



THE RELATIONSHIP OF OCCUPATIONAL SAFETY CLIMATE WITH OCCUPATIONAL SAFETY CLIMATE BEHAVIOR ON POTENTIAL HAZARDS AT RSUD BATARA GURU BELOPA

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ABSTRACT

Work safety climate is an aspect that can shape work safety behavior in an organization. This study aims to analyze the relationship between work safety climate and nurses' work safety behavior on potential hazards at Batara Guru Belopa Hospital. The method used in this study was cross sectional, with a sample size of 91 executive nurses. The sample determination used proportionate random sampling technique. Data were collected using a questionnaire with a Likert scale. Data were analyzed univariately and bivariately using the Chi Square test. The results showed that there was a relationship between work safety climate and work safety behavior. Among the seven dimensions of occupational safety climate studied, those significantly related were security prioritization, management commitment and expertise ($p=0.006$) and strengthening management security ($p=0.045$). Other dimensions such as administrative security laws, commitment to employee safety, employee priority not to accept risk, communication safety, learning and trust in coworker safety, and employee confidence in the effectiveness of the security system proportionally have a relationship but based on statistical tests do not have a significant relationship. The main element of the work safety climate that can shape work safety behavior is management, with a high commitment and priority from management in the form of initial planning and clear goals for safety, as well as management empowerment and authority by designing a safety system that can be applied by nurses and will be able to move nurses to commit to being involved in building work safety through the application of good work safety behavior.

Keywords: *Safety Climate Dimensions, Occupational Safety Behavior*

INTRODUCTION

Currently, there are so many issues about how to implement patient safety that hospitals and medical personnel themselves focus more on patient safety with little regard for the occupational health and safety of medical personnel (Newaz et al., 2018). According to available data, acute events are more common among hospital workers than workers in other fields.

Hospital workers have a 1.5 times higher risk than other workers. The probability of contracting HIV after a prick from a contaminated needle is 4: 1000 (Lyu et al., 2018).

In providing health services, nurses are health professionals who are by the patient's side for 24 hours, so nurses have the greatest risk of occupational diseases, work accidents and occupational diseases.

The relatively small number of work-related incidents does not reflect the actual situation, this is because there are still health workers in hospitals, especially nurses, who do not report work accidents they experience while on duty. Although there are nurses who report, there is still a lack of handling or follow-up from the hospital. Therefore, it is necessary to create a good work safety climate in an organization (Perceka & ..., 2021).

According to (Namian et al., 2018), in addition to the perception of health workers about the risks faced in hospitals or other service centers, the same perception is also needed for the management of managers to reduce the risk of harm. As in the research conducted by (Shahriari & Aydin, 2019), that there needs to be good planning and work design related to safety standards to improve the safety of the work environment for oncology nurses by providing protective equipment, developing practice guidelines. This is supported by research by (Reis et al., 2018), that by improving the work safety climate, compliance with relevant safety regulations when using personal protective equipment (PPE) will increase.

In general, work accidents occur not only because of worker indifference but because of negligence in control, which is the responsibility of management. Although nurses are aware of the dangers at

work, they still ignore their own safety as in the research of (Smith et al., 2020), that at work sometimes nurses prioritize patient safety by ignoring their own safety.

Another study by (Loosemore & Malouf, 2019), found that the work safety of nurses itself depends on the perception of nurses about the risk of hazards that will be faced during carrying out their work. Currently there are still various actions by health workers, especially nurses, that have the potential to increase self-infection, such as: improper hand washing, improper use of gloves, unsafe resealing of syringes, unsafe disposal of sharps, improper equipment sterilization and decontamination techniques, and inadequate room hygiene practices.

