



Analysis of Factors Affecting the Readiness of Health Personnel for COVID-19 Patients Treatment in Hospital

Lina Indrawati*¹, Marni Br Karo, Ernauli Meliyana, Harun Alrasyid

Program Study of Nursing, School of Health Medistra Indonesia, Bekasi, West Java, Indonesia

Abstract

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***Correspondence:** Lina Indrawati, Program Study of Nursing, School of Health Medistra Indonesia, Bekasi, West Java, Indonesia. E-mail: aisyah150416@gmail.com
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BACKGROUND: Many health workers have experienced fatigue due to high workloads with the number of patients who were confirmed positive for COVID-19 with moderate and severe symptoms who were hospitalized. Researchers identified several factors that affect the readiness of health workers in the management of COVID-19 patients, including knowledge, family status, availability of personal protective equipment (PPE), health status, and reward. Optimal self-preparation is needed to achieve COVID-19 management that is in line with expectations by examining these factors more deeply.

AIM: The aim of this study was to identify and knowing factors are affect the readiness of Health personnel for COVID-19 patients' treatment in hospital.

METHODS: This research method uses a descriptive correlation design with a cross-sectional approach aimed at knowing the relationship between variables, where the independent variable and dependent variable are identified at the same time. The number of samples used as many as 34 students of the transfer class who already work as nurses in hospitals.

RESULTS: There were two factors that had an influence on the readiness of transfer students in the management of COVID-19 at the hospital, namely, the family status factor and the availability of PPE with p values of 0.036 and 0.007 and three factors that had no effect, namely knowledge, health status, and giving rewards with $p > 0.05$.

CONCLUSION: Family status and the availability of PPE become the main important factors related to readiness of health personnel for patients' treatment in hospital. Working safely and fully support from the hospital can affect the readiness of the health workers in handling COVID-19 patients.

Introduction

At present, the Coronavirus (COVID-19) has become one of the biggest causes of death worldwide. The pandemic conditions experienced since 2019 have caused unexpected changes in all aspects of human life, especially the health aspect. In addition to health, the impacts that are most felt in the community are job losses, changes in education patterns using online methods, and also changes in other community activities with restrictions on large-scale activities [1].

Coronavirus is a highly contagious pandemic. Therefore, many leaders have urged their citizens to practice social distancing and isolation to prevent the transmission of this disease virus [2]. Coronavirus is contagious. The term contagion refers to an infection that spreads rapidly within a tissue, such as a disaster or the flu. This term was first used in 1546 by Giralamo Fracastor, who wrote about infectious diseases [3]. In a contagious spread, elements that are connected to each other in a network can transmit infection to each other. An increase in the number of corona cases occurs over time short and requires immediate treatment. Coronavirus can easily spread and infect anyone

regardless of age. This virus can be transmitted easily through contact with sufferers. Unfortunately, until now, there is no specific drug to treat cases of coronavirus infection or COVID-19.

Various efforts have been made by the Government of Indonesia to break the chain of the spread of COVID-19, including making policies in the management of COVID-19 patients in hospitals. At present, hospitals in Indonesia, especially the COVID-19 referral hospital, have exceeded capacity. This has an impact on health workers involved in providing health services such as nurses and doctors [4]. Many health workers have experienced fatigue due to high workloads with the number of patients who were confirmed positive for COVID-19 with moderate and severe symptoms who were hospitalized.

Researchers identified several factors that affect the readiness of health workers in the management of COVID-19 patients, including knowledge, family status, availability of personal protective equipment (PPE), health status, and reward [5]. The knowledge factor of health workers, especially nurses, is important to be studied further. In caring for COVID-19 patients, having sufficient knowledge will greatly assist the

readiness of nurses before providing nursing care services to COVID-19 patients in isolation rooms or in special rooms for COVID-19 treatment.

The family status of health workers also has fundamental implications for their readiness to treat COVID-19 patients. For example, currently, many volunteer nurses are needed with one of the requirements being unmarried or unmarried. This is so that when on duty in providing health services at the hospital, the nurse is not burdened with certain tasks at home such as taking care of the family or taking care of the children. It also minimizes the risk of spreading COVID-19 into the family cluster, because the nurse can stay in the hospital environment while on duty to treat COVID-19 patients [6].

The availability of PPE greatly helps the physical and psychological readiness of nurses in treating COVID-19 patients. They will become more confident in their maximum self-safety. This PPE is divided into three levels of security, namely, PPE level 1, 2, and 3. Using PPE that is in accordance with applicable standards, the safety and health status of these health workers can be maintained [4].

Maintaining a good immune system and having an optimal health status is very much needed at this time, given the high workload with a fairly large level of risk. This is in line with research [7] that the health status of medical personnel greatly affects the readiness to treat COVID-19 patients. The high risk of work causes a person to be given a proper incentive reward. This will trigger the spirit of work and become one of the external motivations that can increase the immunity of the health worker. Accuracy in reward payments is also an important aspect in giving rewards, so nurses will be more enthusiastic in carrying out their duties [4]. This study aimed to determine the relationship of these factors to the readiness of health workers in the management of COVID-19 patients in hospitals.

