



Factors Related to Nursing Work Stress in Soul Hospital South Sulawesi Province, Indonesia

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Abstract

One of the psychological factors inhibiting nurses' performance is work stress. The existence of work stress can interfere with nurses in achieving good performance, because work stress can cause pressure and make nurses lose motivation, boredom, so nurses are unable to work effectively. The purpose of this study was to determine what factors were associated with nurses' stress at the Southeast Sulawesi Provincial Mental Hospital. This type of quantitative research with cross sectional study approach. There were 53 nurses in the study. Data analysis using bivariate and multivariate. The results showed there was a relationship between the physical environment, aggressive behavior of patients, workload, and interpersonal conflict with nurses work stress. Conclusion: Physical environmental factors, patient aggressive behavior, workload, and interpersonal conflict have a relationship with nurses work stress. Workload is the most dominant factor related to nurses work stress. Recommendation; the need to evaluate nurse performance, and provide social support through effective communication to nurses.

Keywords: work stress; nurses; hospital.

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1. Introduction

Nurses as professional staff are responsible and authorized to provide nursing services independently and collaborate with other health workers in accordance with their authority, especially related to the scope of practice and nurses. However, nurses also have several obstacles that can affect their actions in the task well. Barriers come from the individual and outside the individual. In addition to being required to continue to provide professional services in their duties, nurses must also be able to overcome the obstacles they experience. Potential psychological hazards due to work stress can be experienced by nurses. Nurses are required to be able to perform their roles as professionals in providing services, intended so that the health service process carried out by nurses can run as expected. Meanwhile, according to [1] of the tasks of a mental nurse is the handling of aggressive behavior of patients with mental disorders, nurses' poor perception is one source of work stress. Meanwhile, according to [2] good perceptions can increase the nurses' interpersonal skills. Stress and prolonged tension, will have an impact on nurses' physical and mental health problems, if there is no immediate resolution. Furthermore, these health problems will become a new stress and form a vicious circle. In turn, disrupted health will also interfere with the appearance of individual work. Nurses become less focused, and work motivation decreases [3]. According to [4]. One psychological factor that is a symptom of stress, which of course can interfere with nurses in carrying out their obligations, this is also a factor inhibiting the performance of a nurse, which can cause a pressure, and make loss of motivation, boredom, so nurses are unable to work effective. Job stress is considered to be one of the most important occupational risks in the modern era. Every year the health care system spends 200 billion dollars because of this problem. Work stress causes a decrease in productivity, absenteeism, rotation of staff on the ward and high health care costs for staff [5]. As a result of high work stress levels can affect the performance, satisfaction, productivity, and caring behavior of nurses. The higher the work stress, the nurse's performance, satisfaction, productivity, and caring behavior will be lower [6,7,8]. The increase in workload will cause a decrease in nurses' performance, so the tendency to leave their work can occur due to fatigue. In addition, work stress on nurses can also affect the quality of service in hospitals. If nurses experience work stress and are not managed properly, this can eliminate patient care, can lead to errors in patient care that can endanger patient safety [9,10]. The results of research [11] indicate that factors causing work stress can endanger patient safety 27.9% due to fatigue. The results of the initial interviews with several nurses at the Southeast Sulawesi Provincial Mental Hospital found that nurses complained of aggressive behavior of patients who often went berserk, shouted, were agitated, ran away, withdrew infusions, did not want to take medication, defecated misplaced, and committed acts violence especially patients suffering from schizophrenia. This will certainly make nurses feel worried, anxious, afraid, avoiding, emotional, whereas nurses who are assigned to each shift are only two to three nurses so nurses have difficulty when dealing with mental patients. The purpose of this study was to determine what factors were associated with nurses' stress at the Southeast Sulawesi Provincial Mental Hospital.

2. Materials and Methods

This type of survey research, using quantitative methods with a cross-sectional study design of [12]. Hospital nurse research samples as many as 53 people. The selection of respondents was carried out using the Purposive Sampling technique. Data collection using questionnaires, observations, and interviews. Data processing is done

using SPSS 16 program [13]. Data analysis using bivariate and multivariate analysis.

