

NURSES' ATTITUDE ON THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) IN EMERGENCY ROOM OF DR. SLAMET HOSPITAL GARUT

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Abstract

Nurses in the emergency room have direct contact with patients. This contact can potentially lead to the risk of nosocomial infections or Healthcare-acquired Infections (HAIs). One of the efforts to avoid this infection is through using personal protective equipment (PPE). The attitude of nurses can influence the use of PPE when giving nursing care to patients. This is in line with the theory of attitude which says that individual attitudes are the beginning of the realization of individual actions or behavior. This study was aimed at finding out emergency department nurses' attitude in using personal protective equipment. The research design used was descriptive quantitative. 50 nurses were selected as samples using total sampling technique. In collecting the data, the instrument used was attitude questionnaire which had been modified into attitude component classifications such as cognitive, affective, and conative. The research instrument was tested for validity of 0.5431-0.6754 with r table 0.4438, and the results of the Cronbach reliability test were 0.805. Univariate data analysis is presented in the results of frequency distribution in the form of a percentage. This study showed 26 respondents (52%) had negative attitudes from the affective and conative components (responses from nurses who neglected the use of personal protective equipment (PPE) to prevent work accidents. While positive attitudes were in the cognitive component, 31 respondents (62%). This study concludes that emergency department nurses' attitude towards the use of PPE was negative based on affective and conative components but they responded positive attitude on cognitive component. The policy concerning on the use of PPE for the nurses need to be increasingly supervised as an effort to keep safety and health for both patients and nurses.

Keywords : Attitude, Emergency department nurses, Personal protective equipment,

Introduction

Emergency department in a hospital is responsible for providing immediate treatment for patients who are likely to die and to have further disability by involving various disciplines. Sapardi, et. all (2018) states that the nurses who have direct contact with the patients will potentially lead to risk nosocomial infections or Healthcare-acquired infections (HAIs). The prevalence of HAIs in developing countries ranges from 5,7% to 19,1%, while in developed countries, it ranges from 3,5% to 12% (WHO, 2016). Based on the reports on some hospitals in Indonesia, it was found that nosocomial infections occurred in Hasan Sadikin Hospital in Bandung (9,9%), Pirngadi Hospital in Medan (13,92%), Karyadi Hospital in Semarang (7,3%), dr. Soetomo Hospital (5,32) in Surabaya and dr. Cipto Mangonkusumo Hospital (5,4%), (Zubaidah and Jaya, 2015). The result of National Safety Council report in 1988 also showed work accident in hospital occurred more (41%) than other industries, (Putri and Kasjono, 2017). Regarding to this condition, it can be said that nurses are health workers who have high risk at health and accident especially when they are on duty in Emergency department.

One of the efforts to avoid the risk is to use personal protective equipment (PPE). According to Suma'mur (2009), the use of PPE is able to reduce the amount of direct contact by putting barrier between action and danger. Thus, the use of PPE for emergency department nurses should be indeed considered before providing treatment for the health and safety of the patients as well as the nurses.

The nurses' attitude can influence the use of PPE when providing nursing care to the patients. Putra (2012) in his study found that nurses' attitude whether it is negative or positive will impact to their behavior in using PPE ($p=0,004$; $\alpha=0,005$). This is in line with the attitude theory that said if the individual attitude is the beginning of realization of action and individual behavior (Dayakisni dan Hudaniah, 2003). Therefore, the bad and good attitude of emergency department nurses will influence the use of PPE and indirectly affect their work safety.

The positive attitude will make emergency department nurses obey to use PPE in accordance to its function. This fact is supported by several researches concerning on the use of PPE by the nurses. The research conducted by Siburian (2012) discussed the use of PPE in emergency department of Pasar Rebo Hospital in 2012 and its relationship with the work safety. The research showed that 53,30% from 30 nurses had negative attitude and did not obey to use PPE. The research indicated that the use of PPE was refused by the nurses and it was found out the relationship between the use of PPE for the emergency department nurses and their attitudes.

