INDONESIAN NURSING SCIENCE JOURNAL

journal homepage: https://jurnal.panengeninsani.com/index.php/insj/

DIFFERENCES IN THE DESCRIPTION OF WORK STRESS IN CENTRAL SURGICAL INSTALLATION NURSES AND EMERGENCY INSTALLATION NURSES AT SUMEDANG REGIONAL GENERAL HOSPITAL

Dedah Ningrum[1*], Difa Nafisya Rizki[1] and Popi Sopiah[1]
Universitas Pendidikan Indonessia[1]

Corresponding Author

E-mail: dedahningrum@upi.edu

Abstract

Background: *Work stress is psychological pressure or disturbance caused by organizational and personal factors in the work environment. Although work stress can occur in various professions, jobs that involve interaction with other people tend to have higher levels of stress. Nurses as medical personnel who interact most directly with patients play a role in various aspects of the health service system and are vulnerable to experiencing significant work stress.* **Design:** *This type of research is quantitative using a cross sectional approach with a comparative descriptive design, using the DASS-21 questionnaire to determine stress levels.* **Setting(s):** *This research was conducted at the central surgical installation and emergency installation at the Sumedang regional general hospital.* **Participants:** *The population in the study were central surgical installation nurses and emergency installation nurses who worked at Sumedang Regional General Hospital, totaling 47 IBS nurses and 38 IGD nurses. With inclusion criteria:*
1) Nurses who work in the central surgical installation
2) Nurses who work in the emergency installation
3) Nurses who are willing to be research respondents
While the exclusion criteria used:
1) Nurses who are sick when data collectionhe
Methods: *Data analysis used a non-parametric statistical test, namely the Mann-Whitney Test processed with SPSS. This statistical test was carried out to compare two independent groups based on the median value.* **Results:** *The results of the Mann-Whitney Test statistical test which was carried out to compare the median values of the two groups obtained a p-value (0.001) with a Z value (-3.452)* **Conclusions:** *The two groups tested had significant differences.*

What is already known

Previous research has discussed similar things, but in previous research, few have explained the differences in stress in central surgical installations compared to other rooms.

What this paper adds

Therefore, in this study, the researcher wanted to see the difference in work stress in the central surgical installation with other rooms, the researcher chose the emergency installation. This includes updates so that there is no professional gap.

1. Background

1.1 Fundamental Phenomena

Job stress is psychological pressure or disturbance caused by organizational or personal factors in the work environment. Although job stress can occur in various professions, jobs that involve interaction with other people tend to have higher levels of stress. Nurses, as medical personnel who most often interact directly with patients, = in various aspects of the health care system and are susceptible to significant job stress (Aberhe et al., 2024).

The problem of job stress among nurses is a serious concern throughout the world, including in Indonesia. Research shows that the majority of nurses experience moderate to high levels of job stress, which has a negative impact on their satisfaction and performance. As an illustration, a study in Indonesia reported that 95.4% of nurses experienced stress, with many of them admitting that the higher the stress level, the lower their job satisfaction (Sinanto, 2023). Similar findings have also emerged in various global studies, which consistently show that high job stress is closely related to low job satisfaction among nurses (Said & El-Shafei, 2020; AbuAlRub et al., 2023; Baker & Alshehri, 2020).

Occupational stress among nurses is associated with decreased job satisfaction, decreased performance, and decreased quality of nursing care. In addition, this stress reduces the retention rate of the workforce, increases the resignation rate, and causes burnout. Its negative impact is also seen in the quality of life of nurses, especially related to health, and affects patient care outcomes (Aberhe et al., 2024).

According to the World Health Organization (WHO), occupational stress is a person's response to work demands and pressures that exceed their abilities, skills, or talents. The nursing profession ranks fourth as the most stressful job in the health sector, due to the complexity of the tasks and high responsibilities. Globally, the level of occupational stress in nurses varies, ranging from 47.8% in Ethiopia to 91.2% in Iran. This stress not only affects the mental and physical well-being of nurses, but also has a negative impact on the quality of care to patients.

Workplace stress commonly experienced by people who work or have worked in the workplace is a common disease. Certain aspects of the work environment are associated with higher levels of employee stress. These include high workloads and time constraints, limited opportunity for decision-making, overly tight provider control, and unclear criteria for competent work. Job stress experienced by health professionals, especially nurses, should not be ignored because it can have a negative impact on their physical and mental well-being (Riyanti & Rahmandani, 2020).

Various factors play a role in increasing job stress among nurses. Heavy workloads, inadequate compensation, and lack of management support are often identified as major causes of stress (Dahie, 2023; "Impact of Job Stress on Nurses' Job Satisfaction in a Public Hospital, Cross River State, Calabar, Nigeria", 2016). In Indonesia, this condition is further exacerbated by systemic problems in health services, such as understaffing and limited resources, which exacerbate the stress experienced by nurses (Sinanto, 2023; M., 2023). In addition, the emotional demands of this profession, especially in high-risk units such as emergency and intensive care, contribute to burnout and decreased job satisfaction (Ghawadra et al., 2019; Choi & Koh, 2015).

The impact of work stress is not only felt by nurses personally, but also affects the quality of patient care and the performance of the health system as a whole. High levels of stress among nurses can increase the desire to leave the job, which is a major challenge for health facilities in maintaining quality of care (Sharififard et al., 2019; Jawad et al., 2015). The ongoing cycle of stress and job dissatisfaction has the potential to worsen patient care outcomes, as stressed nurses tend to be less engaged and less effective in carrying out their duties (Baker & Alshehri, 2020; Wu et al., 2018).

