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THE EFFECT OF NURSES' CARING SERVICES ON THE ANXIETY LEVEL OF PATIENTS BEFORE SURGERY AT RSKD DUREN SAWIT IN 2025

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Abstract

Preoperative anxiety is a common psychological response experienced by patients before surgery, characterized by feelings of worry, fear, and tension. High anxiety levels can adversely affect hemodynamic stability, increase oxygen demand, prolong recovery time, and increase the risk of intraoperative complications. Caring services provided by nurses play a crucial role in reducing preoperative anxiety through therapeutic communication, emotional support, and comprehensive patient education. Research objective to determine the relationship between nurse caring services and anxiety levels of preoperative patients. Research method this study used a cross-sectional analytical design. The sample consisted of 94 preoperative patients at the Central Surgery Installation of Duren Sawit Regional General Hospital, East Jakarta, in November-December 2025. The sampling technique used was consecutive sampling. Data were collected using the Swanson Caring questionnaire and Hamilton Anxiety Rating Scale (HARS). Univariate and bivariate analyses were conducted using Spearman Rank correlation test. Research results all respondents (100%) rated nurse caring services in the good/optimal category (mean score 9.87). The majority of respondents experienced mild anxiety (64.9%), moderate anxiety (33.0%), and severe anxiety (2.1%) with a mean HARS score of 19.53. There was no significant relationship between nurse caring services and preoperative anxiety levels (p-value 0.098, r=0.172). However, there was a significant difference in anxiety levels between male and female patients (p-value 0.025), with females having higher anxiety levels. Conclusions and recommendations although no significant statistical relationship was found between nurse caring services and preoperative anxiety levels, caring services remain clinically important in creating a therapeutic environment. Female patients require more intensive interventions to manage preoperative anxiety. Future research should use longitudinal designs and more sensitive instruments to measure caring variations.

Keywords: Caring Services, Preoperative Anxiety, Nursing Care, Perioperative Nursing

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INTRODUCTION

Surgery is a critical healthcare service and an integral part of modern medical management, both for elective and emergency cases. According to the World Health Organization (WHO) report in 2022, more than 300 million surgical procedures are performed annually worldwide, emphasizing the urgency and central role of surgery in the global healthcare system. Surgical procedures are performed not only for life-saving purposes but also as part of chronic disease management and improvement of patients' quality of life. Despite technological advances in surgical methods, major challenges remain in ensuring equitable access to safe and affordable surgical services, particularly in developing countries (WHO, 2022).

In Indonesia, the Ministry of Health (2021) reported that surgical procedures ranked 11th among the 50 most common diseases treated in hospitals. With the increasing number of trauma cases, degenerative diseases, and emergency conditions, surgical rates continue to rise with approximately 1.2 million procedures per year. This situation demands readiness of healthcare professionals, including nurses, to provide optimal services not only in physiological aspects but also in psychological aspects of patients. With the number of hospitals in Indonesia continuing to increase to more than 3,200 units in 2025, the need for competent healthcare workers in providing quality surgical services is increasingly urgent (Ministry of Health RI, 2023).

One of the psychological responses frequently experienced by patients before surgery is preoperative anxiety. Anxiety arises due to fears of pain, complications, unexpected surgical outcomes, and even death (Stuart & Laraia, 2022). Anxiety symptoms can manifest as physiological symptoms (increased blood pressure, pulse, respiration, tremor, sweating) and psychological symptoms (tension, restlessness, difficulty concentrating, panic). High anxiety levels in preoperative patients can worsen psychological and physiological conditions, thereby affecting surgical failure or postponement (Stuart & Laraia, 2022).

Recent research shows that preoperative anxiety can worsen hemodynamic stability, increase oxygen demand, prolong recovery time, and increase the risk of intraoperative complications (Zhang et al., 2024). A meta-analysis study by Liu et al. (2022) found that preoperative patients experienced anxiety with mild to very severe levels, with the highest prevalence in moderate anxiety. A prospective study by Henderson et al. (2023) on patients undergoing surgery confirmed that high preoperative anxiety is significantly associated with worse clinical outcomes.

Efforts to reduce preoperative patient anxiety can be undertaken through nurse caring services. Caring is the core of nursing practice that emphasizes attention, empathy, therapeutic communication, and emotional support (Watson, 2021). Caring provided by nurses can foster trust, provide a sense of security, and reduce patient anxiety levels. Recent studies show that structured preoperative nursing visits and interventions significantly reduce patient anxiety by increasing understanding of procedures and providing emotional support (Chen et al., 2023). Ghasemi et al. (2021) confirmed that systematic caring interventions by nurses can reduce preoperative anxiety, increase patients' sense of trust and security, and contribute to better surgical outcomes.