In the preliminary study of this research, the researchers conducted an interview with the head of emergency room in dr. Slamet Hospital Garut in 2018. He revealed that the emergency room of this hospital has facilities for PPE such as gloves, masks, protective gowns, googles, and other medical equipment. The number of nurses in emergency departments is 50 people. The shift is divided into 3 shifts; morning, afternoon, and evening shift. Besides, there is also standard of procedure in the use of PPE for the emergency department nurses and its use is supervised by infection prevention and control of the hospital. Hence, the nurses have enough knowledge in using PPE based on the procedure. Based on the interview, it was also found that there were some work accidents because of nurses' negligence and disobedient in using PPE. The work accident happened twice in dr. Slamet hospital during 2015 until 2017. The types of accident were getting pricked by needle and being hurt by sharp objects when putting the patient on a drip (IV). Those accidents happened because the nurses did not wear PPE such as gloves.

Based on the incidence of work accident cases to nurses, the researchers conducted initial observation directly to the emergency department nurses in January 2019. Based on two-day observation, the researchers found that there were 3 nurses who did not wear gloves when putting the patient a drip or IV in morning shift, 2 nurses did not wear mask when coming in the emergency room and 1 nurse did not replace the gloves when taking care another patient in afternoon shift.

Besides, the data of activity report for each semester administered by infection prevention and control of dr. Slamet Hospital in 2018 showed that based on result of audit of safe injection practice, emergency department was the lowest percentage (40%) and the highest one (80%) was in ophthalmology polyclinic. The result of lowest percentage in emergency department was because of the lack of nurses' obedient before injection because they made direct contact with the patients and did not consider their safety such as the nurses did not identify the patients, did not explain the procedure, did not use label on syringe, and did not perform hand hygiene before injection. In addition to, the health workers did not truly obey to take care of medical consumables such as they did not swap the rubber of the vial cover, did not perform aseptic technique when mixing the drugs, and did not wear PPE when mixing the drugs.

From the results of observations made it can be concluded that there is still the attitude of nurses who do not use and neglect the PPE in carrying out their duties so that it is not in accordance with the SOP in force in the IGD unit. the purpose of this study is how the attitude of the emergency room nurses in the use of personal protective equipment (PPE) in RSUD dr. Slamet Garut which is identified through cognitive, affective and conative attitude components

Methods

In this research, descriptive quantitative was applied. This method was used to describe the nurses' attitude in using PPE in emergency room of dr. Slamet Hospital. The population of this research was 50 emergency department nurses of dr. Slamet hospital. The sampling technique used was total sampling. 50 nurses in emergency room were selected as samples in this research.

The instrument used about the nurses' attitudes was a questionnaire of 20 statements. In the research questionnaire, the researcher

divided 20 items of attitude statements into three components of attitude, namely cognitive, affective, and conative. The measuring instrument used in this research instrument uses a Likert scale. Validity test, the instrument in the form of a questionnaire from Siburian (2012) researchers has been modified. The change in classification aims to adjust research interests. Then, the validity test on these changes has passed the content validity. The instrument used in this study had previously been carried out a reliability test by Siburian (2012) with the test results demanding 20 statements of valid attitude with a Cronbach alpha value of 0.805 where the Cronbach alpha value ≥ 0.6 reabel.

The use of the questionnaire consisted of 20 questions which included cognitive, affective and conative components. to know the description of attitude using the mean value of each respondent's content related to attitude variables, with a positive measurement result (Using and not neglecting PPE in accordance with the SOP) if the mean value is, 64.98 and Negative (not using and neglecting PPE according to the SOP) if the mean value < 64.98 . Analysis of the data used is univariate analysis using frequency distribution in the form of a percentage.

