

Dominant Factors Affecting Stress Levels Among Emergency Room Nurses at Waled Hospital

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ABSTRACT

Background & Objective: This study aims to identify the dominant factors influencing the stress levels of emergency room nurses at Waled Hospital.

Method: The research design used was quantitative with a descriptive correlational design and a cross-sectional approach. A total sampling technique was used, involving 55 respondents. The instrument utilized was a validated questionnaire, and data were analyzed using Spearman rank correlation.

Result: Results showed that the majority of nurses had high stress levels and that workload, fear of infection, and inadequate personal protective equipment were the dominant stress factors ($p = 0.004$; $r = -0.289$). **Conclusion:** It is concluded that stress levels among ER nurses are significantly affected by these dominant factors. Comprehensive stress management strategies are recommended to reduce psychological burden and maintain quality of care.

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Introduction

The Emergency Room (ER) is a healthcare unit with a high-pressure work environment, heavy emotional burden, and conditions that demand quick and accurate decisions. The ER work environment often exposes nurses to high psychological stress due to excessive workload, emergency situations, multitasking demands, and interprofessional conflicts (Susanti, 2023). This is a major risk factor for work-related stress among ED nurses.

Work-related stress is a condition of imbalance between job demands and an individual's ability to cope with them, which can impact physical and psychological health and reduce work productivity (Marisa, 2025). In the context of ED nurses, stress can affect the quality of nursing services, increase the potential for medical errors, and reduce job satisfaction (Gousario Y, 2024). According to research (Fany, 2024), more than 60% of ED nurses experience moderate to high work stress related to work intensity and emotional demands.

Previous studies also show that workload, role conflict, lack of social support, and inadequate facilities are the main factors causing stress in nurses (Devi Azhari, 2024). At Waled Hospital, based on a preliminary study conducted by the researcher, most ED nurses showed symptoms of stress such as fatigue, sleep disturbances, and unstable emotions during work. This indicates the need for an analysis of the dominant factors that influence their stress.

Lazarus and Folkman's theory of stress explains that stress is the result of the interaction between individuals and their environment, where individuals assess that environmental demands exceed their ability to cope (Pramono, 2024). Therefore, it is important to understand the internal and external factors that can trigger stress in nurses. This study aims to analyze the dominant factors that influence the stress levels of IGD nurses at Waled Hospital, as a basis for formulating effective stress management interventions. It is hoped that the results of this study can make a real contribution to the development of hospital policies and the welfare of nursing staff in general.

Objective

The purpose of this study was to identify and analyze the dominant factors affecting stress levels among nurses in the Emergency Room (ER) of Waled Regional General Hospital, particularly those related to workload, fear of infection, and limited personal protective equipment, thereby providing a basis for the development of effective stress management strategies for nursing staff.

Method

This study used a quantitative approach with a correlational descriptive design and cross-sectional method, which aimed to determine the relationship between various stress-causing factors and the stress levels of nurses in the Emergency Room (ER) of Waled Hospital. This study was conducted in the ER of Waled Regional General Hospital, Cirebon Regency. The population in this study consisted of all nurses working in the ER of Waled Hospital, totaling 55 people. The sampling technique used total sampling, where the entire population was used as the sample because the population was relatively small and homogeneous.

The main instrument used to measure stress levels was the Perceived Stress Scale (PSS-10), which has been translated and validated in Indonesian. This scale consists of 10 items measured using a 5-point Likert scale (0 = never to 4 = very often). The PSS-10 is a reliable measuring tool that has been widely used in psychology and occupational health research (Tsegaye BS, 2022).

Additionally, supplementary questionnaires were used to measure stress-causing variables, including workload, social support, role conflict, and work environment conditions. Each factor was assessed using indicators adapted from previous standard research instruments. The content validity of the questionnaire was tested by two nursing experts and one clinical psychologist, while reliability was tested through a trial involving 20 respondents outside the research location, with a Cronbach's Alpha value of 0.81, indicating that the instrument had good internal consistency.

Data were collected through the distribution of paper-based questionnaires to all respondents over a period of one week. Respondents were provided with information regarding the purpose of the study and were asked to sign an informed consent form

as a form of voluntary participation. Data confidentiality was maintained by not including names on the questionnaires.