The nature of the workplace may have an impact on stress. A poor work environment can pose threats and distractions, which can interfere with the nurse's ability to plan, make more mistakes in their duties, and become forgetful. The worker's response to adapt to new circumstances is a result of changes in working conditions. A worker will usually experience more work stress if they are less able to adapt to their current working conditions (Meta Agustina, 2022). Continuous stress can worsen the emotional, physical, and mental conditions of a nurse, which then has an impact and results in physical and mental fatigue due to the large amount of energy drained to deal with prolonged stress (Kusumawati & Dewi, 2021).

In addition, nurses not only experience an increase in workload, but are also forced to adapt to their work protocols. The complicated nature of care and heavy workload can potentially cause stress for nurses (Yıldırım & Yıldız,

2022).

1.2 Review of Previous Research

In a study conducted by Meta Agustina (2022), it was stated that the emergence of work stress in nurses can also be caused by excessive workload which can have a negative impact on their sleep quality. Physical and emotional fatigue are the main sources of work stress factors in nurses.

In line with the research results of Kristina Natalya Rewo et al., (2020) who explained that in Indonesia, there are several nurses at the Tangerang City Hospital which shows that 55.1% of nurses experience high levels of stress. Then there are also 80.3% of inpatient nurses at the Banten Hospital which shows that their nurses experience high levels of work stress.

Likewise, the results of Ramdani and Wartono's research in Rangkuti et al., (2022) presented the results of a survey conducted by PPNI in Ramdani and Wartono stating that around 50.9% of nurses in Indonesia experience work stress. Nurses who experience work stress usually complain of frequent dizziness, fatigue, and inability to rest due to high workloads that take up time.

There are several work factors that can cause psychological stress, including psychosocial factors and stress triggers related to work, for example, time pressure, low job control, little social support, imbalance of rewards for effort or work results, and work-life conflicts (Hämmig, 2020).

Thus, several symptoms of stress develop, including physical, emotional and behavioral stress that can interfere with work (Monica, 2023). Then the results of research by Subagiartha et al., (2024) stated that one of the risk factors for the occurrence of blood pressure disorders such as high blood pressure and low blood pressure is sleep quality. Blood pressure is the pressure of blood flow in the arteries that are pumped throughout the body through the arteries. Normally blood pressure will decrease when sleeping compared to when awake, this is due to a decrease in sympathetic nerve activity during sleep.

Then according to Meta Agustina (2022) in her research, she found that 8 people (66.7%) of those who experienced mild stress reported having better sleep quality, compared to 15 people (83.3%) of those who experienced severe stress reported worse sleep quality. Blood pressure can be affected by sleep quality, where poor sleep quality can cause hypertension and become a risk factor for hypertension.

The explanation regarding IBS nurses taken from research conducted by Syafi'i (2022), said that nurses in IBS (Central Surgical Installation) have the task of providing pre-operative, intra-operative, and post-operative perioperative nursing care is their task. The entry phase, time limit phase, and exit phase are the three stages of perioperative care. Given that IBS nurses have a fairly heavy workload, it is possible that they will feel stressed when providing nursing care. This is related to how many operations are performed in a day and how long it takes to complete the operation, both of which can cause work-related stress because an operation can take several hours. Then, the work environment owned by IBS nurses is also a work environment that is at very high risk of being contaminated with pathogens, because during surgery many pathogens are involved such as blood, vomit, feces, and others that are infectious, especially patients who are operated on have a history of infectious diseases.

Nurses in the emergency unit (ER) often face crises and unexpected situations. They are required to handle emergency or critical patients who need immediate treatment. In addition, they often face violence, witness death, perform resuscitation, and make quick decisions in life-threatening situations, which can increase stress levels. ER nurses also have to face challenges from the institutional side, such as inadequate support, changes in the appreciation system, and injustice in the organization. In addition, nursing is also a job where nurses require high concentration and have the principle of being fast and precise in serving patients. There are around 50% to 60% of health workers in hospitals and health centers who are dominated by nurses. In hospitals and health centers, 50% or 60% of health workers are nurses. Almost all lines of care in Indonesia experience high stress, as stated by the Indonesian National Nurses Association or PPNI, which states that around 50.9% of nurses in Indonesia experience work stress, some of the impacts that occur include dizziness, being unfriendly, fatigue, and lack of rest and sleep. However, on the other hand, the work that nurses do is none other than to be responsible for improving health such as preventing disease and curing or restoring patient health in accordance with the ethics and authority and responsibilities of the nursing profession (Sanger & Lainsamputty, 2022). In line with this research, there is also a suggestion from research conducted by Simon (2021) which states that detecting health problems in nurses can be done by the Hospital by conducting regular health checks, this activity can be carried out on all health workers, especially shift nurses, so that the findings of the health assessment can be a basic reference point for making shift schedules and providing information to nurses about the importance of maintaining high sleep standards during shift work.

1.3 Originality

The update in this study is to compare, or describe the differences in work stress of nurses in the Central Surgical Installation and in the Emergency Installation. This update underlines the gap in the profession, namely the Central Surgical Installation, which is seen in its differences with the Emergency Installation, and describes how the levels of stress differ in the two rooms..

1.4 Research Urgency

In addition to ensuring that there is no professional gap, this research was also conducted so that hospitals can control the physical health of their nurses, especially in rooms with heavy workloads, so that the percentage of work stress among nurses in Indonesia decreases.

1.5 Research Objectives

This study aims to determine the differences in the description of work stress in nurses at the Central Surgical Installation and nurses at the Emergency Installation at the Sumedang Regional General Hospital.

