MOTIVATE NURSES WITH COMPLIANCE IN USING PERSONAL PROTECTIVE EQUIPMENT (PPE) AT THE JEMBER AREA HOSPITAL

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ABSTRACT

During the current pandemic, nurses must use personal protective equipment properly. Nurses' compliance with the use of personal protective equipment needs self-motivation from nurses. This study aims to identify the motivation of nurses, identify compliance with the use of personal protective equipment, and analyze the relationship between motivation and compliance with the use of personal protective equipment. The independent variable in this study is motivation, while the dependent variable is nurse compliance. This study has 138 respondents using a sampling technique that is purposive sampling. The design of this study uses a type of correlation with a cross-sectional approach. Bivariate statistical test using Chi-Square. The results of this study are that the motivation of nurses is sufficient at 95.7%, compliance with the use of personal protective equipment is 90.6%, and there is no relationship between the motivation of nurses and the use of personal protective equipment at Hospital in Jember with p = 0.419 (p>0.05). From this study, it was found that there was no relationship between the motivation of nurses and the use of personal protective equipment at the Hospital in Jember. The role of hospitals in increasing compliance with the use of personal protective equipment by conducting training on the use of personal protective equipment and preparing personal protective equipment for nurses.

Keyword: Personal Protective Equipment, Compliance, Motivation

INTRODUCTION

Hospitals are one of the health service facilities that operate in the field of health services to the community and have an important role in improving the level of public health. The hospital services provided aim to ensure that patients can quickly recover from their illness and become healthy again, so that it cannot be tolerated if, during hospital treatment, the patient suffers more due to risks that can actually be prevented (Saragih and Rumapea, 2012). Disease transmission or Infection can be a risk for all health workers if they ignore preventive measures when carrying out procedures on patients (universal precaution) by using PPE. The use of PPE is a nurse's effort to provide an environment free from infection as
well as an effort to protect the patient against disease transmission (Putra, 2018).

Nurses’ compliance in using PPE influences disease transmission. If compliance with the use of PPE is ignored, then, of course, the risk of contracting diseases such as hepatitis, HIV/AIDS, and COVID-19 will increase. Preventing the risk of additional illness in patients due to hospital treatment can be done by providing quality services. The quality of hospital services can be assessed from several indicators. One of these indicators is controlling nosocomial infections (Darmadi, 2008). Control of nosocomial infections can be carried out by nurses, where nurses are part of the cause of nosocomial infections. Nurses, as one of the health workers, are at high risk of being infected with diseases that can threaten their safety while working (Asmaningrum N & Afandi, A.T., 2022).

The World Health Organization (WHO) in 2018 showed that around 8.7% of 55 hospitals from 14 countries had nosocomial infections, mostly due to the low percentage of PPE use, especially in Southeast Asia, 10%. The results of the prevalence survey from the CDC Center for Disease Control and Prevention in the United States stated that in 2011, there were 722,000 cases of nosocomial infections (CDC, 2011). The incidence of nosocomial infections in Indonesia in research conducted at DKI Jakarta hospitals stated that 9.8% of inpatients had new infections, whereas at DR Hospital, Sarjito Yogyakarta, the incidence of nosocomial infections reached 7.3% (Napitupulu in Puspitasari & Tarigan, 2012). The high incidence of nosocomial infections is an indicator of the importance of infection control efforts by implementing universal precautionary standards (Putra, 2012). Factors that influence the low behavior of nurses in universal precautions, especially the use of PPE, are low motivation and lack of compliance. Compliance can be interpreted as a form of response to an order, recommendation, or accuracy through a concrete activity (Albey & Marcus, 2008). Katz and Green (2009) stated several factors that influence the level of compliance, including ability, length of service, educational background, facilities or equipment, clarity of procedures, and motivation. Based on this phenomenon, it is interesting to see the relationship between nurse motivation and compliance with the use of Personal Protective Equipment.

