

Original Research Report

THE INFLUENCE OF SAFETY COMMUNICATIONS AND SAFETY PROMOTION POLICIES ON SAFETY PERFORMANCE AMONG NURSES IN THE EMERGENCY DEPARTMENT AT A TERTIARY HOSPITAL IN SURABAYA, INDONESIA

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ABSTRACT

The application of the occupational safety and health principles in work activities is expected to reduce the occurrence of work-related accidents. This research was conducted in the Emergency Department of a tertiary hospital of Dr. Soetomo General Academic Hospital, Surabaya, Indonesia, in 2019 and aimed to determine the influence of safety communications and safety promotion policies on the safety performance among nurses. This research was a quantitative research with a cross-sectional design study. The population in this study were 208 emergency room nurses at Dr. Soetomo General Academic Hospital with a total sample of 68 people using a simple random sampling technique. The results showed that the correlation between safety communications variable with safety performance had a p-value of 0.035 (<0.05) and the correlation between safety promotion policies variable with safety performance had a p-value of 0.319 (>0.05), indicating that there was an influence of safety communications on safety performance, while there was no influence of safety promotion policies on safety performance among nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, Indonesia.

Keywords: Safety communications; safety promotion policies; safety performance; public health

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1. To reduce the occurrence of work-related accidents, the application of occupational safety and health principles in work activities is necessary.
2. This research analyzed the safety communications and safety promotion policies on the safety performance among nurses.
3. Safety communications have influence on safety performance, while safety promotion policies have no influence on safety performance.

INTRODUCTION

Hospital workers, such as health workers, laboratory workers, housekeeping workers, central sterile supply department (CSSD) workers, or even garbage collectors, have a great risk of getting healthcare associated infections (HAIs) or work-related infections. The implementation of and commitment to occupational and environmental health and safety are some of the efforts to protect all levels of hospital society and the environment from potential hazards caused by hospital activities. A study from Aghaei et al. (2020) showed that the most common occupational accidents in healthcare units are needle stick injuries. According to a research from Mayangkara et al. (2021), even with the

implementation of occupational health and safety (OSH) in a hospital, minimizing occupational accidents is difficult due to some sectoral regulations of OSH from various agencies.

A good company is a company that implements optimal safety programs for the employees because they aware that it is directly related to their productivity and able to motivate them to improve their work quality (Purnomo et al. 2018). Verra et al. (2019) found that most establishments in European Union countries take preventive measures on direct physical harm. It shows that European Union establishments have great concern about safety. But, it was found that only 29.5% of them

take measures to promote health. Based on an integrative literature review from Wagner et al. (2020), the determinants of occupational safety culture in hospitals and other workplaces mostly include management and colleagues, the characteristics and circumstances of workplace, and the characteristics of employees. In a sustainability report, frequently raised issues of concern are the efforts to ensure the safety of employees in some industries (Wang et al. 2020).

Sustainable Development Goals (SDGs) are commitment to efforts in improving community welfare nationally and globally. Health and welfare are two variables that bind and influence each other in every citizen. Therefore, the state must ensure access to health for all citizens and make preventive efforts so that the community is not exposed to various infectious diseases (Irhamsyah 2020). A company that has been certified in quality, environmental, and occupational health and safety management has an important role in the success of the SDGs in three sustainability dimensions (economic, environmental, and social) (Fonseca & Carvalho 2019).

Based on most studies, in the effective implementation of safety management, there is safety performance as the major compelling force (Ajmal et al. 2021). Occupational safety has a crucial role to enhance safety behavior as well as safety performance in the workplace (Asamani 2020). A hierarchical framework from a literature review by Mohammadi et al. (2018) explains that in order to determine the safety performance, not only management activities within project levels, but interactions among factors at different levels are also needed. It shows that each hierarchical level has an important role in determining the safety performance. Safety management practices are management practices, roles, and functions designed by companies to improve employee safety, which consists of 6 dimensions, i.e. management commitment related to safety, safety training, worker involvement in solving safety problems, safety communications, safety rules and procedures, and safety promotion policies. Safety communication is an activity to convey safety information to workers (Vinodkumar & Bhasi 2010). Safety communication can be measured using indicators from Vinodkumar & Bhasi (2010), which include discussing safety issues with leaders, discussing safety issues in meetings, and accessing safety informations. A research conducted by Supriyanto & Anggraini (2020) showed that communication has a significant influence on employee performance. A research by Ulva (2017) studied communication procedures to improve effective communication using the situation, background, assessment, and recommendation (SBAR) and write, read, and confirm (WRC) systems at a hospital in Padang, although in practice there are still problems in the confirmation sheet that have not been completely

available. Moreover, teamwork and communication improvement training are necessary to promote safety culture and it is correlated with increased patient safety and fewer adverse events (Hikami et al. 2022). The safety promotion policies are efforts to motivate the workforce to prioritize safety when working. Safety promotion policies can be measured using indicators of the existence of a safety incentive program. An organization's perceptions can be the key to obtain support from the managerial roles about the implementation of health promoting policies and programs, so it can be implemented properly (Biswas et al. 2021). By implementing safety promotion policies, it reflects the good management commitment and signifies the proactive attitude toward safety (Subramaniam 2016).

