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THE CULTURE OF PATIENT SAFETY IN ANESTHESIOLOGY NURSING SERVICES

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ABSTRACT
Patient safety principles have not been optimally implemented in anesthesiology services. Nurse anesthetists, as providers of anesthetic nursing services, must have a good patient safety culture so that they can ensure patients remain safe during the anesthesia process. This study aims to determine the description of patient safety culture among nurse anesthetists in Indonesia. This quantitative study with a cross-sectional approach involved 369 nurse anesthetists as samples. The sampling technique used was purposive sampling. The research instrument used was the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire developed by the Agency for Healthcare Research and Quality (AHRQ) in Indonesian, with a Cronbach's Alpha value of ≥ 0.70 and a range of 0.809-0.918 for all items consisting of 12 components. Data analysis in this study used descriptive statistics, namely frequency distribution with percentage or proportion measures. This study shows that the majority of nurse anesthetists have a patient safety culture in the poor category (57%), with the lowest scores in the dimensions of non-punitive response to errors and staffing, while the highest scores were in the dimension of teamwork within the unit. Service providers need to take proactive measures to identify and change system weaknesses at all levels of service.

Keywords: non-punitive response; nurse anesthetist; patient safety culture; teamwork

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INTRODUCTION

Patient safety is a fundamental principle applied by healthcare providers to ensure that patients are safe and protected from harm (Patrisia et al., 2022). Nurse anesthetists, as healthcare professionals, also apply this principle of patient safety to ensure that patients undergoing surgery with anesthesia are protected from various risks. Patient safety is important in every surgical procedure involving anesthesia. This is because surgical procedures are high-risk procedures that can expose patients to the possibility of permanent loss or injury. Every surgical procedure involves punctures or incisions in the skin, or the insertion of instruments or foreign objects into the body (Donaldson et al., 2020).

Globally, the performance of anesthesia providers is still categorized as poor in the domain of patient safety. The results of a study conducted by (Pereira et al., 2022) found that most anesthesia residents in North America, Europe, and Asia have a poor understanding of patient safety. Another study conducted in Ukraine by (Bielka et al., 2022) found that 79.1% of respondents were aware of patient safety in anesthesiology, but only 40.3% applied these patient safety principles in the institutions where they worked, and as many as 28.2% of respondents had never heard of the WHO Surgical Safety Checklist. The WHO Surgical Safety Checklist serves as a communication tool that can encourage all healthcare workers in the operating room to improve quality and reduce the risk of complications or death in patients. Communication is a factor that contributes to patient injury. At least one

communication failure that contributes to patient injury occurs in 43% of cases (Douglas et al., 2021).

Patient Safety Incidents (PSI) were voluntarily reported by anesthesiologists at a rate of 0.17% (847 cases out of 452,974 anesthetic procedures), consisting of airway-related incidents (27%), heart, brain, and vascular system-related incidents (13%), and pharmacologic-related incidents (10%) (Zhang et al., 2021). PSI in anesthesia services occurred because anesthesiologists, including nurse anesthetists, did not test anesthesia equipment during the pre-induction period (29.78%), did not perform adequate ventilation evaluation during induction (46.81%), and did not perform tracheal aspiration assistance during the anesthesia termination process (21.98%) (Lemos & Poveda, 2020).

Patient safety goals are also implemented in Indonesia. The results of a study conducted by (Murtiningtyas & Dhamanti, 2022) found that on average, hospitals already have regulations and procedures governing patient identification, but in reality, what happens in the field does not comply with the regulations that have been determined, so that the overall implementation of identification is not yet optimal. Another study conducted by Basri & Purnamasari (2021) found different results. This study found that correct patient identification was achieved at 91.5%, the implementation of effective communication and the correct location, procedure, and patient for surgery was achieved at 100%, the improvement in the safety of drugs that need to be watched out for was achieved at 94.9%, the implementation of reducing the risk of healthcare-associated infections was achieved at 94.9%, and the implementation of reducing the risk of patient falls was achieved at 96.6%. Overall, the implementation of patient safety goals was generally in the good category at 81.4%.