3. Results

Bivariate Analysis

Relationship between Physical Environment and Nurse Stress

Table 1: Distribution of Relationship between Physical Environment and Stress Levels of Nurses in Class III Inpatients at the Mental Hospital of Southeast Sulawesi Province

Physical Environment	Nursing Job Stress				Total		Test Statistics
	High		Low		N	%	
	n	%	n	%			
Enough	5	21,7	18	78,3	23	100	$X^2_{\text{tab}} = 3,841$
Less	16	53,3	14	46,7	30	100	
Total	21	39,6	32	60,4	53	100	P value = 0,41
							$\phi = 0,320$

Source: Primary Data July 2019

Based on the results of table 1, it was found that from 23 respondents with sufficient physical environmental conditions there were 5 nurses (21.7%) experiencing high work stress and 18 nurses (78.3%) experiencing mild work stress. While from 30 nurses with less physical environment, 16 nurses (53.3%) experienced high work stress and 14 nurses (46.7%) experienced low work stress. It can be concluded that nurses who experience high work stress more than nurses who experience low work stress.

Relationship of Patient Aggressive Behavior with Nurse Stress

Table 2: Distribution of Relationship between Patients' Aggressive Behavior and Nurse Stress Levels in Class III Inpatients at the Mental Hospital of Southeast Sulawesi Province

Patient Aggressive Behavior	Nursing Job Stress				Total		Test Statistics
	High		Low		n	%	
	n	%	n	%			
High	18	63.3	11	36,7	29	100	$X^2_{\text{hit}} = 11,488$ $X^2_{\text{tab}} = 3,841$
Low	3	8,7	21	91,3	24	100	
Total	21	39,6	32	60,4	53	100	P value = 0,000 $\phi = 0,504$

Source: Primary data for July 2019

Based on the results of table 2, it was found that from 29 nurses with high aggressive behavior conditions there were 18 nurses (63.3%) experiencing high work stress and 11 nurses (36.7%) experiencing mild work stress. While from 24 nurses with low aggressive behavior conditions there were 3 nurses (8.7%) experienced high work stress and 21 nurses (91.3%) experienced low work stress. It can be concluded that nurses who experience low stress more than nurses who experience high work stress

Relationship between Workload and Nurse Stress

Table 3: Distribution of Relationship between Workload and Nurse Stress Level in Class III Inpatient Mental Hospital in Southeast Sulawesi Province

Work load	Nursing Job Stress				Total	Test Statistics	
	High		Low				
	n	%	n	%			n
High	18	78,3	5	21,7	23	100	$X^2_{hit} = 22,584$ $X^2_{tab} = 3,841$ P value = 0,000 $\phi = 0,692$
Low	3	10,0	27	90,0	30	100	
Total	21	39,6	32	60,4	53	100	

Source: Primary data for July 2019

Based on the results of table 3, it was found that out of 23 nurses with high workload conditions there were 18 nurses (78.3%) experiencing high work stress and 5 nurses (21.7%) experiencing low work stress. While from 30 nurses with low workload conditions there were 3 nurses (10.0%) experiencing high work stress and 27 nurses (90.0%) experiencing low work stress. It can be concluded that nurses who experience low stress more than nurses who experience high work stress

Relationship of Interpersonal Conflict with Nurse Stress

Table 4: Distribution of Interpersonal Conflict Relationships with the Level of Nurse Stress in Class III Inpatients at the Mental Hospital of Southeast Sulawesi Province

Conflict Interpersonal	Nursing Job Stress				Total	Test Statistics	
	High		Low				
	n	%	n	%			n
Enough	14	63,6	8	36,4	22	100	$X^2_{hit} = 7,432$ $X^2_{tab} = 3,841$ P value = 0,006 $\phi = 0,414$
Less	7	22,6	24	77,4	31	100	
Total	21	39,6	32	60,4	53	100	