Moreover, Linnan et al. (2019) found that in the United States, an OSH and workplace health promotion expert need to be part of multi-disciplinary teams within the State and Territorial Health Departments to bring critical worker health perspectives to the public health efforts.

Dr. Soetomo General Academic Hospital, Surabaya, is one of tertiary hospitals in East Java with type A category. Based on data obtained from the Occupational Health and Safety Committee of the hospital, there were 18 incidents related to OHS in 2017 and 13 incidents of work-related accidents in 2018. In a report from the Infection Prevention and Control Committee of Dr. Soetomo General Academic Hospital, Surabaya, there were 12 needle stick injuries (NSIs) in 2017 and 74 NSIs in 2018. Meanwhile, according to a report from the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, there were one work-related accident in 2017 and another one in 2018.

The Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, is the most vital service unit in helping to save the lives of patients who experience medical emergencies right after entering the hospital. Because emergency management must obtain a fast response time and appropriate action, nurses in this section are often exposed to various sources of danger that can threaten life and at greater risk of accidents.

This study was conducted with the aim of analyzing safety communications and safety promotion policies that can influence the safety performance among nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya.

MATERIALS AND METHODS

This research used quantitative approach. This research was an observational cross-sectional study conducted in

the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, Indonesia, in 2019. The population in this study were all the nurses in the Emergency Department. The inclusion and exclusion criteria were set to obtain the appropriate population size for the study. The inclusion criteria in this study were the Emergency Department nurses at Dr. Soetomo General Academic Hospital, Surabaya, who had direct contact with the patients or their environment and were willing to participate in the study.

The exclusion criteria were nurses who took time off. Based on the inclusion and exclusion criteria, the total population obtained were 208 people. The sampling technique was a simple random sampling. The sample in this study were nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, consisting of the 1st floor nurses (Emergency Assistance), 2nd floor nurses (Obstetrics and Neonates), 3rd floor nurses (Intensive Observation), and 5th floor nurses (Operating Room). On the 4th floor there were no nurse respondents because it is the Education and Research Administration Room. The total sample in the study were 68 people.

Data supporting the results of the study were obtained through in-depth interviews with informants who knew the practice of safety management and the application of standard precautions as part of the safety behavior of nurses in hospitals. The informants in the study consisted of the Chair of the Occupational Health and Safety Committee, the Chair of the Infection Prevention and Control Committee, and the Head of the Emergency Department Nursing Room. The data collection instrument in this study was a questionnaire sheet. Observations were completed with the help of a checklist sheet and a camera for documentation, an interview guide with the help of a voice recorder, and a study of documentation.

Descriptive analysis of the study results was performed using frequency distribution table to produce a distribution and percentage of each research variable. Bivariable analysis test was performed to determine the relation of the research variables. Chi-square test was used in the bivariable test with the help of SPSS version 21, while the logistic regression test was used in the multivariable analysis test with the help of SPSS version 21. The values were categorized by the median cut-off point. If it was less than the median, it was categorized as “less”, while if it was more than or equal to the median, it was categorized as “good”.

This research was preceded with a preliminary study in order to determine the problem to be studied. The informed consent, research permit, and ethical clearance were prepared after the problem was formulated. The research had been declared ethically compliant through

the certificate number 33:61MGRMIX1423; obtained from the Health Research Ethics Committee of Dr. Soetomo General Academic Hospital. The next steps were collecting data on personal informations through questionnaires. Data on the Big-Five personality traits were obtained through questionnaires, safety management practice through questionnaires and interviews, and safety performance data were obtained also through questionnaires and observations. The supporting data were obtained from secondary data. Then, data processing and analysis were carried out, and conclusions and suggestions were drawn.

RESULTS

Variable Identifications

Variables of the safety management practices in this study consisted of safety communications and safety promotion policies. The frequency distribution of the research variables was obtained based on the results of primary data collection from 68 respondents who were nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya. The frequency distribution of safety communications and safety promotion policies variables is shown in Table 1.

Table 1. Frequency distribution of safety communications and safety promotion policies among nurses in the Emergency Department at Dr. Soetomo General Academic Hospital, Surabaya, in 2019

Variable	Category	Frequency (n)	Percentage (%)
Safety Communications	Less	17	25.0
	Good	51	75.0
Safety Promotion Policies	Less	19	27.9
	Good	49	72.1

The measurement of safety performance was performed using a questionnaire that included the compliance and participation of respondents in work safety. The frequency distribution of safety performance research variables was obtained based on the results of primary data collection from 68 respondents who were nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya. The frequency distribution of the safety performance variable is shown in Table 2.