1.6 Literature Review

The theoretical concept in this study is taken from the theory proposed by Robert Karasek, where he describes work stress as follows :

1) Definition of Job Stress

Job stress is a condition of tension experienced by a person due to work demands that exceed their abilities or resources. This stress can trigger various physical, emotional, and behavioral reactions that can interfere with an individual's performance and well-being.

2) Factors Causing Work Stress

Factors that can trigger work stress include:
- Excessive workload
- Lack of control
- Interpersonal conflict
- Organizational change
- Unclear role demands

3) Impact of Work Stress

Work stress can cause various negative impacts, both physical and psychological, including:
- Physical impacts (headaches, digestive disorders, sleep problems, chronic fatigue, and decreased immune system)
- Psychological impacts (depression, anxiety, irritability, decreased concentration, and difficulty in making decisions)
- Behavioral impacts (absenteeism, decreased productivity, increased errors, and aggressive behavior)

4) Classification of Job Stress

Robert Karasek, classifies jobs into four categories based on the level of demand and level of control:
- Passive Type Jobs: These jobs tend to be boring and unsatisfying
- Active Type Jobs: These jobs are challenging and provide opportunities for self-development.
- Passive Type Jobs: These jobs are very tiring and have a high risk of causing stress
- Active Type Jobs: These jobs provide high autonomy but may be less challenging.

2. Methods

Researchers in this study used quantitative research types. Researchers also used a cross-sectional approach with a comparative descriptive design. Quoted from Nursalam in 2013 in Janah (2019) said that the Cross-Sectional approach is a study in which researchers measure or observe independent and dependent variable data only once at a time. Quantitative research is a type of research in which there is data from observations or measurements, in this study the researcher will present data by describing the differences in stress levels of Central Surgical Installation nurses and Emergency Installation nurses. Researchers use statistical analysis to help determine the meaning of the comparison between independent variables (central surgical installation and emergency installation) with dependent variables (work stress).

2.1 Research Participants

The population in the study were central surgical installation nurses and emergency installation nurses who worked at Sumedang Regional General Hospital, totaling 47 IBS nurses and 38 IGD nurses. With inclusion criteria:
1) Nurses who work in the central surgical installation
2) Nurses who work in the emergency installation
3) Nurses who are willing to be research respondents
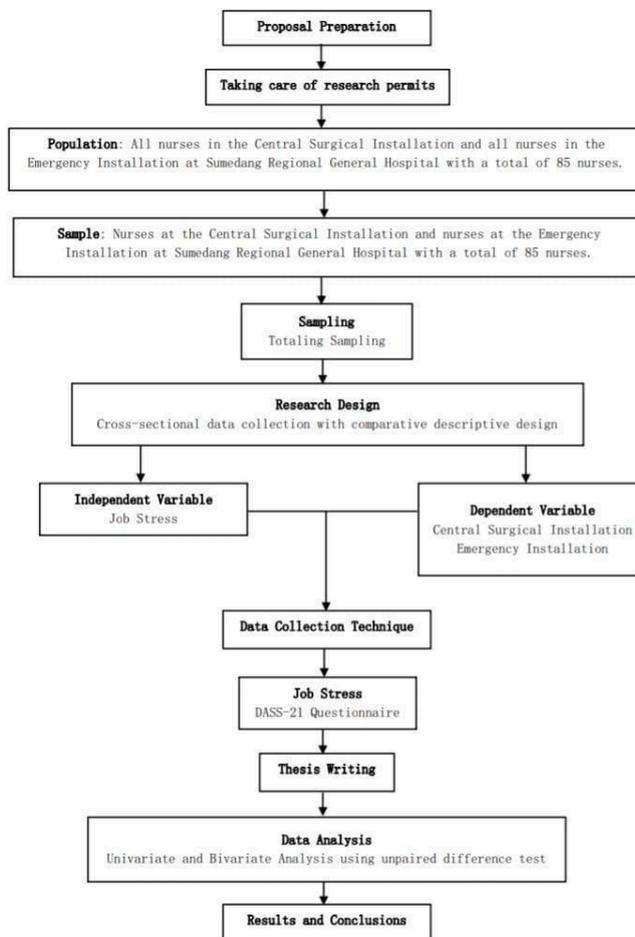While the exclusion criteria used:

1) Nurses who are sick when data collectionhe

The research location will be conducted at Sumedang Regional General Hospital, with a time span from November to December 2024.

This research has been declared to have passed the ethics test with the ethics pass number: 171/KEP/EC/UNW/2024. Ethics in research are needed to prevent unethical or unethical behavior or things that violate ethics.

2.2 Research Procedure

Table 1. How Research Works

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┌──────────────────────────┐
│   Proposal Preparation   │
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┌──────────────────────────┐
│ Taking care of research permits │
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             │
┌────────────────────────────────────────────────────┐
│ Population: All nurses in the Central Surgical      │
│ Installation and all nurses in the Emergency        │
│ Installation at Sumedang Regional General Hospital  │
│ with a total of 85 nurses.                          │
└────────────────────────────────────────────────────┘
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│ Sample: Nurses at the Central Surgical Installation │
│ and nurses at the Emergency Installation at Sumedang│
│ Regional General Hospital with a total of 85 nurses.│
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│        Sampling          │
│     Totaling Sampling    │
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┌──────────────────────────────────────────────────┐
│              Research Design                      │
│ Cross-sectional data collection with comparative  │
│ descriptive design                                │
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       │                           │
┌────────────────────┐   ┌──────────────────────────┐
│ Independent Variable│   │   Dependent Variable     │
│     Job Stress      │   │ Central Surgical Installation │
│                     │   │  Emergency Installation  │
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│ Data Collection Technique │
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│        Job Stress        │
│   DASS-21 Questionnaire   │
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│      Thesis Writing      │
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│              Data Analysis                        │
│ Univariate and Bivariate Analysis using unpaired  │
│ difference test                                   │
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┌──────────────────────────┐
│  Results and Conclusions │
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2.3 Instrument

The instruments in this study used 1 questionnaire and 3 measuring instruments. The measuring instruments used were a sphygmomanometer which is a blood pressure measuring instrument, SPO2 which is a measuring instrument for oxygen in the body as well as for calculating the heart rate, and a watch for measuring the respiratory rate in 1 minute by manual calculation. The questionnaire used was in the form of questions about everything that was thought and felt during the past month while working.