Source: Primary data for July 2019

Based on the results of table 4, it was found that out of 22 nurses with sufficient interpersonal conditions there were 14 nurses (63.3%) experiencing high work stress and 8 nurses (36.4%) experiencing low work stress. While from 31 nurses with less interpersonal conflict, there were 7 nurses (22.6%) experiencing high work stress and 24 nurses (77.4%) experiencing low work stress. It can be concluded that nurses who experience low stress more than nurses who experience high work stress

Multivariate Analysis

Table 5: Results of analysis of multivariate model variables between Independent Variables and Dependent Variables

Variable	<i>p value</i>	Exp (B)
Physical environment	0,677	1,760
Patient Aggressive Behavior	0,043*	54,261
Workload	0,035*	38,086
Interpersonal conflict	0,076	19,852

Based on the Analysis Results in Table 5, it is found that the dominant variables related to work stress are the patient's aggressive behavior and workload. Then a second regression test is performed to find the order of strength of the relationships between variables as presented in table 6.

Table 6: Results of Multivariate Model Variable Relationship Analysis Results

Variable	<i>p value</i>	Exp (B)
Patient Aggressive Behavior	0,006	18,185
Workload	0,000	32,469

Based on the Analysis Results in Table 6, it was found that the variables related to nurses work stress are workload and aggressive behavior of patients. However, when viewed from the strength of the relationship, the workload variable is the strongest variable having a relationship with nurses work stress, this can be seen Exp (B) of 32.469

4. Discussion

Relationship Between Physical Environment With Nurse Stress

Good working environment conditions can produce good and optimal work performance and have an impact on the mental health and work safety of a workforce. The condition of the physical work environment has an influence on the physiological and psychological conditions of a workforce. Physical environmental conditions can be stressors such as noise, vibration and hygiene in the work environment [14]. The results showed that of 30 nurses with a less physical environment category, there were 16 nurses (53.3%) with a high stress level assessment and 14 nurses (47.7%) with a low stress level assessment. Furthermore, from 23 nurses with less

physical environment, there were 5 nurses (21.7%) with high stress levels and 18 nurses (78.3%) with low stress levels. Chi-square statistical test results obtained by the value of $X^2_{hit} > X^2_{tab}$ ($4.192 > 3.841$), based on assessment criteria, this means that there is a relationship between the physical environment and nurses work stress in the Mental Hospital of Southeast Sulawesi Province. Furthermore, the results of the relationship closeness test obtained that the value is 0.320 or shows a weak relationship This is in line with the results of research [15] which shows that environmental conditions that are at risk of causing nurses work stress as much as 79.3%. According to [16], poor physical environment is related to work stress. Based on the results of monitoring in class III inpatient rooms, there is still a distinctive odor, but this does not come from the room but comes from patients who are again in care. Measurement of the physical environment is based on respondents' perceptions as measured through a questionnaire. Perception is the final process of observation that begins with the sensing process, with the perception of the individual being able to realize and understand about the environment around him [17]. The physical environment in a mental hospital consists of work space, work equipment, work facilities, lighting, electricity, ambient noise, air, surrounding land, and so on. Physical environmental conditions that can cause work stress on nurses include the condition of a narrow room, closed work space, patient body odor that is rarely or never showered, inadequate lighting, poor air circulation, and sometimes hot temperatures. Some nurses are always disturbed by the condition of the work environment like that especially since this condition has long been felt, so many nurses complained about the situation because they felt uncomfortable at work. Frequency of contact with unfavorable work environment conditions, many nurses become depressed in working, at higher conditions, this causes high work stress as well. One solution that can be applied to prevent high work stress is to do a mutation of the nurse's workspace with the aim of preventing saturation in certain workspaces.