RSUD Batar Guru Belopa is a type C hospital located in Belopa as the center of Luwu Regency. In 2020, the hospital had just established PPI (Infection Prevention and Control) so that there was no record of occupational events or occupational diseases experienced by workers in the hospital or handling of occupational accident problems experienced by health workers. The results of the information obtained that there are 3 nurses who have been pricked by needles while working, the availability of personal protective equipment (PPE) is still limited, for the operating room itself only masks, handscoen, operating suits and sterile

clothes are available in limited quantities. In addition, there is no supervision from the head of the room or from management about the use of personal protective equipment. This shows the importance of management in creating a security or safety climate in an organization.

Management has a very large role in creating a work safety climate. Thus good safety management will be able to shape the work safety behavior of the workforce in an organization. The purpose of this study was to determine the relationship between work safety climate and nurses' work behavior on potential hazards at Batara Guru Belopa Hospital.

MATERIALS AND METHODS

Location and Research Design

This research was conducted in ICU, ER, Operating Room and Treatment Room of RSUD Batara Guru Belopa. The research design used cross sectional to see the relationship between work safety climate variables (management safety priority, commitment and competence, management safety justice, management safety empowerment, worker safety commitment, workers safety priority and risk nonacceptance, safety communication, learning and trust in workers safety competence and workers trust in the effectiveness of safety system) with nurses' work safety behavior according to nurses' perception in RSUD Batara Guru Belopa

simultaneously. This research was conducted for 6 months, starting from March to August 2021.

Population and Sample

The population in this study were all nurses at Batara Guru Belopa Hospital, totaling 156 people. While the research sample amounted to 91 implementing nurses who were selected by proportionate random sampling and in accordance with the inclusion criteria.

Data Collection Method

In this study, the measuring instrument used was a questionnaire with a Likert scale consisting of: 35 items of work safety climate dimensions and 25 items of work safety behavior of nurses related to potential hazards at Batara Guru Belopa Hospital. This measuring instrument is a previously used instrument and has met the requirements of validity and reliability tests.

Data Analysis

Data analysis was conducted using computer tools in accordance with the measurement scale and research objectives. Data were analyzed univariately to determine the frequency distribution of respondent characteristics and each variable. Bivariate analysis used Chi Square Test and Kolmogorov-Smirnov test to see the relationship between work safety climate and nurses' work safety behavior on

potential hazards at Batara Guru Belopa Hospital according to nurses' perception.

RESEARCH RESULTS

Univariate Analysis

Table 1. Frequency Distribution Of Nurse Characteristics

Source: Primary Data 2021

Nurse Characteristic	n	%
Age		
21-27 Years old	51	56
28-35 Years old	40	44
Gender		
Male	32	35.2
Female	59	64.8
Education		
Nursing Diploma	10	11.0
Bachelor Of Nursing	6	6.6
Ners	75	82.4
Length of Service		
1 Month - 3 year	55	60.4
3 Year - 21 year	36	39.6
Total	91	100

Based on table 1, it shows that most nurses in this study have an age of 21-27 years as many as 51 people (56%) and most of them are female, namely 59 people (64.8%). The highest level of education in this study was a graduate of the Ners profession, namely 75 people (82.4%). The fastest working period was 1 month and the longest was 21 years, where most of the executive nurses in this study were less than 3 years, namely 55 people (60.4%).

Table 2: Frequency Distribution of Occupational Safety Climate Dimensions in the Hospital

Safety Climate Dimensions	N	%
Safety priorities, management commitment and expertise		
Not good	35	38.5
Good	56	61.5
Strengthen management security		
Not good	24	26.4
Good	67	73.6
Administrative security law		
Not good	28	30.8
Good	63	69.2
Commitment to employee safety		
Not good	37	40.7
Good	54	59.3
Employee prioritization of risk aversion		
Not good	41	45.1
Good	54	59.3
Safety communication, learning and trust in coworkers' safety		
Not good	42	46.2
Good	49	53.8
Employee confidence in the effectiveness of the security system		
Not good	44	48.4
Good	47	51.6
Total	91	100

Source: Primary Data 2021

Table 2 shows that most of the executive nurses stated that security priorities, management commitment and expertise were good as many as 56 people

(61.5%), strengthening management security was good as many as 67 people (73.6%), administrative security laws were good as many as 63 people (69.2%), commitment to good employee safety as many as 54 people (59.3%), employee priorities for not accepting risks were good as many as 54 people (59.3%), communication safety, learning and trust in the safety of colleagues were good as many as 49 people (53.8%), employee confidence in the effectiveness of a good security system as many as 47 people (51.8%).