LITERATURE REVIEW

Motivation is a feeling or thought that encourages someone to do work or exercise power, especially in behavior. Motivation has three main elements, including Needs that occur when individuals feel there is an imbalance between what they have and what they hope for. Drive is a mental force that is oriented towards fulfilling hopes or achieving goals. This goal-oriented drive is the core of motivation (Nursalam, 2015; Khoiroh et al., 2020). Motivation is also divided into two, namely, internal motivation and external motivation. Internal motivation can be interpreted as motivation that comes from within a person, and external motivation can be interpreted as motivation that arises from the external environment (Jenita, 2017).

Compliance is a term used to explain obedience or surrender to predetermined goals (Bastable,
Compliance comes from the word obedient, which means discipline and obedience (Niven, 2000). Compliance can be interpreted as a form of response to an order, recommendation, or accuracy through an activity concrete. Compliance refers to a situation when an individual’s behavior is in accordance with the actions recommended or proposed by a health practitioner (Albery & Marcus, 2008). Nursing staff can prevent the risk of additional illness in patients from being in the hospital by providing quality services. The quality of nursing health services in hospitals can be assessed through several indicators. One of these indicators is controlling nosocomial infections. Actions or efforts to prevent the transmission of nosocomial infections are the most important actions. This prevention effort can be carried out by breaking the chain of transmission and increasing universal vigilance among service providers (Darmadi, 2008). Implementing universal precautions is part of infection control, which cannot be separated from the role of each party involved. This program can only run if each party is aware and understands their respective roles and positions. This universal precautionary procedure can be considered as supporting occupational health and safety programs for health workers (Ministry of Health of the Republic of Indonesia, 2010). One effort to minimize unexpected events is by maximizing the use of Personal Protective Equipment.

**METHOD**

This type of research is descriptive correlation research using a cross-sectional approach. This research was conducted at one of the hospitals in the Pendalungan area of Jember, with a total population of 218 nurses working. The nurses who were used as research targets were nurses who were on active duty in medical care rooms such as the Surgical Room, Medical Room, Children’s Room, Maternity Room, and other treatment rooms according to each hospital. The research sample obtained was 142 respondents after being calculated using the Slovin formula. The inclusion criteria in this study are: nurses actively working in the inpatient ward and nurses who have had a booster vaccination, as well as the exclusion criteria, namely nurses who refuse to be respondents and nurses who are on leave when the data is taken or are out of town on duty. Based on the results of sampling and determining criteria, a sample of 138 respondents was obtained. The four selected respondents were unable to attend the research site when the data was collected because some were on leave and some were sick. The data collection process lasted five days, and a total of 138 respondents were collected. This research instrument used a nurse motivation questionnaire and an observation sheet for compliance with the use of Personal Protective Equipment. This research has passed the ethical test at the Hospital Ethics Committee with number 24/ETIK/RSXX/2022.
RESULTS

Table 1. Characteristics of Respondents n(138)

<table>
<thead>
<tr>
<th>Respondent Characteristics Data</th>
<th>Total (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>44</td>
<td>31,9</td>
</tr>
<tr>
<td>Woman</td>
<td>94</td>
<td>68,1</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤30 years</td>
<td>66</td>
<td>47,8</td>
</tr>
<tr>
<td>&gt;30 years</td>
<td>72</td>
<td>52,2</td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational (D3)</td>
<td>74</td>
<td>53,6</td>
</tr>
<tr>
<td>Bachelor (Ners)</td>
<td>64</td>
<td>46,4</td>
</tr>
<tr>
<td>Length of Work:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤3 years</td>
<td>6</td>
<td>4,3</td>
</tr>
<tr>
<td>&gt;3 years</td>
<td>132</td>
<td>95,7</td>
</tr>
</tbody>
</table>

In the table above, it is explained that the majority of respondents are female and the majority are over 30 years old. The majority of respondents' education is vocational (D3) and have worked for more than three years.

Table 2. Nurse motivation identification data n(138)

<table>
<thead>
<tr>
<th>No.</th>
<th>Nurse motivation</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Strong</td>
<td>6</td>
<td>4,3%</td>
</tr>
<tr>
<td>2.</td>
<td>Currently</td>
<td>132</td>
<td>95,7%</td>
</tr>
<tr>
<td>3.</td>
<td>Weak</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>138</td>
<td>100%</td>
</tr>
</tbody>
</table>

In Table 2 it is explained that almost all respondents have moderate motivation.