Relationship Between Aggressive Behavior With Nurse Stress

The patient's aggressive behavior poses a threat to the physical and psychological health of the nurse. This condition does not rule out the possibility of mental disorders in nurses that will affect the performance of nurses such as loss of motivation, boredom and not being able to work effectively causing negative effects on health services. The results showed that of the 30 nurses with a high aggressive behavior category, there were 19 nurses (63.3%) with high stress levels and 11 nurses (36.7%) with low stress levels. Furthermore, from 23 nurses with aggressive behavior of low category patients, there were 2 nurses (8.7%) with high stress levels and 21 nurses (91.3%) with low stress levels. Chi-square statistical test results obtained by calculating the value of $X^2 > X^2_{table}$ ($14,402 > 3,841$), based on the assessment criteria, this means there is a relationship between aggressive behavior of patients with work stress nurses in the Mental Hospital of Southeast Sulawesi Province. Furthermore, the results of the closeness of the relationship test obtained that the value is 0.554 or indicates a moderate relationship. The results of this study are in line with research conducted by [3] which showed that nurses experienced aggressive behavior, 48.9% experienced mild stress. While nurses who were categorized had never experienced aggressive behavior from patients, 51.1% The results of research [18] show that mental nurses experience stress when they are often required to deal with aggression behavior from mental disorders patients. Existing stress is a minor stress sourced from the community and social environment including the work environment, and has the characteristics of Uncontrolled Events and Overload which has the potential to increase the stress experienced by nurses. Stress experienced by nurses has both a biological and psychosocial

impact. To overcome this, mental nurses use stress coping strategies, both problem-focused coping and emotion-focused coping. Both the stress experienced and the stress coping done by the subjects of this study are more determined by the subject's own resources, namely internal and external sources, and are not related to age or years of service. The patient's aggressive behavior is a psychological condition experienced by mental patients who appear when the patient sees or responds to the environment around both fellow patients and nurses or health workers. Aggressive behaviors felt by mental patients include irritability, irritability, frequent screaming, hitting the patient's friends, saying rude words, attacking others, talking off course, damaging objects or equipment around and so on. Some aggressive behavior of patients that often occurs and can endanger the safety of patients, the safety of fellow patients, the safety of the patient's family and the safety of the officer or guardian include mental patients attacking nurses with sharp / blunt objects, hitting nurses on guard, chasing officers, speaking harshly, not heeding officers, conflicts between patients, and others in part.

The Relationship Between Workload and Nurse Stress

Nurse workload is all activities carried out by nurses while on duty in a nursing service unit. Job stress is a condition of tension that causes an imbalance of physical and psychological conditions in employees sourced from individuals or organizations that affects the physical, psychological, behavior of employees [19] The results showed that of 23 nurses with a high workload category, there were 18 nurses (78.3%) with a high stress level assessment and 5 nurses (21.7%) with a low stress level assessment. Furthermore, from 30 nurses with low category workload, there were 3 nurses (10.0%) with high stress levels and 27 nurses (90.0%) with low stress levels. Chi-square statistical test results obtained by calculating the value of $X^2 > X^2$ table (22.584 > 3.841), based on the assessment criteria, this means there is a relationship of workload with nurses work stress in the Mental Hospital of Southeast Sulawesi Province. Furthermore the results of the closeness of the relationship test obtained that the value is 0.692 or shows a strong relationship. This is in line with the results of the study [19] found a heavy workload of 23 respondents (56.1%) and moderate work stress 29 respondents (70.7%). Value of $P = 0,000$. The conclusion from this study there is a relationship between physical workload and work stress of nurses in the inpatient room of GMIM Pancaran Kasih Manado General Hospital. The workload of nurses working in hospitals is related to nursing care that must be given to patients. The things that are taken into consideration in the workload of nurses are the number of patients that is not proportional to the number of patients treated, direct nursing activities, indirect and health education as well as the average time, and the frequency of actions needed by patients. If the number of tasks that are not proportional to physical abilities and expertise and the time available then it will be a source of stress [19] The workload of nurses in psychiatric hospitals is very diverse apart from the physical environment, administrative tasks of service, management workload, but always faced with the social environment of subordinate superiors, peers, family of patients including relationships with patients themselves. Workload felt by officers will increase emotional pressure, mental pressure, cause work motivation to be low, easily tired at work, uncomfortable at work, easily offended, at higher circumstances have a major impact on work stress thereby reducing nurse work productivity. Some conditions of workload that can be felt by nurses in relation to work include the availability of nurses who are not proportional to the number of patients, the presence of nurses who are absent during working hours, the nurses who are not disciplined in work, the nurses who have a mutation of duties, nurses who work in dual positions, and nurses who do not handover the work when changing work shifts. Work conditions that are felt