RSKD Duren Sawit, as a referral hospital in East Jakarta, serves various major and minor surgical procedures. A preliminary survey in the first quarter of 2025 showed that the number of surgical patients reached 876 elective and emergency patients, and most patients who were about to undergo surgery admitted to experiencing anxiety, triggered by lack of information, fear of procedures, and minimal emotional support from healthcare workers. This phenomenon indicates a gap between patients' psychological needs and the services provided, necessitating evaluation and improvement in the preoperative nursing service system.

METHODS

This analytical study used a cross-sectional design. The sample consisted of 94 preoperative patients who met the inclusion and exclusion criteria at the Central Surgery Installation of Duren Sawit Regional General Hospital (RSKD) in East Jakarta during November-December 2025. The sampling technique used was consecutive sampling.

Inclusion criteria: (1) adult patients aged 20-60 years; (2) patients undergoing elective surgery with general or regional anesthesia; (3) patients with full consciousness (GCS 15) and able to

communicate well in Indonesian; (4) patients willing to be research respondents and sign informed consent voluntarily; (5) patients with ASA physical status I-II.

Exclusion criteria: (1) patients with a history of mental disorders or under psychiatric treatment; (2) patients who had used sedatives or anxiolytics within 24 hours before anxiety measurement; (3) patients with severe hearing impairment, speech disorders, or other communication disorders; (4) patients with emergency surgical cases; (5) patients who refused to participate or withdrew from the study.

Data collection instruments consisted of: (1) demographic data questionnaire covering age, gender, education level, occupation, type of surgery, and type of anesthesia; (2) Caring Services questionnaire developed based on Swanson's Caring Theory covering five caring dimensions (maintaining belief, knowing, being with, doing for, enabling) consisting of 10 items with dichotomous scale (Yes=1, No=0), with total score ranging from 0-10 categorized as poor (0-5), fair (6-7), and good/optimal (8-10); (3) Hamilton Anxiety Rating Scale (HARS) 2020 edition consisting of 14 symptom groups with scores ranging from 0-56, categorized as no anxiety (<14), mild anxiety (14-20), moderate anxiety (21-27), severe anxiety (28-41), and panic (≥42).

Data analysis included univariate analysis to describe the frequency distribution of each variable and bivariate analysis using Spearman Rank correlation test to examine the relationship between nurse caring services and preoperative anxiety levels, with significance level $p<0.05$. Mann-Whitney test was used to examine differences in anxiety levels based on gender.

This research obtained ethical clearance from the Research Ethics Committee of Binawan University before data collection began. Ethical principles applied included autonomy, informed consent, anonymity, confidentiality, beneficence, and non-maleficence.

RESULTS AND DISCUSSION

Table 1. Respondent Characteristics (n=94)

Characteristics	n	%
Age		
Mean ± SD	44.48 ± 11.72	
20-29 years	9	9.6
30-39 years	17	18.1
40-49 years	30	31.9
50-60 years	38	40.4
Gender		
Male	50	53.2
Female	44	46.8
Education		
Elementary-Junior High	18	19.1
Senior High School	54	57.4
Diploma/Bachelor	22	23.4

Characteristics	n	%
Type of Surgery		
Minor surgery	63	67.0
Major surgery	31	33.0
Type of Anesthesia		
General anesthesia	10	10.6
Regional anesthesia	84	89.4
Previous Surgery Experience		
Never	60	63.8
Ever	34	36.2

Table 1 shows that the average age of respondents was 44.48 years (SD=11.72), with the youngest 20 years and oldest 60 years. The majority of respondents were male (53.2%), had senior high school education (57.4%), underwent minor surgery (67.0%), with regional anesthesia (89.4%), and had never had surgery before (63.8%).

Table 2. Frequency Distribution of Nurse Caring Services (n=94)

Caring Services Category	n	%
Poor (0-5)	0	0.0
Fair (6-7)	0	0.0
Good/Optimal (8-10)	94	100.0
Total	94	100.0
Mean ± SD	9.87 ± 0.366	
Min - Max	8 - 10	

Table 2 shows that all respondents (100%) rated nurse caring services in the good/optimal category with a mean score of 9.87 (SD=0.366).