The instrument regarding work stress used in this study was the Indonesian version of the DASS-21 questionnaire. The results of the validity test of the DASS-21 questionnaire had a high validity value of 0.71 and a reliability value of 0.93 which was processed based on the Cronchbach Alpha assessment. (Rahmawati et al., 2019). This questionnaire is stated to have high reliability if it has a Cronbach's α coefficient value> 0.6. From the results of the validity and reliability tests, it was stated that the DASS-21 questionnaire measuring instrument could be used because it had met the eligibility requirements for research instruments. (Yusup, 2018).

2.4 Data Analysis

Data analysis is used to statistically test the truth of the hypothesis that is made. The resulting data will then be processed, tabulated, and analyzed by a computer using the SPSS program.

1. Univariate Analysis

Univariate analysis was conducted to describe the frequency distribution and characteristics of the independent variables (central surgical installation and emergency installation) and the dependent variable (work stress), with the form of analysis adjusted based on the type of data (numerical or categorical), so that the data can be summarized into a middle measure and variation and compared between subject groups according to the research objectives $P = \frac{f}{n}x$ 100%.

Description:

P = Percentage of subjects in a certain category

f = Sample with certain characteristics

n = Total sample

In this study, the researcher summarized categorical data and numeric words as follows:

a) Summarization of Numerical Data

The middle measure reflects the concentration of values from data measurements. In this study, for numerical data such as work stress, the middle measures that are often used are mean, median, and mode. The mean, or average, is obtained by summing up all the values and dividing them by the number of measurements. The advantage of the mean is that it is easy to calculate and involves all data, but the disadvantage is that it is susceptible to extreme values (both high and low), so that in data with a skewed distribution, the mean may be less representative of the true average. In such cases, the median or mode can be a more accurate alternative.

b) Categorical data summary

Because the data in this study are categorical and numerical, the summary of categorical variables, such as central surgical installation, emergency installation, and work stress, is done with a frequency distribution in the form of percentage or proportion. Meanwhile, for numeric data, the summary uses a middle measure (such as mean or median) and a measure of variation (such as standard deviation or range). Thus, each type of data will be analyzed according to its characteristics to provide accurate and meaningful information.

2. Bivariate Analysis

In this study, the researcher used an unpaired difference test as an analysis test. In statistical testing, a non-parametric statistical test type was used, namely the Mann-Whitney Test. This statistical test is used to compare two independent groups based on the median value. This statistical test is often used as an alternative to the t-independent test when the normality assumption is not met.

Quoted from Massie et al., 2018, bivariate analysis is used to determine whether 2 variables are suspected of being related to each other. This analysis is used to accept the comparison between structured variables, namely work stress and the independent variables, namely the central surgical installation and the emergency installation.

The calculation of data distribution was carried out by conducting the Kolmogorov-Smirnov normality test which produced the following results, which showed significance:

a. Null Hypothesis (H0): data is normally distributed

b. Alternative Hypothesis (H1); data is not normally distributed.

If the p-value of the Kolmogorov-Smirnov test is greater than 0.05, then it fails to reject H0 and can assume the data is normally distributed. If the p-value < 0.05, it can reject H0 and conclude that the data is not normally distributed.

3. Results

General Description of the Study

The respondents in this study were nurses working in the Central Surgical Installation and nurses working in the Emergency Installation at Sumedang Regional General Hospital. Sumedang Regional General Hospital is a type of General Hospital with a type B Non-Education. Sumedang Regional General Hospital is owned by the Sumedang Regency Government, which has a land area of 18,699 and a building area of 25,937. The current Director of Sumedang Regional General Hospital is dr. H. Enceng, Sp.B. Sumedang Regional General Hospital is one of three Hospitals in Sumedanh, two of which are Private Hospitals.

Respondent Demographic Data

Respondent demographic data is used to determine the diversity of respondents' backgrounds, including age, gender, status and length of service of respondents.

Table 2. Respondent Demographic Data

Characteristics	Frequency (%)
Age	

Late Adolescence (17 – 25 years)	7 (8,3%)
Early Adulthood (26 – 35 years)	37 (43,5%)
Late Adulthood (36 – 45 years)	38 (44,7%)
Early Elderly (46 – 55 years)	3 (3,5%)
Total	**85 (100%)**
Gender	
Male	40 (47,1%)
Female	45 (52,9%)
Total	**85 (100%)**
Status	
Married	79 (92,9%)
Unmarried	6 (7,1%)
Total	85 (100%)
Length of Service	
< 1 year	6 (7,1%)
1 – 5 year	7 43,5%)
> 5 year	42 (49,4%)
Total	**85 (100%)**

Based on table 2. shows that respondents aged 36-45 years are the age group that works the most in the Central Surgical Installation and Emergency Installation, which is 38 nurses (44.7%). Then, there are more female respondents than male respondents, with the number of female respondents being 45 nurses (52.9%) and the number of male respondents being 40 nurses (47.1%). In addition, the status group that is more is married, which is 79 nurses (92.9%), and for the length of service group, table 1. shows that the work span of more than 5 years is the highest, which is 42 nurses (49.4%).