Table 3. Compliance with the use of PPE (Personal Protective Equipment) n(138)

<table>
<thead>
<tr>
<th>No.</th>
<th>Compliance with the use of PPE</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Comply</td>
<td>13</td>
<td>9,4%</td>
</tr>
<tr>
<td>2.</td>
<td>Disobedient</td>
<td>125</td>
<td>90,6%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>138</td>
<td>100%</td>
</tr>
</tbody>
</table>

In Table 3 it is explained that the majority of respondents do not comply with the use of Personal Protective Equipment.
Table 4. Relationship between nurse motivation and compliance with the use of personal protective equipment

<table>
<thead>
<tr>
<th>The relationship between nurse motivation and compliance with PPE use</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>0.652</td>
</tr>
<tr>
<td>Asymp. Signification Chi-Square</td>
<td>0.419</td>
</tr>
</tbody>
</table>

Based on Table 4, it can be seen that the value is 0.652. And significance value Chi-Square 0.419 can be concluded that there is no relationship between nurse motivation and compliance with PPE use.

DISCUSSION

Based on data on the characteristics of respondents based on gender, the majority of respondents were female, namely 94 respondents (68.1%). In line with Soepodjo's (2017) research, the majority of nurses working in hospitals are women, 85%. Nofia's research (2016) shows that the majority of nurses are female, at 69.7%. Gender is the difference between women and men biologically from birth. According to Fakih (2006), gender is a characteristic inherent in men and women which is constructed socially and culturally. The results of the research conducted by researchers are in line with related research conducted by Fauzia (2014) regarding the influence of individual, organizational, and behavioral factors on nurses’ compliance with hand hygiene. The results obtained were based on the characteristics of respondents according to gender: 94 respondents (68.1%) were female, and 44 respondents (31.9%) male. Women have a motherly nature that is in line with the nursing profession. Women have a more loving and caring nature than men, therefore, the nursing profession is still in great demand by women.

Based on data on the characteristics of respondents based on age, the majority of respondents were > 30 years old, namely 72 respondents (52.2%). In line with research by Soepodjo (2017), the age of most nurses is > 39 years old, amounting to 50%. Renyaan's research (2016) shows that the age of nurses, namely 20-40 years, is 73.5%. Feist (2009) revealed that as one gets older, an individual’s psychological maturity becomes better, meaning that the more mature a person’s psychology is, the better the adaptation to anxiety (Kaplan, 2010). Age is the length of a person's life, which is measured from birth to the last birthday. Age also influences the soul of a person who accepts it to reprocess understandings and responses, so it can be seen that the older a person is, the more mature they have for working to carry out actions in the hospital. more mature. Usually, young people have radical thoughts, while adults are more moderate (Potter & Perry, 2005). As a person ages, they will get a lot of information and ways to respond to a situation. As a person age, they become more mature in their thinking and emotions. Someone will care more and be more mature in complying with applicable regulations.
Based on data on the characteristics of respondents based on education, the majority of respondents had a D3 education, namely 74 respondents (53.6%). In line with Pardede's (2020) research, the majority of nurses' education is D3 at 59.7%. Kambuaya's research (2016) shows that the majority of nurses' education at Sorong Regency Regional Hospital is D3 at 78.2%. In contrast to Soepodjo's (2017) research, the majority of nurses had a Master's degree, 30%, S1, 25%. According to Afriani (2012), a person's education plays a very important role in the process of forming compliance behavior in complying with regulations. The higher the level of formal education obtained, the easier it will be to accept new knowledge and the easier it will be to change one's behavior in complying with established regulations. Education for each person has its own meaning. Education is generally useful in changing thought patterns, behavior patterns, and decision-making patterns. A sufficient level of education will make it easier to identify stressors within oneself and from outside oneself. The level of education also influences awareness and understanding of stimuli (Sadock, 2010). Education is in line with obedience; the higher a person's education, the higher their obedience. Education will add new knowledge and make it easier to change behavior and follow established rules.