Table 3. Frequency Distribution of Preoperative Anxiety Levels (n=94)

Anxiety Level	n	%
No anxiety (<14)	0	0.0
Mild anxiety (14-20)	61	64.9

Anxiety Level	**n**	**%**
Moderate anxiety (21-27)	31	33.0
Severe anxiety (28-41)	2	2.1
Panic (≥42)	0	0.0
Total	**94**	**100.0**
Mean ± SD	19.53 ± 3.82	
Min - Max	14 - 29	

Table 3 shows that the majority of respondents experienced mild anxiety (64.9%), moderate anxiety (33.0%), and severe anxiety (2.1%) with a mean HARS score of 19.53 (SD=3.82).

Table 4. Relationship Between Nurse Caring Services and Preoperative Anxiety Levels

Variable	**Anxiety Level**	**Correlation Test**
	Mild n (%)	Moderate n (%)
Caring Services		
Good/Optimal	61 (64.9)	31 (33.0)

*Spearman Rank correlation test

Table 4 shows that there was no significant relationship between nurse caring services and preoperative anxiety levels (p=0.098, r=0.172). The correlation coefficient indicates a very weak positive relationship, but it is not statistically significant.

Table 5. Differences in Anxiety Levels Based on Gender

Gender	**n**	**Mean Rank**	**p-value**
Male	50	41.63	0.025
Female	44	54.17	

*Mann-Whitney test

Table 5 shows that there was a significant difference in anxiety levels between male and female patients (p=0.025), with females having higher anxiety levels (mean rank 54.17) compared to males (mean rank 41.63).

Discussion

Respondent Characteristics

The results showed that the average age of respondents was 44.48 years with the youngest 20 years and oldest 60 years. Middle adulthood (40-60 years) is the group that most commonly undergoes surgical procedures because at this age the risk of degenerative diseases and health problems increases. Most respondents were male (53.2%), had senior high school education (57.4%), and underwent minor surgery (67.0%) with regional anesthesia (89.4%). This profile shows that patients undergoing surgery at RSKD Duren Sawit are mostly patients with minor surgical procedures using regional anesthesia. The fairly good education level (80.8% at least high school) indicates that respondents have good cognitive abilities to understand information related to surgical and anesthesia procedures provided by nurses.

Nurse Caring Services

The results showed that all respondents (100%) rated nurse caring services in the good/optimal category with a mean score of 9.87

out of a range of 0-10. This indicates that the caring behaviors of anesthesia nurses at RSKD Duren Sawit are excellent in implementing Swanson's five caring dimensions: maintaining belief, knowing, being with, doing for, and enabling. This finding aligns with research stating that anesthesia nurses who demonstrate good caring behaviors make patients feel cared for, valued, and treated as unique individuals. Optimal caring implementation includes introducing oneself clearly, showing attention, conducting comprehensive assessments, accompanying patients, listening to complaints, providing comfort, and calming anxious patients.

The achievement of optimal caring ratings by all respondents reflects the implementation of basic nursing principles consistent with Watson's (2021) and Swanson's (2021) theories. Caring elements such as competence, confidence, and commitment outlined by Sitzman & Watson (2024) appear to have been realized in clinical practice. Good caring creates therapeutic relationships essential for building patient trust, which is the foundation of effective communication and reduction of uncertainty—key factors in anxiety theory (Stuart & Laraia, 2022).

Preoperative Anxiety Levels

The results showed that most preoperative patients experienced mild anxiety (64.9%), moderate anxiety (33.0%), and severe anxiety (2.1%) with a mean HARS score of 19.53. No respondents were without anxiety, indicating that anxiety is a universal psychological response in patients about to undergo surgery. The most dominant anxiety symptoms were feelings of worry about surgery (80.9%), fear of bad things happening (73.4%), tension and inability to relax (64.9%), and appearing anxious during interviews (66.0%) at mild levels. Physical symptoms that emerged included cardiac symptoms (40.4%), urinary tract disorders (39.4%), and sleep disturbances (31.9%).

This finding is consistent with theory stating that preoperative anxiety is caused by fear of anesthesia procedures, postoperative pain, uncertain surgical outcomes, body image changes, and fear of death. Untreated anxiety can negatively impact patient recovery, increase analgesic needs, prolong hospitalization, and decrease patient satisfaction.

The prevalence of 100% anxiety with predominantly mild to moderate intensity is consistent with the meta-analysis findings of Zhang et al. (2024) which reported preoperative anxiety experienced by 60-92% of surgical patients. The manifestation of symptoms dominated by cognitive worries and mild autonomic symptoms is consistent with the description of anxiety as a multidimensional response to perceived threats (Stuart & Laraia, 2022).