Overview of the Work Stress Level of Central Surgical Installation Nurses and Emergency Installation Nurses at Sumedang Regional General Hospital

Table 3. Description of Work Stress in Nurses in the Central Surgical Installation and Emergency Installation Nurses

Stress Level	Central Surgical Installation (CSI) (%)	Emergency Installation (EI) (%)
Light	16 (18,8%)	31 (36,4%)
Medium	21 (24,7%)	0 (0%)
Heavy	10 (11,8%)	7 (8,3%)
Total	**47 (55,3%)**	**38 (44,7%)**
	85 (100%)	

Based on table 3, it is found that the level of work stress of nurses in the Central Surgical Installation has a mild level of work stress, namely 21 respondents (24.7%). And nurses in the Emergency Installation have a moderate level of stress, namely 31 respondents (36.4%).

Kolmogorov-Smirnov Normality Test Results

Before the researcher conducted the Bivariate Analysis, the researcher conducted a Normality Test first on the results of the questionnaire that the researcher used in this study, namely using the DASS-21 questionnaire to measure the level of work stress in nurses. The researcher used the Kolmogorov-Smirnov test because the sample in this study was > 50 respondents.

Table 4. Kolmogorov-Smirnov Normality Test Result

		Kolmogorov-Smirnov

Stress Level	Group	Statistics	Sig.(*p-value*)
	CSI	0.228	0.000
	EI	0.496	0.000

Based on table 4. the results of the normality test obtained a Sig. value (0.000), which means that the p-value < 0.05 means that the data is not normally distributed.

Descriptive Statistics of Nurses' Work Stress in Central Surgical Installation and Emergency Installation

Table 5. Descriptive Statistics of Work Stress of Nurses in Central Surgical Installation and Emergency Installation

Group	N	Min	Max	Median	Standard Deviation
CSI	47	0	31	22.00	9.969
EI	38	0	33	8.00	10.872

Based on table 5, the results show that the minimum stress value for nurses in the Central Surgical Installation is 0 and the maximum stress value is 31, while for nurses in the Emergency Installation, the minimum stress value is 0 and the maximum is 33. It was also found that the median value of work stress for nurses in the Central Surgical Installation was 22.00 and the median value of work stress for nurses in the Emergency Installation was 8.00.

Differences in the Description of Work Stress in Central Surgical Installation Nurses and Emergency Installation Nurses
The bivariate analysis used by the researcher in this study was the Non-Parametric Mann-Whitney Test because the results of the normality test were not normal, so a non-parametric analysis was used to test the median (middle value) of nurses' work stress in the Central Surgical Installation and Emergency Installation.

Table 6. Results of the Non-Parametric Mann-Whitney Test

Group	Me	U	Z	p-value	Decision
CSI	22.00	542.000	-3452	0,001	Significance p-value < 0,05
EI	8.00				

Based on table 6, the results of the statistical test value (U) from the initial data of the Mann-Whitney Test with a result of 542,000, the results were obtained from the ranking calculated for one group compared to another group. In addition, there is also a Z value, this Z value is a summary of the U value, which if the Z value has a very negative number or is far from 0, as stated in the table, which is -3.452, then it can be interpreted that the ranking of the two groups tested is very visible significant difference

4. Discussion

Respondent Characteristics Based on Demographic Data

Work stress in nurses is at higher risk for the majority of respondents aged 26 to 45 years. Based on the research data, the majority of respondents are in the late adult age group (36-45 years) with a total of 38 respondents (44.7%) then followed by respondents in the early adult group, namely with an age range of 26-35 years as many as 37 respondents (43.5%). Furthermore, respondents in the late adolescent age group with an age range of 17-25 years include 7 respondents (8.3%), while respondents in the early elderly group with an age range of 46-55 years are the smallest group with a total of 3 nurse respondents (3.5%). This shows that the majority of respondents are individuals who are of productive age, namely in the age range between 26 years and 45 years, this age range also tends to have higher levels of work stress.

The distribution of gender in this study is relatively balanced, because it consists of 45 female nurse respondents (52.9%) and 40 male nurse respondents (47.1%), although female nurses are slightly more than male nurses. This can reflect the perception or experience of experiencing work stress that can be influenced by gender differences in work.

In addition, the respondents in this study were dominated by the majority of respondents with married status as

many as 79 respondents or 92.9%, while those who were not married were only 6 people or 7.1%. The high number of respondents who were married can indicate that the marital factor can affect work stress in nurses in the Central Surgical Installation and nurses in the Emergency Installation.

Then most of the respondents had more than 5 years of work experience, namely 42 people or 49.4%, respondents with a length of work of 1-5 years as many as 37 or 43.5%, and respondents with less than 1 year of work experience only numbered 6 people or (7.1%). Respondents with longer work experience, or more than 5 years, have the potential to face work stress caused by the duration of work or the number of patients in the workplace.

The Discussion section serves as a critical analysis of the research findings, connecting them with prior studies and the latest relevant literature. This section should constitute 30-40% of the total manuscript length and must go beyond merely presenting the results by offering substantial interpretations. A well-structured discussion highlights the study contributions to scientific development, addressing both consistencies and discrepancies with existing research. To ensure clarity and depth, the discussion should begin by interpreting the key findings, explaining their significance in relation to the research objectives. Rather than repeating the results, this part should focus on what the findings mean in a broader scientific context. The next step is to compare the results with previous studies, identifying whether they align with or challenge earlier findings. Any differences should be explained, considering methodological, theoretical, or contextual variations. Furthermore, the discussion should be supported by recent literature, emphasizing primary sources published within the last five years. This ensures that the study is grounded in contemporary scientific discourse. Finally, the discussion should highlight the study's contributions, explaining how the findings advance knowledge in the field, introduce new perspectives, or suggest implications for future research. By integrating these elements, the discussion. Provides a comprehensive and meaningful interpretation of the research findings.

