies. A positive safety culture includes work patterns, effective team communication, punitive response to mistakes, and collaborative learning (Castle et al., 2010). Safety culture plays a vital role in increasing staff awareness of safety issues, evaluating patient safety improvements and tracking changes in safety culture over time (Castle, 2006).

Hospitals are considered having developed safety culture when achieving better patient outcomes, such as reduced hospital mortality and provision of empirical support to implement safety culture. However, the outcomes are not likely found in less developed nursing homes. Setting up a safety culture

in nursing homes is a compliance with the government regulatory standards and care planning (Castle et al., 2010). The literature mentions that nursing homes lack safety control causing some problems such as drug use and adverse drug events, high rates of pressure ulcers, inadequate fall risk management, and ineffective infection control (Li et al., 2019).

Nursing homes are prone to treatment errors and adverse events. As the physical ability decreases, the social roles of the elderly decreases as well, thereby increasing elderly's dependence on others (Stone & Harahan, 2010). Elderly usually require multiple medications because they have several health problems including cognitive and sensory impairments that can lead to an increased risk of medical errors (Castle et al., 2010). Nursing homes may not accommodate elderly's needs as they experience a high workload, staff turnover, difficulties in recruiting competent new staff (Landers et al., 2016), and suboptimal quality of care (Castle & Ferguson, 2010; Social Welfare Services of East Java, 2017). In addition, nursing home is

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generally provided by certified nursing assistants who are not licensed (Arnetz et al., 2011). Most caregivers in nursing homes are social workers, followed by nurses and doctors (Edvardsson et al., 2019). Overall, staffing and demands are very important to consider for providing health safety in nursing homes. Achieving a safety culture requires leadership skills from providers including staff to understand the organization's values, beliefs, and norms about what is important and what attitudes and behaviors are expected (Castle et al., 2010).

Caregivers are human resources for health who, on the one hand, are the primary supporting agents focused on the quality of care (QOC). Elderly satisfaction is the main indicator of service standards to assess the quality of service provided (QOC). The attitude of officers will also have an impact on elderly satisfaction. The elderly needs will increase from time to time with demands for the quality of care (QOC). Thus, the elderly might pose subjective value (perception) of the quality of care (QOC) (Sorra et al., 2016). Elderly satisfaction with the healthcare service has emerged as a central concept for orphanage service management. The goal of a nursing home is to improve the quality of physical, social, and mental care with comfort and safety for elderly. Nursing homes provide elderly with various services that have been pre-planned and routine. This current study aimed to assess the relationship between safety culture and quality of care (QOC) in nursing homes of East Java, Indonesia.

2 METHODS

This study used a cross-sectional survey design with 219 respondents recruited using multistage cluster samplings. This study included 13 nursing homes in East Java: 8 government-owned and 5 private nursing homes. From July to October 2020, we conducted the research using the SAQ distributed to caregivers (on average, 15-20 caregivers per institution). A reminder one week before the deadline was sent to caregivers who participated in this study. The completed questionnaires were returned anonymously in boxes located in the nursing home ward to ensure confidentiality. Respondents in this study included nurses, social workers, security, cleaning services, kitchen workers, and officers who worked directly with the elderly.

2.1 Data Collection

The Indonesian version of the Safety Attitudes Questionnaire (SAQ-INA) was used to assess patient safety culture. The SAQ-INA was a 14-item questionnaire which required respondents to rate their level of agreement on a 5-point scale: 1 = strongly disagree, 2 = slightly disagree, 3 = neutral, 4 = slightly agree, and 5 = strongly agree. "Not applicable" was included as a response category for all questions and was combined with missing values in the data analyses. Negative item scores were reversed to obtain higher scores in the data set, indicating a more positive evaluation of patient safety culture in nursing homes. Besides, the Perceived Team-based Quality of Care (QOC) version was utilized to assess care quality. The instrument consisted of five items with a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

2.2 Methods of Data Analysis

For statistical analysis, IBM SPSS Statistics for Windows, Version 22.0, was used. The population and patterns of the collected data were described using descriptive statistics and frequency tables. The Spearman test was used to examine the relationship between safety culture and quality of care (QOC).