Nurse anesthetists work in operating rooms and are involved in all types of invasive procedures that can cause death or complications (Nurhayati, 2022). Patient safety is also very important for nurse anesthetists. Nurse anesthetists can provide safe anesthesia nursing care by promoting a culture of patient safety. The more positive the patient safety culture, the greater the efforts to improve patient safety. In addition, when nurse anesthetists implement a patient safety culture, they will unconsciously perform all actions or procedures in accordance with hospital standards, thereby creating a safe working environment (Patrisia et al., 2022).

Given that there is not much literature discussing the patient safety culture of nurse anesthetists in providing anesthesia nursing care, it is necessary to know more details about the patient safety culture of nurse anesthetists in Indonesia. This study aims to determine the description of the patient safety culture of nurse anesthetists in the domains of teamwork within the unit, expectations and actions of supervisors/managers, organizational learning-continuous improvement, management support for patient safety, overall perceptions of patient safety, feedback and communication about errors, openness of communication, frequency of reported events, cross-unit teamwork, staffing, handover and transition, and non-punitive response to errors. It is hoped that the results of this study will provide a detailed picture of the extent to which nurse anesthetists in Indonesia implement a patient safety culture and that these findings can be used as considerations in formulating policies and programs to optimize the active involvement of nurse anesthetists in improving the quality of anesthesia services.

METHOD

This quantitative research using a cross-sectional study approach involved 399 nurse anesthetists as samples based on the Slovin formula. The sampling technique used was

purposive sampling. The nurse anesthetists involved in this study met several requirements, including: 1) actively working in a hospital, 2) having a valid Registration Certificate (STR), 3) having a minimum of 1 year of work experience, and 4) willing to be a respondent. The research instrument used was the Hospital Survey on Patient Safety Culture (HSOPSC) questionnaire developed by the Agency for Healthcare Research and Quality (AHRQ) in Indonesian with a Cronbach's Alpha value ≥ 0.70 with a range of 0.809-0.918 on all items consisting of 12 components (Tambajong et al., 2022). Patient safety culture was measured using a Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). Each respondent filled out the questionnaire via Google Form. Data analysis for this study used descriptive statistics, namely frequency distribution with percentage or proportion measures. This study was approved by the ITEKES Bali Research Ethics Commission (Number: 04.0577/KEPITEKES-BALI/XI/2022).

RESULT

Table 1.
General characteristics of nurse anesthetists (n=369)

characteristics	f	%
Gender		
Male	296	80
Female	73	20
Education		
D III	194	53
D IV	138	37
S1	33	9
S2	4	1
length of service		
< 13 tahun	217	59
≥13 tahun	152	41

Table 1. Provides details of the general characteristics of 369 nurse anesthetists, the majority of whom are male (80%). Nurse anesthetists with a D III education make up 53%. Furthermore, those with < 13 years of work experience make up 59%.

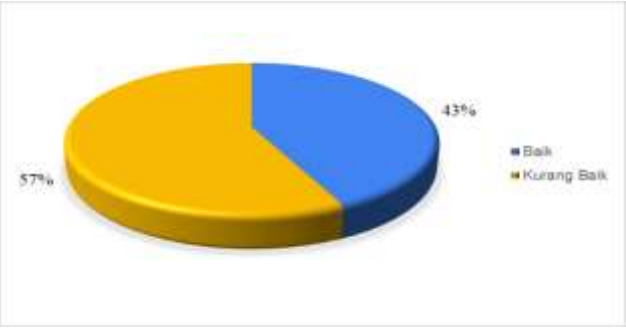

Figure 1. Patient safety culture among nurse anesthetists

Figure 1. Provides an overview of patient safety culture among 369 nurse anesthetists. The majority of nurse anesthetists (57%) have a patient safety culture that is categorized as poor.

DISCUSSION

This study shows that the majority of nurse anesthetists have a patient safety culture in the poor category, at 57%. These results were obtained after analyzing 12 components of patient safety culture, namely teamwork within the unit, expectations and actions of supervisors/managers in promoting patient safety, organizational learning and continuous improvement, management support for patient safety, overall perceptions of patient safety,

feedback and communication about errors, openness of communication, frequency of reported incidents, teamwork worldwide, staffing, handover and transition, and non-punitive response to errors (Tambajong et al., 2022). The existence of a poor patient safety culture indicates that most nurse anesthetists have poor habits in applying basic principles to ensure patient safety during the provision of anesthetic nursing care. To the best of the researchers' knowledge, there is no literature that specifically discusses patient safety culture involving nurse anesthetists.