Table 2. Frequency distribution of safety performance among nurses in the Emergency Department at Dr. Soetomo General Academic Hospital, Surabaya, in 2019

Variable	Category	Frequency (n)	Percentage (%)
Safety Performance	Less	31	45.6
	Good	37	54.4



Table 3. The relationship between safety communications and safety promotion policies with safety performance among nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, in 2019

Independent Variable (Safety Management Practices)	Dependent Variable (Safety Performance)				Total		p-value	PR
	Less		Good		N	%		
	n	%	n	%				
Safety Communications								
Less	12	70.6	5	29.4	17	100	0.035	1.895
Good	19	37.3	32	62.7	51	100		
Safety Promotion Policies								
Less	11	57.9	8	42.1	19	100	0.319	1.148
Good	20	40.8	29	59.2	49	100		

Research Variable Analysis

At this stage of analysis, bivariable analysis with Chi-square test was used to determine the relationship Table 3 shows the results of the relationship analysis between safety communications variable and safety promotion policies variable with safety performance among nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya.

According to most of the respondents, the safety communications were good. The cross-tabulation results showed that most of the respondents who stated that the safety communications were good had good safety performance (62.7%). The results of the Chi-square statistical test showed that the safety communication variable with the safety performance had a p-value of 0.035 (<0.05) indicating a significant relationship. The prevalence ratio (PR) value was 1.895 (>1) that meant the respondents who deemed the safety communications as less significant had a lower safety performance compared to respondents who stated that the safety communication was good.

According to most of the respondents, the safety promotion policies were also good. The cross-tabulation results showed that the majority of respondents who stated that the safety promotion policies were good had good safety performance (59.2%). The results of the Chi-square statistical test showed that the safety promotion policy variable with safety performance had a p-value of 0.319 (>0.05), so there was no significant relationship.

DISCUSSIONS

Most of the nurses in the Emergency Department of Dr. Soetomo Hospital, Surabaya, deemed the safety communications as good. This means that the management has implemented open door policy and open communications on safety issues, and that the management has provided an opportunity to discuss and address safety issues in meetings. In this study,

statistically there was an influence of safety communications on safety performance. This is in line with a research by Rutra (2019) who examined the relationship between safety communications among workers and showed the results that communication strategies have an influence in increasing workers' awareness of the importance of safety in work environment. The results of a literature review analysis by Maulida (Famaiyanti, 2023) concluded that 8 out of 15 articles found poor safety communications in emergency departments, especially in the patient handover process. The eight research articles conducted in the emergency departments found that the levels of patient safety were less good than in other units, and that there were significant relationships between communications and patient safety in hospital emergency rooms. A research conducted by Chen et al. (2018) showed that safety communication has a very close association with safety performance and provides better explanation regarding safety performance in Taiwan's construction industry.

The assessment of most of the nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya, showed good safety promotion policies. This can be interpreted that safety behavior is considered a positive factor for job promotion and that safety promotion activities carried out by the management are effective in creating safety awareness. In this study, statistically there was no influence of the safety promotion policies on safety performance. This was not in line with a research by Syaff (2008) who concluded that there was a quite strong influence of rewards in shaping safe behavior. This is because the existence of a reward system becomes a motivation for workers to behave safely and carry out work happily. The results of this study were also not in line with a research conducted by Ginting et al. (2021) who showed that there was an influence of OSH promotion on the employees' use of personal protective equipment and unsafe acts. A research by Andriyadi et al. (2021) was conducted on the significance of the relationships of safety talk, implementation of training, and supervision of safe behavior among PT. X workers in the construction of Mulawarman University building,



construction of Mulawarman University building, Samarinda, in 2020. The results of multivariate analysis found no influence of safety promotion activities on the safe behavior of workers. The implementation of supervision as evaluation material and reminders in the field is an effort to increase safety behavior by motivating workers through rewards and punishments. To promote safety programs effectively, the determinants of the health, safety, and environment (HSE) culture should be well understood by the workers (Tehrani et al. 2018).

Strength and limitation

The findings of this study re-emphasize the significance of hospital safety performance, as demonstrated in earlier studies. However, safety promotion policies had little influence on safety performance, which is inconsistent with other studies. Further studies are required to investigate methods for improving safety performance, particularly among nurses in hospital settings.

CONCLUSION

Safety communications have influence on safety performance, while safety promotion policies have no influence on safety performance among nurses in the Emergency Department of Dr. Soetomo General Academic Hospital, Surabaya.

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Conflict of interest

The authors state that there was no conflict of interest in this study.

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Author contribution

Conceptualization: RB, NW, NS; data curation: RB, NS; methodology: RB, NW, NS; supervision: NW, ED; validation: NW, NS, ED; original draft writing: all authors; review and editing: all authors.

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