The study was conducted in June - July 2019 in accordance with a research permit from the Padjadjaran University Research Ethics Committee with a letter number 842 / UN6.KEP / EC / 2019 issued on 28 June 2019, a research permit from the National Unity and Politics Agency of Garut Regency on June 26, 2019, a research permit from RSUD Dr. Slamet Garut on July 1, 2019 and the research carried out for 3 days on July 2 to 5 July 2019

Result

According to the research conducted concerning on the nurses' attitude in the use of PPE in EO of dr. Slamet Hospital, it was obtained as follows:

Table 1. Frequency Distribution of Nurses' Attitude in the use of PPE

Variable	Level	Frequency (f)	Attitude (%)
Attitude	Negative	26	52
	Positive	24	28

The table 1 indicated that most of respondents, 25 nurses (56%) had negative attitude

Table 2. Frequency Distribution of Demography Characteristics (N=50)

Characteristic	f (%)	Attitude	
		f (%)	f (%)
Sex			
Male	35 (70)	19 (45.7)	16 (54.3)
Female	15 (30)	5 (33.3)	10 (66.7)
Age			
<40 YO	35 (70)	21 (60.0)	14 (40.0)
≥ 40 YO	15 (30)	3 (20.0)	12 (80.0)
Education			
D3	26 (53)	10 (38.5)	16 (61.5)
S1	11 (22)	6 (54.5)	5 (45.5)
S1+Ners	13 (26)	8 (61.5)	5 (38.4)
Working Length			
< 1 Tahun	2 (4)	1 (50)	1 (50)
1-5 Tahun	17 (34)	6 (35.3)	11 (64.7)
> 5 Tahun	31 (62)	17 (54.8)	14 (52.2)

Table 2 showed that most of respondents were male, 35 respondents (70%). Also, their ages, 35 respondents (70%) were more than 40 years old. In terms of education, diploma graduates were the most respondents of this research, 26 respondents (53%). In terms of working length, 31 respondents (62%) had worked for more than 5 years.

The table also showed the attitude of the respondents. It was obtained that males, 19 respondents (45,7%), had positive attitude. Conversely, females, 10 respondents (66,7%) dominated the number of respondents who had negative attitude.

In terms of age, those who had positive attitude were less than 40 years old, 21

respondents (60%) and the respondents who had negative attitude were more than 40 years old, 12 respondents (80%).

Regarding to the education, 8 respondents who had undergraduate degree and nursing professional (S1+ners) had positive attitude. Contrarily, 16 diploma graduates (61,5%) had negative attitude.

The last characteristics, working length, indicates that the positive attitude was obtained for the respondents who had worked for more than 5 years, 17 respondents (54,8%). But, 11 respondents who had length of working ranging from 1 to 5 years had negative attitude.

Table 3. Frequency Distribution of Nurses' Attitude in the use of PPE In terms of Cognitive Category (N=50)

Subtitle	Level	Frequency (f)	Precentage (%)
Cognitive	Positive	31	62.0
	Negative	19	38.0
Afective	Positive	21	42
	Negative	29	58
Conative	Positive	21	42
	Negative	29	58

Based on table 3 it is known that the cognitive categories of emergency room nurses regarding attitudes in PPE mostly have positive attitudes (do and not neglect the use of PPE) 31 respondents (62.0%). That most of them have a negative attitude (neglect and neglect in the use of PPE) in the affective category with the results of 29 respondents (58%). That most have attitudes based on conative categories with partially negative results (rejection and neglect in the use of PPE) 29 respondents (58%).

Discussion

Attitude is positive and negative feeling or mental state which is always prepared, learned, and set to give certain influence to someone's response towards other people, objects, and situation, (Azwar, 2011). The attitude is the constellation of cognitive, affective, and conative components which mutually interact in understanding, feeling, and behaving towards the objects, (Izzah 2012). According to researchers, the positive attitude of nurses always uses and never neglects the use of PPE according to the SOP, can avoid the occurrence of workplace accidents nurses in handling and serving patients (Izzah 2012).