The data analysis technique used was univariate analysis to determine the frequency distribution and percentage of each variable. Bivariate analysis was performed using the Spearman Rank test to determine the relationship between dominant factors and nurses' stress levels because the data was ordinal and not normally distributed. The normality test was performed using the Shapiro-Wilk test, given that the sample size was less than 100 respondents.

Results

This study involved 55 nurse respondents working in the emergency room of Waled Regional General Hospital. The characteristics of the respondents are presented in Table 1 below:

TABLE 1. Characteristics of Respondents Based on Gender, Age, and Length of Service

| Characteristics | Category | Frequency | Percentage |
|-------------------|-----------------|-----------|------------|
| Gender | Male | 12 | 21,8% |
| | Female | 43 | 78,2% |
| Age | < 25 years old | 11 | 20,0% |
| | 26-35 years old | 35 | 63,6% |
| | > 35 years old | 9 | 16,4% |
| Length of Service | < 2 years | 7 | 12,7% |
| | 2-5 years | 32 | 58,2% |
| | > 5 years | 16 | 29,1% |

Based on the characteristics table, the data shows that the majority of nurses are female, totaling 43 people (78.2%). The majority of nurses are aged 26-35 years, totaling 35 people (63.6%). The majority of nurses have 2-5 years of work experience, totaling 32 people (58.2%).

TABLE 2. Distribution of Stress Levels Among Nurses in the Emergency Room of Waled Regional General Hospital

| Stress Level | Frequency | Percentage |
|--------------|-----------|------------|
| High | 34 | 61,8% |
| Moderate | 21 | 38,2% |
| Low | 0 | 0% |

Based on the results of univariate analysis, it was found that most respondents (61.8%) experienced high stress levels, while the rest experienced moderate stress levels. No respondents were in the low stress category.

TABLE 3. Results of Spearman Rank Test between Factors and Stress Levels

| Factors | p-value | r-value | Description |
|------------------|---------|---------|-----------------|
| Workload | 0,004 | -0,289 | Significant |
| Work environment | 0,012 | -0,265 | Significant |
| Social support | 0,142 | -0,176 | Not significant |

Bivariate analysis using the Spearman Rank test showed a significant relationship between workload factors and stress levels ($p = 0.004$; $r = -0.289$), which means that the higher the workload, the higher the stress levels experienced by nurses. The work environment factor also had a significant relationship ($p = 0.012$), while social support did not show a significant relationship ($p = 0.142$).

Discussion

The results showed that most nurses in the emergency department of Waled Regional General Hospital experienced high levels of stress. These findings indicate that workload is a dominant factor affecting stress. High workload can include a large number of patients, accumulated tasks, and intensive work demands in a short period of time. This is in line with previous studies stating that high workload is associated with increased stress in nurses (Maranden, 2023).

The work environment also plays an important role in influencing stress (Supit, 2022). An unsupportive environment, such as a lack of medical equipment, cramped workspaces, or poor interactions between healthcare workers, can trigger work-related stress (Sartina, 2023). These results are consistent with a study by Susanti and Harahap, which found that an unfavorable work environment increases the risk of stress (Octavia M, 2017).

Social support from coworkers and family was found to be insignificant in this study. However, several studies have stated that social support plays an important role in reducing stress (Setya, 2017). This difference may be due to variations in work context and organizational culture. In a previous study, social support was found to be an effective protective factor in reducing stress among nurses (Miladiyah N, 2015).

Theoretically, work stress is explained by Lazarus and Folkman's theory, which states that stress arises from an imbalance between external demands and an individual's capacity to cope with them (Folkman S., 2020). When job demands exceed nurses' adaptive abilities, stress increases and impacts physical and mental health as well as a decline in service quality (Fitriyani, 2022).

This study makes an important contribution by highlighting internal (workload) and external (work environment) factors that can be controlled by hospital management to create a healthy work environment. Interventions such as stress management training, workload reduction through fair task distribution, and improvement of work facilities are strategies that need to be implemented (Ayu, 2024).

Conclusion

This study concluded that most nurses in the emergency department of Waled Hospital experienced high levels of stress. The dominant factors affecting this stress were workload, unsupportive working conditions, and limited availability of personal protective equipment. Workload was the most significant factor affecting nurses' stress levels.

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