by nurses that are often repeated at work will accumulate in thoughts, feelings, and can psychologically harm nurses. The adverse effects of high workloads will trigger high work stress which ultimately decreases work productivity.

Relationship of Interpersonal Conflict with Nurse Work Stress

One of the duties of a nurse is to have to interact with other parties such as doctors to provide good service to individuals, families, groups and communities by using good communication [20]. Interpersonal conflict occurs as a result of disruption of social interaction between workers and other people such as coworkers, patients, patient's family, and superiors. This disorder occurs due to inter-personal disagreements about personal needs or desires that should be met [21]. The results showed that of the 22 nurses in the category of sufficient interpersonal conflict, there were 14 nurses (63.6%) with a high stress level assessment and 8 nurses (36.4%) with a low stress level assessment. Furthermore, from 31 nurses with less interpersonal conflict category, there were 7 nurses (22.6%) with high stress levels and 24 nurses (77.4%) with low stress levels. Chi-square statistical test results obtained by the value of $\chi^2_{hit} > \chi^2_{tab}$ ($7,432 > 3,841$), based on assessment criteria, this means there is a relationship between interpersonal conflict with nurses work stress at the Mental Hospital of Southeast Sulawesi Province. Furthermore the results of the closeness of the relationship test obtained that the value is 0.414 or indicates a moderate relationship This is in line with the results of research [22,23] which states that increased role conflict will result in increased work stress experienced by employees. Role conflict can be interpreted as a condition where an individual has a different role at the same time [23]. Based on observations it is known that the role conflict experienced by nurses ie nurses have an additional role as part of one of the teams or committees in the hospital. Being part of an organization in a hospital causes nurses to have more than one role at the same time. Role conflict can be an important stressor for a person [24]. Role conflict arises when a worker experiences a conflict between the tasks he has to do and the responsibilities he has, the tasks he has to do that in his view are not part of from his job, conflicting demands from superiors, colleagues, subordinates, or others who are considered important to him, as well as conflict with his personal values and beliefs while carrying out his work duties [14]. These conditions cause the inconvenience of workers and can become triggers the emergence of stress. Nurse interpersonal conflicts often occur in the workspace.

In nurses' hospitals, in addition to facing working conditions in their relationships with fellow nurses, there is also a good communication relationship with superiors, subordinates including other colleagues. Work relationships based on shared thoughts, feelings, vision and mission that are in line with coworkers will bring a safe, peaceful and conducive working atmosphere. However, if coworkers and work colleagues disagree, are in line and in the same direction in terms of work, it will create an uncomfortable working atmosphere which will have an impact on low work motivation and work stress. Some situations of interpersonal conflict that can create nurses' work stress in the hospital include misunderstanding, offense, unfair division of labor, unfair distribution of incentives, dislike of work, personal ego, disrespect for colleagues, arrogance at work, favoritism in making friends, feeling great at work, not involving friends in work, and social jealousy due to unfair job transfers Limitations of this study are some of the respondents and informants have a limited time to provide detailed information at the time of the interview.

5. Conclusions and Recommendations

Conclusion; Physical environmental factors, patient aggressive behavior, workload, and interpersonal conflict have a relationship with nurses work stress. Workload is the most dominant factor related to nurses work stress. Recommendation; the need to evaluate nurse performance, and provide social support through effective communication to nurses.

6. Conflict of Interest

Authors declare no conflict interest.

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