Thus, the majority of respondents in this study were of productive age, married, and had quite a long work experience. These factors have the potential to be the main determinants of the level of work stress experienced, because the majority of respondents are married and have long work experience, so they will face greater responsibilities for work and family. Although there are more female respondents, the gender distribution shows that work stress can occur in both groups.

Previous researchers, namely Awalia, M. J, et al. (2021) concluded that there was a significant relationship between gender and work stress, while the age variable did not have a significant relationship with work stress in nurses at Kwaingga Hospital, Keroom Regency. The age factor itself is indeed not easy to analyze, because in reality there are many other factors that influence work stress. In fact, with increasing age and experience and knowledge that are increasingly found in the field, it will be better for individuals to produce a greater sense of responsibility so that they can cover the shortcomings for adaptation and are more likely to be able to control stress.

Likewise, research conducted by Ayu, A. M, et al. (2023) found that the most dominant factor in nurses' work stress is workload. The study showed that gender, age, and marital status have no relationship with work stress. Stress can occur in various age groups, whether or not work stress occurs depends on the individual managing the stress felt because personal maturity can overcome work pressure not seen from age, but from experience. Likewise with gender, there is no difference between men and women in considering something, solving problems, adapting, and reviewing. Marital status is also not a factor that triggers work stress, because it all depends on the ability to solve problems in the family so that it does not interfere with work.

Description of the Work Stress Level of Nurses in the Central Surgical Installation and Nurses in the Emergency Installation at Sumedang Regional General Hospital

Based on research data from 85 respondents working in both rooms, namely 47 in the Central Surgical Installation and 38 in the Emergency Installation. There were 47 respondents (16 respondents (18.8%) from the Central Surgical Installation, 31 respondents (36.4%) from the Emergency Installation) who had mild work stress, 21 respondents (24.7%) from the Central Surgical Installation had moderate work stress, and 17 respondents (10 respondents (11.8%) from the Central Surgical Installation, 7 respondents (8.3%) from the Emergency Installation) who had severe work stress. Measurement of work stress used the DASS-21 questionnaire.

The level of work stress experienced by nurses both in the Central Surgical Installation (IBS) and in the

Emergency Installation (IGD) illustrates the challenges faced in working in a hospital. In IBS, nurses with moderate stress levels were quite high compared to mild and severe stress levels. This shows that IBS nurses may face intense work pressure, especially in handling post-operative patients who certainly require special care. As stated in a study conducted by Reza Syafi'I, M. Y. (2023) at the PKU Muhammadiyah Gombong Hospital, it was found that nurses' workload is closely related to the level of work stress in IBS, where high workload is often the main trigger for stress. Meanwhile, in the ER, the majority of nurses experience mild stress. Research at the ER of Syafira Hospital Pekanbaru supports this, showing that a dynamic work environment and time pressure can still be overcome thanks to the adaptive abilities of ER nurses (Taib, 2022). This shows that the ability of ER nurses to deal with emergency situations is more adaptive even though they are in a dynamic work environment.

Stress levels are influenced by various factors, including high workload, pressure on responsibility, long work schedules, and work environment conditions that require speed and accuracy in making decisions and actions. High workload is often the main trigger, especially because nurses have to handle many patients in a short time. Stress experienced by nurses not only affects physical and mental health, but also has the potential to reduce the quality of service to patients. Factors such as high workload, role conflict, long work schedules, and work environment conditions that require speed and accuracy in decision making are the main causes of work stress (University of Jember, 2021). Therefore, to overcome this problem, an effective stress management strategy is needed. Some steps that can be taken include time and stress management training for nurses, providing mental health support facilities in the workplace, and hospital policies that support fair workload distribution. Research in the PPNI Journal also confirms that support from hospital management, including awards for achievement, can help improve nurse welfare (PPNI Journal, 2023). Thus, the level of nurse welfare can be improved, which ultimately has a positive impact on patient care.

Differences in Job Stress Descriptions in Central Surgical Installation Nurses and Emergency Installation Nurses at Sumedang Regional General Hospital.

Based on the results of the study, the significant difference in job stress between Central Surgical Installation Nurses and Emergency Installation Nurses can be seen from the differences in number and level, as shown in table 4.3 that the Central Surgical Installation is dominated by moderate stress levels, namely 21 respondents and 31 respondents with mild stress levels in the Emergency Installation.

Respondents in this study were dominated by respondents with a productive age, namely 26-45 years. Based on the study, respondents with an age range of 26-45 years are at risk of experiencing high work stress because they are influenced by age factors. In addition, marital status and length of service can also be at risk of experiencing high work stress.

Previous research conducted by Agustiningsih, I (2018) found that there was a significant relationship between workload and work stress. Workload is one of the factors that can cause stress, including pressure and time pressure in completing tasks or activities, non-conducive work environment conditions, and personal or group conflicts. The workload borne by IBS and ER nurses is not the same as nurses in other rooms. In both rooms, of course, there are many demands that nurses must achieve, extra strict and fast service, routine and continuous recording of patient conditions, efforts to maintain patient conditions so that they remain in the condition they should be and do not worsen, and other pressures that trigger stress for nurses in the IBS and ER rooms.

The results of the study showed that the median stress level in the IBS room was 22.00 (IQR: 16), while the median stress level in the ER room was 8.00 (IQR: 9). The results of the Mann-Whitney Test showed a significant difference between the two rooms with a p-value (0.001).