2.3 Ethical Considerations

This study was based on data on patient safety culture obtained from nursing homes. It was done under the National Health Research and Development Ethics Commission's guidelines. All participants were given written information about the research objective and were assured about their data anonymity and confidentiality. The ethical approval for this study was obtained from the Commission for Health Research Ethics, Faculty of Nursing, Universitas Airlangga (Number of Ethical Approval: 2007-KEPK).

3 RESULTS

This study included 219 respondents from 13 nursing homes in East Java, Indonesia. Table 1 shows the basic characteristics of the respondents. The majority of respondents (56.2%) are female, and the average age of nursing home staff workers (28.7%) is between 36 and 45 years old. Medical personnel make up the majority of jobs (50.75%).

Table 1: Characteristics of 219 caregivers in 13 nursing homes, East Java, Indonesia.

		Number	Percent (%)
Gender	Male	96	43.8
	Female	123	56.2
Age	17 – 25	31	14.1
	26 – 35	50	22.8
	36 – 45	63	28.7
	46 – 55	60	27.3
	56 – 60	15	6.84
Type of work	Medical staff	111	50.7
	Managerial	44	20.0
	Supporting staff	59	26.9
	Therapists	5	2.28

Our study showed a significant relationship between safety culture with quality of care (QOC) in the nursing homes. Safety culture was significantly associated with quality of care ($r = 0.000$; $p < 0.05$). The highest and lowest mean (±SD) scores of safety culture were 55.93±5.844. In addition, the quality of care had the lowest and highest scores of 21.50±2.327 (Table 2).

Table 2: Descriptive statistics for QOC and SAQ.

	N	Min	Max	Mean	Std. Deviation
PercQOC	219	11	25	21.50	2.327
SAQIna	219	33	70	55.93	5.844

4 DISCUSSION

This study found that patient safety culture had a significant relationship with quality of care in nursing homes. A patient safety culture is a commitment to safety around the healthcare organization. This includes being willing to discuss procedural errors, process improvements, and system issues without fear of repercussions (non-punitive to error) (Sorra et al., 2016). Safety culture also involves open communication to prevent recurring adverse events and develop strategies (Handler et al., 2006). Staffing, open communication, non-punitive response to errors, feedback, and communication about errors, hand-offs and transitions, management support for patient safety, and organizational learning are all identified as key measurement domains in patient safety culture at hospitals.

In a similar domain survey, nursing home staff (Handler et al., 2006) and administrators (Bonner et al., 2008) ranked hospital safety culture significantly lower than the associated groups. Convenient work environments and communication about patient safety-related incidents may also contribute to be key aspects of safety culture in hospital and nursing home settings (Bonner et al., 2008). Additional aspects, such as training and skills, teamwork, and adherence to procedures are significant to identify safety culture of either hospitals or nursing homes (Teigné et al., 2019). Adherence to procedures is regarded as critical for safe work practices (Famolaro et al., 2016).

Creating a patient safety culture could improve patient safety and quality of care. Assessing key aspects can be used in patient safety culture assessment. The need to provide responsive quality service might be imposed by elderly patients, and thus speed and readiness of caregivers in dealing with complaints are important to improve patient safety culture. Bondevik et al. (2017) discovered that increasing age and job position are related to patient safety factors, teamwork climate, safety climate, job satisfaction, and working conditions. The most important factor of patient trust is the quality of care which thus creates customer loyalty and satisfaction. Patient safety culture is determined by the quality of service. Hence, the improvement in quality of care can be measured from to what extent nursing homes apply patient safety culture (World Health Organization Europe, 2003). Performance and service quality will be successful if the customer's needs, desires, and expectations are met. This indicates quality of services has a significant effect on patient satisfaction (Erdfelder et al., 2009).

5 CONCLUSION

One of the determinants of service quality in nursing homes is safety culture. This study can provide nursing homes with the initial information to model interventions for safety culture, such as improving working conditions to increase job satisfaction, lowering the risk of medication-related errors and fall injuries, and improving quality of communication among caregivers. A final note is that the nursing homes need to improve service quality by increasing their safety culture. More research is needed to study the relationship between safety culture and other quality-of-care indicators such as the incidence of falls, pressure ulcers, malnutrition, injury, and others.

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