Based on the data, it can be seen that the majority of nurses' motivation is moderate motivation, amounting to 132 respondents (95.7%). In line with Sani's (2017) research, moderate nurse motivation was 21.3%, and weak motivation was 52.5%. Research conducted by Miladiyah (2015) showed that the greatest motivation for nurses was moderate motivation at 56.9%. Motivation is a human psychological characteristic that contributes to a person's level of commitment. This includes factors that cause, channel, and maintain human behavior in a certain determined direction. Motivation is everything that encourages someone to do something. Motivation is a feeling or thought that encourages someone to do work or exercise power, especially in behavior.
Nurses have sufficient motivation to do their work because nursing work is work that directly interacts with fellow humans. Nurses also have an obligation to help patients and families. Even when returning home, nurses have an obligation to look after their family and loved ones at home. So, nurses will do their work with good motivation.

Based on Table 3, it can be seen that most of the level of compliance with the use of PPE was non-compliance, namely 125 respondents (90.6%). In line with Sani’s (2017) research, the level of hand washing compliance among nurses, including non-compliance, was 57.4%. This is different from Yafinda’s (2020) research, which showed that 65% of nurses were compliant in using PPE in the form of non-sterile gloves and shoes when administering injection drugs to patients. Compliance is a term used to explain obedience or surrender to predetermined goals (Bastable, 2002). Compliance comes from the word obedient, which means discipline and obedience (Niven, 2000). Compliance can be interpreted as a form of response to an order, recommendation, or accuracy through an activity concrete. Compliance refers to a situation when an individual’s behavior is in accordance with the actions recommended or proposed by a health practitioner (Albery & Marcus, 2008). Nurses wearing PPE at work are disobedient because nurses do not carry out actions that are directly related to patients, such as educating the patient’s family. When a pandemic like this occurs, what is meant by compliance is complete wearing of PPE every time you interact with patients or families. The thing that is most forgotten about using PPE is that when carrying out procedures with nurses use a pair of gloves to administer injections to several patients; apart from that, there are nurses who do not put protective gowns in place, even use them while sitting on the floor at the nurse station. However, in all actions, the nurse must at least wear gloves, even if it is just to change an IV bottle. Non-compliance also often occurs in polyclinics because there, the poly nurses are tasked with taking anamnesis as well as checking vital signs, which sometimes makes nurses forget not to use PPE correctly and completely. When infectious cases increase, the availability of PPE is insufficient due to increased use, such as in a pandemic era like this. When a patient’s family calls, and there is no time to wear PPE because they are in a hurry to see the patient’s condition, most of the nurses do not wash their hands before putting on the hand scoon. There are new nurses who have not received training in using PPE. The habit of taking it lightly is that there are senior nurses. who actually do not use complete PPE when providing nursing care. Because it is considered not an action that comes into direct contact with the patient.

Based on the data, it can be seen that the value of 0.652. The significance value Chi-Square 0.419 can be concluded that there is no relationship between nurse motivation and compliance with the use of PPE in hospitals. In line with Kustriyani’s (2018) research using the Spearman rank test, the result was a p-value of 0.078; it can be concluded that there is no relationship between motivation and compliance with the use of PPE. This is different from Afinda’s (2020) research which uses a correlation test Somers’D It is
known that there is a relationship between motivation and compliance with the use of PPE among nurses in the Critical Guard Room at Wonogiri Regional Hospital with a p-value of 0.019. Ditha's research (2020) uses tests Fisher exact It is known that there is a relationship between nurse motivation and nurse compliance in using personal protective equipment, handscoons, and masks, with a p-value of 0,008. Nurse motivation is influenced by motivation from within oneself and motivation from the environment. Self-motivation must have the hope of protecting oneself in using PPE. Environmental factors that see seniors not wearing PPE properly are one of the factors; apart from that, patient families who are in a hurry to ask nurses to check on their family's condition mean that nurses don't have much time to complete PPE. Nurses have moderate motivation to carry out nursing actions, but some things happen in the field that cause nurses to be unprepared in terms of using PPE.

CONCLUSION
Based on the results of the analysis and discussion, it can be concluded that there is no relationship between nurse motivation and compliance with the use of Personal Protective Equipment when nurses carry out service actions in hospitals. This research can be used as input for improving the quality of hospital services by providing regular training and evaluation regarding the use of PPE. Suggestions for further research can refine and complete this research by looking for the latest sources and theories.

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