The higher median stress level in the Central Surgical Installation (IBS) compared to the Emergency Installation (IGD) may reflect a significant difference in workload, case severity, and the influence of the work environment in the two rooms. Previous studies have shown that IBS nurses have higher stress levels than ED nurses, with 60% of IBS nurses reporting moderate to severe stress due to their responsibility for postoperative patients (Wahyuni & Hidayat,

2022). Nurses in IBS tend to face a heavier workload because they are responsible for postoperative patients who require intensive and prolonged care. IBS nurse tasks such as routine vital sign monitoring, administering medications, and ensuring patient recovery after surgery are often sources of cumulative stress. Another study also noted that the high frequency of routine tasks in IBS can cause physical and mental fatigue in nurses who do not get enough rest (Kusuma et al., 2023).

This is different from the ED, where even though the patient who comes is in an emergency condition, the nature of the work that is completed more quickly after the patient is stabilized or referred to another room can reduce overall work stress. The severity of the case also contributes to this difference. The ED receives patients with emergency conditions that require rapid treatment, but the nature of cases in the ED tends to be diverse and dynamic. In contrast, in IBS, nurses must handle patients with stable conditions that require long-term attention, so their responsibility for the sustainability of patient recovery can increase stress levels. Research at Dr. Soetomo Hospital showed that long-term work pressure in IBS increases the risk of burnout by 45% compared to the ER, which is more dynamic (Pratama et al., 2023).

The work environment in these two rooms also plays an important role. IBS has a calmer work atmosphere but requires high concentration for a long time, while in the ER, although the environment is busier and more dynamic, quick interactions with patients often provide immediate resolution that can reduce stress levels. The differences in job characteristics, case severity, and the influence of the work environment indicate that stress management strategies need to be tailored to the unique needs of each room. In IBS, increasing the number of workers or distributing the workload more evenly can help reduce work pressure. Meanwhile, in the ER, training in stress management techniques to deal with emergency situations effectively can be a solution to maintain the mental and physical health of nurses. With a specific approach, the stress levels of nurses in both rooms can be better managed to support optimal health service quality.

5. Limitations

There were limitations when conducting the research, namely that there were several respondents who were not present or were not in the Central Surgical Installation room or the Emergency Installation. In addition, several nurses were not willing when the documentation was carried out, and there were several nurses who only filled in their identity, not the questionnaire. This can affect the completeness of the data obtained, because several respondents were unable to participate within the specified research period.

6. Conclusion

Based on the results of the study at Sumedang Regional Hospital, of the 85 respondents, the majority worked in the Central Surgical Installation (55.3%) and the rest in the Emergency Installation (44.7%). The majority of respondents were late adults (44.7%), female (52.9%), the majority were married (92.9%), and most had work experience >5 years (49.4%). The stress level of nurses in IBS was mostly in the moderate category (24.7%), while in the ER it was in the mild category (36.4%). Changes in vital signs such as systolic pressure, diastolic pressure, heart rate, and respiratory rate were found in most respondents in both rooms. The Spearman Rank correlation test showed that there was no significant relationship between stress levels and changes in vital signs in IBS or ER (p-value > 0.05), with correlation coefficients in the very low to low categories. The median stress level in IBS was 22 (IQR: 16), higher than the ER which had a median of 8 (IQR: 9). The Mann-Whitney Test showed a significant difference in stress levels between the two rooms (p-value 0.001).

References

Aberhe, W., Mariye, T., Bahrey, D., Hailay, A., Mebrahtom, G., Zereabruk, K., & Gebreayezgi, G. (2024). Job stress among nurses in Ethiopia: A systematic review and meta-analysis. *International Journal of Africa Nursing Sciences*, *20*(July 2020), 100661. https://doi.org/10.1016/j.ijans.2024.100661

Apriadi, D. (2023). *Konsep Keperawatan Medikal Bedah Penerbit Cv. Eureka Media Aksara*.

Bayu, P. (2021). *hubungan motivasi dengan penerapan komunikasi terapeutik perawat pelaksana di RS Yukum Medical Centre Lampung Tengah*. 7–17.

Dewi, M. K.,N.A.K. (2023). *Modul Perkuliahan Metodologi Penelitian. 0*, 1–23.

Halimah, S., Suryadi, A., & Pratama, B. (2020). Dampak psikologis stres kerja pada perawat RSUD Surabaya. Jurnal Kesehatan Surabaya

Halimah, S., & Suryadi, A. (2020). Risiko gangguan kardiovaskular pada perawat akibat stres kerja. Jurnal Kesehatan Surabaya.

Hämmig, O. (2020). Work- And stress-related musculoskeletal and sleep disorders among health professionals: A cross-sectional study in a hospital setting in Switzerland. *BMC Musculoskeletal Disorders*, *21*(1), 1–11. https://doi.org/10.1186/s12891-020-03327-w

James W, D. (2021). Keterampilan Dalam Keperawatan. In *Andrew's Disease of the Skin Clinical Dermatology*

Janah, M. (2019). Hubungan Masalah Kesehatan Kronis, Aktivitas Fisik Dan Depresi Dengan Kejadian Risiko Malnutrisi Pada Lansia Di Kabupaten Tegal. *Perpustakaan Universitas Airlangga*, 53–68.

Jurnal PPNI. (2023). Strategi manajemen stres pada perawat: Studi implementasi kebijakan rumah sakit. Jurnal PPNI.

Kusuma, F., Putri, R., & Anggraeni, N. (2023). Dampak tugas rutin terhadap kesehatan mental perawat di IBS. Jurnal Kesehatan Surabaya.

Kusumawati, P. M., & Dewi, i gusti ayu manuati. (2021). Peran stres kerja memediasi pengaruh beban kerja terhadap. *E-Jurnal Manajemen*, *10*(3), 209–228.