Relationship Between Nurse Caring Services and Preoperative Anxiety

The results of the Spearman Rank correlation test showed no significant relationship between nurse caring services and preoperative anxiety levels ($r=0.172$, $p=0.098$). Although the direction of the relationship showed a very weak positive correlation, this relationship was not statistically meaningful because $p>0.05$. This result is not consistent with the research hypothesis stating that there is a relationship between nurse caring services and patient anxiety.

Several possibilities that can explain this result are:

Data Homogeneity: All respondents (100%) rated nurse caring services in the good/optimal category with very small score variation (SD=0.366) and narrow score range (8-10). The lack of sufficient variation in the caring variable makes it difficult to identify statistical relationships with the anxiety variable.

Other More Dominant Factors: Preoperative patient anxiety levels are influenced by many factors besides nurse caring, including demographic factors (age, gender, education), clinical factors (type of surgery, surgical history, type of anesthesia), psychological factors (coping mechanisms, personality, past experiences), and social factors (family support, marital status, economics). This study showed that gender had a significant effect on anxiety levels ($p=0.025$), with females having higher anxiety than males.

Measurement Timing: Caring and anxiety questionnaires were completed at the same time, 1-2 hours before surgery. During this period, patient anxiety may have already reached a high level due to anticipation of the procedure about to be performed. Although nurses had provided optimal caring, the anxiety-reducing effect may not have been optimal due to temporal proximity to the surgical procedure.

Measurement Instruments: The caring questionnaire used in this study employed a dichotomous scale (Yes/No) with 10 items which may be less sensitive to capturing variations in caring behavior compared to instruments using a Likert scale with more items. This can cause a

ceiling effect where most respondents give maximum ratings.

Sample Characteristics: The majority of respondents underwent minor surgery (67.0%) with regional anesthesia (89.4%) which generally has lower risk compared to major surgery with general anesthesia. This can lead to relatively homogeneous anxiety levels in the mild-moderate category, so the effect of caring on anxiety variation is not statistically detected.

Although there was no statistically significant relationship, clinically, optimal caring services (100% good category) concurrent with anxiety levels that are mostly mild (64.9%) indicate that caring still has important value in perioperative nursing services. Caring creates a therapeutic environment that supports patients' psychological well-being even if it does not directly reduce anxiety in the context of this study.

Differences in Anxiety Levels Based on Gender

The Mann-Whitney test results showed a significant difference in anxiety levels between male and female patients (p=0.025), with females having higher mean rank (54.17) compared to males (41.63). This finding is consistent with various studies showing that women tend to be more vulnerable to experiencing preoperative anxiety compared to men.

This difference can be explained from several aspects: (1) biological factors—women have hormonal fluctuations that can affect emotional responses; (2) psychological factors—women tend to be more expressive in expressing anxious feelings; (3) socio-cultural factors—women are more open in reporting anxiety symptoms; and (4) coping mechanisms—women tend to use emotion-focused coping while men use problem-focused coping.

The implication of this finding is that nurses need to give special attention and more intensive interventions to female patients in managing preoperative anxiety, including providing more detailed information, greater emotional support, and appropriate relaxation techniques.

CONCLUSION

Based on the research results on the relationship between nurse caring services and preoperative patient anxiety levels at the Central Surgery Installation of RSKD Duren Sawit, East Jakarta in 2025, the following can be concluded:

All respondents (100%) rated nurse caring services in the good/optimal category with a mean score of 9.87, indicating that caring behaviors of nurses covering Swanson's five caring dimensions have been implemented very well. The majority of preoperative patients experienced mild anxiety (64.9%), moderate anxiety (33.0%), and severe anxiety (2.1%) with a mean score of 19.53. The most dominant anxiety symptoms were worry about surgery (80.9%) and fear of bad things happening (73.4%).

There was no significant relationship between nurse caring services and preoperative patient anxiety levels (p=0.098). Nevertheless, optimal caring services remain important in creating a therapeutic environment for patients. There was a significant difference in anxiety levels between male and female patients (p=0.025), with females tending to have higher anxiety levels.

It is recommended that: (1) RSKD Duren Sawit maintain and improve the quality of nurse caring services through continuous training; (2) develop special intervention programs to reduce preoperative patient anxiety, especially for female patients; (3) increase comprehensive preoperative education; (4) future researchers conduct longitudinal design studies and use more sensitive caring instruments such as Likert scales to capture caring behavior variations; (5) control for confounding variables such as social support, coping mechanisms, and past experiences in future studies.

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