The results showed that there were negative attitudes of 26 respondents (52%). This shows that most of the attitudes of emergency room nurses in the use of PPE have attitudes that indicate rejection or neglect of the use of PPE in accordance with applicable procedures. In addition, these results can be interpreted that most nurses pay less attention to the use of PPE that is not in accordance with procedures, do not invite other nurses to use PPE and are not yet fully responsible for the use of PPE. The results of this study are smaller than the results of research conducted

by Apriluana, et al. (2016) found that 62.5% of respondents had a negative attitude in the use of PPE compared to respondents who were positive 37.5%

A positive attitude towards nursing actions or describing attitudes like towards a particular object, on the basis that a person has a tendency to act, therefore nurses are concerned about the use of PPE and also has become a necessity as an executive nurse. A good attitude will respond by accepting it as a form of self-readiness. A good attitude, someone has a tendency to act positively (Sitti, S. F, 2019).

In accordance with the opinion of Rahmat (2010), the formation of attitudes does not occur alone or in vain, but the formation of attitudes always takes place in human interactions where in interactions that occur between humans can exchange information so that information can affect attitudes for the better. A good attitude nurses will know better what to do best for the patient. A nurse will be able to determine the right course of action for the patient's health. A person who is positive tends to apply good principles at work.

Based on the result of the research on 50 respondents, it was found out 52% of respondents had the negative attitude. The negative attitude of the nurses in emergency room of dr. Slamet hospital was caused by three components that reciprocally relate each other; cognitive, affective, and conative. Among these three components, the positive attitude obtained was only in cognitive category, 56%. The results of negative attitude on affective (58%) and conative (58%) cause the overall nurses' attitude negative.

Attitude structure consists of three important and mutually supporting components namely cognitive component (cognitive), affective component (Affective)

and conative component (conative). The cognitive component is a representation of what is believed by individuals. This component contains a person's beliefs about what is valid or what is true for the object of attitude and this has been patterned in his mind. The affective component is a feeling that involves an emotional aspect or evaluation. In general, emotional reactions as an affective component are much influenced by trust or what is believed to be true and apply to the object. Conative component is the aspect of certain behavioral tendencies in accordance with the attitudes owned by someone related to the attitude object being faced. This link is based on the assumption that beliefs and feelings influence behavior (Azwar, S. 2013).

Ningsin (2018) conducted a research that showed if someone's education affected the way he thought in dealing with work. The level of someone's education influence the response which comes from the outside, (Gibson, 1996 quoted by Imran, 2013). So that the higher the level of education of a nurse, the more positive the attitude in doing his job, especially in the use of PPE for the creation of safety and avoid work accidents that can endanger nurses and patients.

In accordance with Notoatmodjo's theory (2012) that knowledge and attitude itself is influenced by formal education factors. Knowledge is very closely related to education, where higher education will also broaden knowledge. However, that does not mean that a person with low education is also lacking in knowledge. This is considering that formal education affects one's knowledge, but can be obtained through non-formal education.

This study is in line with Akbar's (2015) research at the General Hospital of Ampana City, Tojo Una - Una Regency, out of 43 respondents (65%) were knowledgeable about nurses' knowledge and attitudes about the importance of personal protective equipment because the education of respondents was higher education, while respondents who lack knowledge about nurses' knowledge and attitudes about the importance of personal protective equipment because of their low education and work period of less than 6 years.

But the results of this study contradict the research of Udin Kurnia (2012). About the relationship of knowledge and attitudes with the behavior of the use of personal protective equipment at the Faculty of Nursing, which states that the length of a person's work time is not a measure if knowledge is also lacking, because there are several factors that cause for example a person's education, work environment and work motivation, work productivity both will have an impact on workers' knowledge including in taking action. Any pressure at work will affect the results achieved, including the use of PPE.

According to researchers, respondents well-informed about the use of PPE are influenced by the education of respondents, where respondents educated with Diploma III in nursing, S1 nursing and S1 Nursing + Professional Nurse. The higher a person's education, the more his knowledge increases besides that the respondent also understands the meaning of using PPE. The higher one's education, the better the knowledge and the better the opportunity to understand and know things correctly. So it can be said that education is very influential on what a person is struggling to make and fill his life in achieving safety and happiness, including the importance of using personal protective equipment.