Table 3. Frequency Distribution of Work Safety Behavior at Batara Guru Belopa Hospital

Nurse Occupational Safety Behavior	N	%
Good	14	15.4
Medium	65	71.4
Less Good	12	13.2
Total	91	100

Source: Primary Data 2021

Table 3 shows that most of the executive nurses in this study have the following behaviors moderate work safety (71.4%) and there are also nurses with poor work safety behavior (13.2%).

Bivariat Analisis

Tabel 4. Analisis Hubungan Iklim Keselamatan Kerja dengan Perilaku Keselamatan Kerja Perawat Atas Bahaya Potensial Di RSUD Batara Guru Belopa

Variabel	Perilaku						Total	<i>p</i> < 0,05	
	Kurang Baik		Sedang		Baik				
	n	%	N	%	n	%	N		%
Safety priorities, management commitment and expertise									0.006
Not good	9	25.7	24	68.6	2	5.7	35	100	
Good	3	5.4	41	73.2	12	21.4	56	100	
Strengthen management security									0.045
Not good	5	20.8	18	75	1	4.2	24	100	
Good	7	10.4	47	70.1	13	19.4	67	100	
Administrative security law									1.000
Not good	5	17.9	20	71.4	3	10.7	28	100	
Good	7	11.1	45	71.4	11	17.5	63	100	
Commitment to employee safety									0.744
Not good	6	16.2	25	67.6	6	16.2	37	100	
Good	6	11.1	40	74.1	8	14.8	54	100	
Employee prioritization of risk aversion									0.237
Not good	6	14.6	26	63.4	9	22.0	41	100	
Good	6	12.0	39	78.0	5	10	50	100	
Safety communication, learning and trust in coworker safety									0.936
Not good	6	14.3	30	71.4	6	14.3	42	100	
Good	6	12.2	35	71.4	8	16.3	49	100	
Employee confidence in the effectiveness of safety systems									0.414
Not good	5	11.4	30	68.2	9	20.5	44	100	
Good	7	14.9	35	74.5	5	10.6	47	100	

Source Primary Data 2021

Table 4 shows that the priority of security, commitment and good management expertise with good nurse work safety behavior as many as 12 people (21.4%) more than the priority of security, commitment and poor management expertise obtained good nurse work safety behavior as many as 2 people (5.7%). Based on the statistical test results with the Chi-Square test, the p value = $0.006 < \alpha$ 0.05. This shows that security priorities, commitment and management expertise have a significant relationship with nurses' work safety behavior.

Strengthening good management security with good nurse work safety behavior as many as 13 people (19.4%) more than strengthening poor management security obtained good nurse work safety behavior as many as 1 person (4.2%). Statistical test results with Chi-square test obtained p value = $0.045 < \alpha$ 0.05. This shows that strengthening management security does not have a significant relationship with nurses' work safety behavior.

Good administrative security law with good nurse work safety behavior as many as 11 people (17.5%) more than with poor administrative security law obtained good nurse work safety behavior as many as 3 people (10.7%). The results of statistical tests with the Kolmogorov-Smirnov test obtained a value of $p = 1,000 >$

α 0.05. This shows that administrative safety law does not have a significant relationship with nurses' work safety behavior.

Commitment to good employee safety with good work safety behavior of nurses as many as 8 people (14.8%) is slightly more than the commitment to employee safety that is not good to get good work safety behavior of nurses as many as 6 people (16.2%). Statistical test results with Chi Square test obtained p value = $0.744 > \alpha$ 0.05. This shows that commitment to employee safety does not have a significant relationship with nurses' work safety behavior.