Lestari, R., Wibowo, T., & Pratiwi, F. (2021). Hubungan olahraga dengan stabilitas tanda vital pada perawat. Jurnal Keperawatan Indonesia.

Mamun, M. A. A., & Hasanuzzaman, M. (2020). Pengaruh Stres Terhadap Tekanan Darah Pada Pasien Poli Umum di Puskesmas Benteng Kabupaten Kepulauan Selayar. *Energy for Sustainable Development: Demand, Supply, Conversion and Management*, *November*, 1–14.

Mózo, B. S. (2020). Keperawatan Perioperatif Iintraoperatif dan Pascaoperatif. *Journal of Chemical Information and Modeling*, *53*(9), 1689–1699

Notoatmodjo. (2018). Metode Penelitian Etika Penelitian. *Jurnal UMPRI*, *10*(1), 2–13.

Rewo,K.N, Puspitasari, R, & Winarni, L.M. (2020). Faktor – Faktor Yang Berhubungan Dengan Stres Kerja Pada Perawat Di Rs Mayapada Tangerang Tahun 2020. *Jurnal Health Sains*, *1*(3), 112–120. https://doi.org/10.46799/jhs.v1i3.34

Perhi. (2019). Konsensus Penatalaksanaan Hipertensi 2019. *Indonesian Society Hipertensi Indonesia*, 1–90.

Pratama, D., Widodo, H., & Kartika, E. (2023). Faktor risiko burnout pada perawat IBS dan IGD. Adi Husada Nursing Journal.

Rahayu, Suwarni Lilik, Anik Aryani, A. (2019). *Dan Distress, Merupakan Proses Stress Yang Menekan Namun Masih 10*. 10–39.

Rangkuti, H. Z., Harahap, J., & Simajorang, A. (2022). Faktor-Faktor Yang Memengaruhi Stres Kerja Pada Perawat Di Ruang Rawat Inap. *Jurnal Keperawatan Priority*, *5*(2), 46–54. https://doi.org/10.34012/jukep.v5i2.2659

Reza Syafi'i, M. Y. (2023). Beban kerja perawat berhubungan dengan tingkat stres kerja di IBS. Jurnal Keperawatan PKU Muhammadiyah

Riyanti, F. E., & Rahmandani, A. (2020). Hubungan Antara Hardiness Dengan Stres Kerja Pada Perawat Instalasi Rawat Inap Di Rumah Sakit Umum Daerah Banyumas. *Jurnal EMPATI*, *8*(3), 505–514. https://doi.org/10.14710/empati.2019.26491

Sanger, A. Y., & Lainsamputty, F. (2022). (Ansori, 2015). *Holistik Jurnal Kesehatan*, *16*(1), 61–73.

Santoso, F., & Anggraeni, M. (2023). Respon fisiologis perawat IGD terhadap situasi darurat. Jurnal Keperawatan Indonesia.

Savitri, A. R. (2021). *Hubungan metode asuhan keperawatan profesional tim dengan stres kerja perawat di Rsud Muntilan tahun 2020*. http://eprintslib.ummgl.ac.id/2662/

Subagiartha, F., Katuuk, M., & Paat, T. (2024). Hubungan Kualitas Tidur dengan Tekanan Darah pada Perawat di Siloam Hospital Manado. *Jurnal Keperawatan*, *12*(1), 89–96.

Sumiarty, C., & Sulistyo, F. A. (2020). Hubungan Respiratory Rate (RR) Dengan Oxygen Saturation (SPO2) Pada Pasien Cedera Kepala. *Jurnal Ilmiah Wijaya*, *12*, 2301–4113. www.jurnalwijaya.com;

Susanti, S., & Sulistyana, C. S. (2020). Pengaruh Posisi Tubuh terhadap Tekanan Darah pada Lansia Penderita Hipertensi di Wilayah RW 06 Kelurahan Bongkaran Sejahtera Kecamatan Pabean Cantian Surabaya. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, *7*(1), 116–122. https://doi.org/10.26699/jnk.v7i1.art.p116-122

Syafi'i, M. Y. R. (2022). *Faktor faktor yang mempengaruhi tingkat stres kerja perawat di instalasi bedah sentral rumah sakit pku muhammadiyah gombong skripsi*.

Taib, N. A. (2022). Gambaran tingkat stres perawat yang bertugas di ruang IGD. Jurnal Keperawatan Poltekkes Riau.

Universitas Jember. (2021). Hubungan beban kerja dengan stres kerja perawat di IGD. Jurnal IKESMA

Widodo, S., Ariyanti, D., & Kartika, R. (2022). Adaptasi fisiologis terhadap stres kerja pada perawat: Tinjauan literatur. Adi Husada Nursing Journal.

Wulandari, D., Kurniawati, E., & Rahayu, T. (2022). Hubungan stres kronis dengan kadar kortisol pada perawat IBS. Jurnal Ilmiah Kesehatan.

Yıldırım, D., & Yıldız, C. Ç. (2022). The Effect of Mindfulness-Based Breathing and Music Therapy Practice on Nurses' Stress, Work-Related Strain, and Psychological Well-being during the COVID-19 Pandemic: A Randomized Controlled Trial. *Holistic Nursing Practice*, *36*(3), 156–165. https://doi.org/10.1097/HNP.0000000000000511

Yulianti, A., & Rahmawati, S. (2021). Hubungan stres kerja dengan tekanan darah perawat di IBS RSUP Dr. Sardjito. Jurnal Medika.

Yuniarti. (2020). *SOP Pengukuran Tekanan Darah UPT Puskesmas Paminggir.*