Mulyati's research (2008) also indicated that nurses' factor in using PPE could be influenced by supervision. Therefore, the nurses in performing the use of PPE could act in accordance to the existing rules but their performance would be primarily affected by the supervision. However, the result of the study still showed the negative response.

Based on a research conducted by Putra (2012) concerning on the relationship between attitude and behavior, it explained that the result of positive and negative attitude would be affected to the nurses' behavior. This result of study was in line with Mulyanti (2008) that stated if the attitude was one of the factors that made the nurses obey or not to the use of PPE.

According to researchers, if nurses' attitude in using PPE is more negative, there will be a risk of accident and work safety for nurses as implementers also for patients and their families. This is consistent with the results of

research by Putri S, et al (2018) which states that nurses who have negative attitudes have 22 times the risk of experiencing workplace accidents compared to nurses who behave positively (95% CI 4,091-122,559).

According to Honda et al (2014) in a study in Thailand, there was a significant relationship between nurses' attitudes towards the prevention of injuries / accidents due to sharp objects and the occurrence of injuries due to sharp objects. Nurses who have a negative attitude toward preventing sharps injuries are almost twice as likely to get sharps injuries compared to those who behave positively. This study is also in accordance with research conducted by Salawati (2009) and Sandewa (2014) that attitude has a relationship with workplace accidents.

To overcome this, nurses are expected to be positive about the procedures for implementing occupational safety and health in the form of supporting / approving all OSH programs, especially for the use of PPE, so there is a pro-active attitude to apply new knowledge about the implementation of occupational safety and health. The more pro-active, the more positive about OSH implementation in the use of PPE so that it will reduce the incidence of work accidents. Besides attending training and applying knowledge gained in carrying out tasks that refer to K3 procedures, especially the use of PPE for the prevention of workplace accidents. Efforts can be made by hospitals such as regular education, counseling programs, improving nurse welfare, Certified Compassion Fatigue Specialist Training (CCFST) training. According to several studies, it was effective in improving compassion satisfaction (Wulandari, A. E, et al, 2018)

In addition to being pro-active and training in the use of PPE, it can also be done with K3RS promotion media, in accordance with the results of research conducted by Putri S, et al (2018) which shows that promotion is significantly related to work accident events with a p-value of 0.001 (CI 95% 4,779-43,146) with POR 14,359 which means that incomplete nurses receive OSH promotion socialization with 14 times the risk of experiencing workplace accidents compared

to nurses who complete get OSH promotion socialization. This study is in accordance with research conducted by Salawati (2009) and Piri (2015) that K3 promotion has a relationship with workplace accidents. For this reason, nurses can prevent workplace accidents, so media efforts are promoted to provide OSH promotions, especially the use of PPE that is easily accessible to all nurses so that OSH promotions can be carried out properly.

The identified barriers and supportive behaviors perceived by nurses in providing care at the ED are expected there would be actions to minimize barriers, such as further studies of nurses' workload, providing a spirituality team, special training for nurses in providing ED care and providing of special rooms for ED patients and their families (Ariyanti, S. at al., 2019)

Conclusion

Nurses' use of PPE has become obligation for the nurses in maintaining patients' health and safety as well as for the nurses themselves. The nurses should obey in using PPE to prevent the nosocomial infection. The nurses' attitude in using PPE has three components namely cognitive, affective, and conative. The results of research on the attitudes of emergency nurses in the use of PPE in Dr. Slamet Garut Regional Hospital, showed that nurses' attitudes based on conative and affective components in the use of PPE there were still negative nurses' attitudes which were neglect and did not use according to SOP. While based on the cognitive attitude component, most of them have a positive attitude, namely using PPE in accordance with applicable SOP provisions. The results of this study can be used as a reference for further research, especially the description of nurses' attitudes on PPE related to other variables. Further research can in-depth explain more by monitoring nurses' attitudes in the emergency room and conducting step-by-step supervision to obtain more valid data. Also, further research can be done by monitoring nurses' attitudes towards the use of PPE by using one of the sub-variables or components that make up the attitude as well as studying the factors that influence nurses'

attitudes towards the use of PPE.

2 Number 4

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