The priority of employees to not accept good risks with good nurse work safety behavior is 5 people (10%) less than the priority of employees and not accepting unfavorable risks obtained moderate nurse work safety behavior as many as 9 people (22%). Statistical test results with Chi Square test obtained p value = $0.237 > \alpha$ 0.05. This shows that the priority of employees not to accept risk does not have a significant relationship with the safety behavior of nurses.

Safety communication, learning and trust in the safety of good colleagues with good work safety behavior of nurses as many as 8 people (16.3%) more than the safety communication, learning and trust in the safety of colleagues who are less good

obtained good work safety behavior of nurses as many as 6 people (14.3%). Statistical test results with Chi Square test obtained $p \text{ value} = 0.936 > \alpha 0.05$. This shows that communication safety, learning and trust in the safety of colleagues do not have a significant relationship to the safety behavior of nurses.

Employee confidence in the effectiveness of a good security system with good work safety behavior of nurses as many as 5 people (10.6%) less than employee confidence in the effectiveness of a security system that is less good obtained good work safety behavior of nurses as many as 9 people (20.5%). Statistical test results with Chi Square test obtained $p \text{ value} = 0.414 > \alpha 0.05$. This shows that employee confidence in the effectiveness of the security system does not have a significant relationship with the work safety behavior of nurses.

DISCUSSION

The results showed that security priorities, commitment and management expertise have a significant relationship with nurses' work safety behavior. This research is in line with the research of (Wang et al., 2018), according to which management commitment is the most important factor in shaping employee behavior, because work accidents do not only occur due to employee indifference, but due to neglect of management control

Failure to implement safety behavior is usually associated with a lack of management support and commitment (Shahriari & Aydin, 2019). This is supported by research by (Nunen et al., 2018), which states that policies have a positive influence on nurses in implementing work safety. However, its implementation is still constrained by the lack of human resources who understand K3, the lack of K3 training and the lack of awareness of the workforce who report themselves when they experience accidents at work. The main elements of a work safety climate that can shape behavior are the following This is supported by research (Campion & Famolaro, 2018), which states that policies have a positive influence on nurses in implementing work safety. However, the implementation is still constrained by the lack of human resources who understand K3, the lack of K3 training and the lack of awareness of the workforce who report themselves when they have an accident at work. The main element of the work safety climate that can shape work safety behavior is management, by implementing a good work safety system and being able to mobilize the workforce to be involved in building good work safety (Reese, 2018).

Strengthening management safety has a significant relationship with nurses' work safety behavior. The work safety climate must start from the top manager on

work safety issues. Because the higher the occupational health and safety climate implemented by top managers, the higher the performance of workers in implementing safe behavior (Javed et al., 2019). According to (Alruqi et al., 2018), states that a manager in creating a positive safety climate by providing support and motivation to workers to participate in the implementation of activities, providing security during work. At the management level, not only the competency aspect is needed, but also the empowering aspect, in this case related to human resource development, one of which is by providing training, providing rewards for improving performance and providing motivation so that workers, in this case nurses, can behave safely during work.

Administrative security law does not have a significant relationship with nurses' work safety behavior. This is contrary to research conducted by (Dizdar & Ünver, 2019), which states that administrative security law has a significant influence on the occurrence of accidents where management in implementing the work safety system must be fair, try to find the cause and solve it. Management in solving problems related to work safety must be fair not only blame but look for causes and find solutions to problems related to work safety. Top management behavior and activities have a major impact on the

formation of a conducive climate, such as in the decision-making process related to work safety issues must be fair so that workers can perceive it well through safe behavior during work. Management must know the problems that exist related to work safety before going to the problem solving stage. In addition to the importance of supervision of workers from management itself, it is also necessary to have the cooperation of the workers themselves to report existing problems. So that management tries to be able to solve existing problems and can even prevent unsafe behavior and unsafe conditions through planning and policies related to work safety.