The poor patient safety culture among nurse anesthetists was most evident in nonpunitive responses to errors (59%) and staffing (53%). These findings are consistent with those of a study conducted by Imelda & Wibowo (2018), which found that the weakest dimensions of patient safety culture were staffing and nonpunitive responses to errors. Other studies have also found similar results. A study conducted by (Al-Surimi et al., 2022) found that the dimensions of patient safety culture with the lowest scores were staffing (26.5%) and non-punitive response to errors (22.1%). Even a study conducted by (Ali Ali et al., 2022) in Egypt also found that the dimension of non-punitive response to errors had the lowest score of 18.9%. Meanwhile, other studies found different results. A study conducted by (Mrayyan, 2022) found that the strengths of patient safety culture were non-punitive response to errors and teamwork within the unit.

A nonpunitive response to errors is a key dimension of patient safety culture that describes the extent to which nurse anesthetists feel that errors are blamed on them and that they feel that when they report an incident, it will be recorded in their personnel files (Kumah, 2025). Another study conducted by (Mahjoub et al., 2016) at Farhat Hached University Hospital (Sousse – Tunisia) also found that 50.9% of respondents felt they were not free to question their superiors' decisions or actions. This is despite the government having launched patient safety programs such as the National Patient Safety Committee (KNKP) and Patient Quality and Safety Improvement (PMKP). These programs are intended to encourage healthcare workers, including nurse anesthetists, to report errors or near misses into the patient safety reporting system. However, in reality, the work environment of nurse anesthetists has not yet become a place where they can speak openly about errors and systemic problems without fear of punishment. This tends to make it difficult for nurse anesthetists to perform their best work in various situations. This is supported by the results of this study, which found that 53% of nurse anesthetists reported no incidents during the past 12 months. Service providers must be committed to proactively identifying and changing system weaknesses at all levels of service, thereby creating a work environment that minimizes errors and focuses on safety.

The staffing dimension is also one of the weakest dimensions of patient safety culture among nurse anesthetists. The staffing dimension describes the extent to which there are sufficient staff (nurse anesthetists) to handle the workload and working hours appropriate for providing optimal anesthetic nursing care (Kumah, 2025). The results of this study differ from those of a study conducted by (Lu et al., 2022), which found that work fatigue (burnout) was not related to patient safety culture. This is supported by the results of a study conducted by (Devi et al., 2022), which found that the majority of nurse anesthetists had low levels of work fatigue (81%). The low level of work fatigue in this category means that the majority of nurse anesthetists do not lose their enthusiasm for providing anesthetic nursing care. Nurse anesthetists have been working in positions that match their abilities, resulting in optimal performance. Although nurse anesthetists have demonstrated good performance, there are several issues related to personnel management that may be linked to the low scores in this dimension. This study cannot explain how the involvement of the personnel management

process relates to the patient safety culture of nurse anesthetists, so further research is needed on this matter.

This study also found that the highest-scoring dimension of patient safety culture was teamwork within the unit, at 99%. This indicates that the majority of nurse anesthetists have the ability to work together synergistically in providing quality anesthesia nursing care. The results of this study are in line with research conducted by (Pimentel et al., 2017), which found that teamwork received the highest score of 69% among other dimensions of patient safety culture. Another study conducted by (Aboufour & Subbarayalu, 2022) in Saudi Arabia also found that the teamwork dimension had a score of 76%, reflecting that all hospital staff respected their fellow staff members in the team.

The existence of this teamwork ability can certainly minimize communication errors during the process of providing anesthesia nursing care. If communication within the team is correct, it can improve patient safety. The results of this study are in line with the results of a study conducted by (Febriansyah et al., 2020) in Bekasi, which found that teamwork within the unit is the most dominant factor in patient safety culture. Teamwork within the unit is very important in order to improve the patient safety culture of nurse anesthetists, so trust, communication, and effective leadership are needed to maintain this.

CONCLUSION

The majority of nurse anesthetists have a patient safety culture that is categorized as poor. This indicates that nurse anesthetists have not optimally implemented patient safety principles. The highest dimension of patient safety culture among nurse anesthetists is teamwork within the unit, while the dimensions of nonpunitive response to errors and staffing have the lowest scores.

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