Commitment to employee safety does not have a significant relationship with nurses' work safety behavior. This is not in accordance with the results of research conducted by Cheyne et al, (1998), stating that there is a relationship between worker commitment and the formation of work safety behavior where workers who are committed and aware of the importance of work safety programs will implement work safety which is a form of awareness of the importance of implementing safe behavior during work. A person does not just state that they are committed to something, but is shown through behavior, therefore a good attitude is needed where the attitude can be interpreted through visible behavior.

This is in line with the research of (Jiang et al., 2019) that the existence of a work safety climate can affect employee attitudes towards safety, the way employees work and interact with other employees, which directly affects work safety, namely work accidents in an organization. Therefore, it is very important to implement a work safety management system, namely by providing equipment, facilities, and a good work environment, competent human resources through the provision of SOPs that can be used as guidelines in implementing work safety and training related to work safety because through training nurses can receive information about ways to work safely which can increase knowledge (Sulhan et al., 2022).

Employee priorities and not accepting risks show no significant relationship to nurses' work safety behavior. In contrast to the results of research conducted by (Schwappach et al., 2018), that workers' perceptions of work safety in terms of safety priorities, not accepting hazardous conditions or not taking risks and not showing courage contrary to safety aspects have a relationship with work safety behavior. According to (Pandit et al., 2019), the perception of danger will affect the occurrence of safe or unsafe behavior. Although a person has a good perception and knowledge as well as an attitude to

reject danger, that person can potentially experience an accident if he does not have a good ability to avoid danger. The management itself prepares a good working environment for workers by preparing all adequate facilities and infrastructure, in order to prevent unsafe conditions. In addition, it is also important to increase knowledge for workers to better perceive existing hazards so that they are more vigilant and can create safe behavior during work.

Communication safety, learning and trust in the safety of colleagues do not have a significant relationship with the safety behavior of nurses. In contrast to the results of research conducted by (Men et al., 2020) stating that good working relationships, trust between employees and employees with management can control safe behavior in an organization. This requires good communication by each employee, namely good communication between management and colleagues, and the process of transferring information. By providing information on how to work safely, the correct use of personal protective equipment will increase the knowledge of the worker. Knowledge will increase awareness that makes people behave in accordance with their knowledge (Juariah & Purwaningsih, 2022). The most effective aspect of reducing the risk of accidents in the workplace is that

employees fully understand the risks of their work. So, if they understand their job responsibilities and risks, they can do their job seriously and work with confidence (Yıldız et al., 2018). Management that is highly committed and consistent in implementing this system can cause the workforce to be motivated to apply good safety behavior can also occur, there is trust between workers, protect each other so that accidents do not occur and the risk of danger can be controlled (Lyu et al., 2018).

Employees believe the effectiveness of the security system does not have a significant relationship with nurses' work safety behavior. In contrast to the results of research by (Aldridge & McChesney, 2018), stated that with a good work safety system, it will form safe behavior for workers. The work safety management system is part of risk management. With a good safety management system, elements such as equipment, facilities and a reliable work environment can be in accordance with professional technical standards, human knowledge, skills and attitudes can be in accordance with the competencies required by their work and standard operating procedures can correctly and safely manage and move facilities and infrastructure. The work safety system must be supported by the support and commitment of the leadership (Kaltah et al., 2021). A good

safety climate is created when management has authority over safety by developing a safety system that employees can actually use in the workplace, which instills employee confidence in the effectiveness of the safety system. Thus, safety behavior will be formed in workers.

CONCLUSIONS

The results showed that there is a relationship between work safety climate and nurses' work safety behavior. Among the seven dimensions of occupational safety studied, those that have a significant relationship are security prioritization, management commitment and expertise, and strengthening management security. Management is the main element of the work safety climate that shapes work safety behavior. The existence of high commitment and priority from management in the form of initial planning and clear goals for safety, as well as management empowerment and authority by designing safety systems that can be applied by nurses and will be able to mobilize the workforce to commit to being involved in building work safety through the application of good work safety behavior.

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