Methods

This study uses a descriptive correlation design with cross-sectional approach. The method used in this study aimed at knowing the relationship between variables where the independent variable and dependent variable are identified at the same time. The sampling technique in this study was carried out using non-probability sampling type total sampling. Then, the number of samples was 34 respondents. This research was conducted on School of health Medistra Indonesia in 2021. The time of the study was February 2021. The instruments in this study were questionnaire about knowledge, family status, availability of personal protective equipment (PPE), health status, reward,

and readiness for COVID-19 treatment in Hospital. This research has received ethical approval by the ethics committee of Medistra Indonesia Health College no. 007/STIKesMI/P2M/X/2020.

Result

Respondent's characteristics

The results on Table 1 showed that based on age characteristics, most of the respondents were in the age range of 31–40 years (50%). There are 12 respondents (35.3%) who are in the age range of 25–30 years, while the other five respondents (14.7%) are in the age range of >40 years. Based on the gender characteristics, 23 respondents (67.6%) were female and 11 respondents (32.4%) were male. Moreover, based on characteristics of the length of work, 30 respondents (88.2%) have worked for >3 years, while the other four respondents (11.8%) have worked for 1–3 years.

Table 1: Characteristic of Respondent

Characteristics	N	%
Age		
25–30	12	35,3
31–40	17	50
>40	5	14,7
Gender		
Male	11	32,4
Female	23	67,6
Length of Work		
1–3 Years	4	11,8
>3 Years	30	88,2

The results on Table 2 showed that most respondents have good knowledge (88.2%), most respondents are married (76.5%), most respondents have complete PPE facilities (70.9%), most have health status healthy people (91.25), most of them received suitable rewards (76.5%), and most of the respondents were ready to manage COVID-19 (55.9%). Nurse as a health personnel has responsibility to give the best treatment for the patient with COVID-19 in hospital.

Table 2: Factors affecting the readiness of health personnel for COVID-19 patients treatment in hospital

Independent variables	N	%
Knowledge		
Good	30	88,2
Moderate	4	11,8
Family status		
Married	26	76,5
Unmarried	7	20,6
Divorce	1	2,9
Availability of PPE		
Complete	24	70,9
Not Complete	10	29,4
Health status		
Healthy	31	91,2
Unhealthy	3	8,8
Reward		
Suitable	26	76,5
Not Suitable	8	23,5
Readiness		
Ready	19	55,9
Not Ready	15	44,1

The bivariate test aims to determine the relationship between the independent variable and the dependent variable. This test was carried out using the Chi-square test with a 95% confidence interval ($\alpha = 0.05$).

The results on Table 3 showed that in these variables, the variables that had a significant influence on readiness in the management of COVID-19 at the hospital were family status (0.036) and the availability of PPE (0.036).

Table 3: Chi² factors analysis affecting the readiness of health personnel for COVID-19 patients' treatment in hospital

Independent Variable	p value	Conclusion
Knowledge	0.801	H0 Accepted
Family status	0.036	H0 Rejected
Availability of PPE	0.007	H0 Rejected
Health status	0.410	H0 Accepted
Reward	0.231	H0 Accepted

Discussion

Based on the results of data analysis, it was found that 17 people (56.7%) transfer students had good knowledge and were ready to treat COVID-19 patients. However, $p = 0.801 > 0.05$, thus at the 95% confidence level, H0 failed to be rejected, which means that there is no relationship between knowledge and readiness of students to transfer the STIKes Medistra Indonesia level as health workers in the management of COVID-19. Based on the analysis of researchers, knowledge is obtained from one's experience, both own experience and others.

The knowledge of transfer students regarding the management of COVID-19 treatment is obtained through various media and sources, but without considering the depth of the student's knowledge, they must be ready and able to treat COVID-19 patients, also work and serve in hospitals, and the majority work in the COVID-19 treatment room. Although the knowledge gained is not only from the hospital institution where they work, they still have to be ready to treat COVID-19 patients.

The relationship between education level and a person's knowledge is the higher the level of education, the better the level of knowledge [8]. However, in this case, the knowledge of nurses is not related to the readiness to care for COVID-19 patients. Knowledge of students transferring levels as one of the health workers in the hospital is not the main indicator in their readiness to treat COVID patients because when they graduate from educational institutions, pass the competency test, have registration card and have been sworn in by the nursing profession, they are declared worthy to provide health services, especially

in the field of nursing, including the treatment of COVID-19 patients.

Based on the results of statistical analysis, it was found that $p \text{ value} = 0.036 < 0.05$, thus at the 95% confidence level, H0 was rejected, which means that there is a relationship between family status and the readiness of transfer students in school of health Medistra Indonesia as health workers in the management of COVID-19 in hospitals. This is one of the factors that they experience anxiety because when treating positive COVID-19 patients or conducting examinations on people who have COVID-19 symptoms. Health workers are worried that they will transmit the Corona COVID-19 virus to their families [9]. They also feel stigmatized, because they feel themselves in contact with patients infected with the virus. The results of this study indicate that the status of health workers/students who have families of 65.4% (17 people) is mostly ready to carry out the treatment of COVID patients.

The results of statistical analysis using the Chi-square test obtained $p = 0.007 < 0.05$. Thus, at the 95% confidence level, H0 rejected, which means that there is a relationship between the availability of PPE and the readiness of students in managing COVID-19 patients in hospitals. In line with the research by [10] that health workers are a group that is very vulnerable to being infected with COVID-19 because they are at the forefront of handling cases, therefore, they must be provided with complete PPE according to the WHO protocol so that the anxiety experienced is reduced [11]. For this reason, the provision of proper personal protective equipment is very important.

One thing that can cause health workers to experience increased anxiety, one of which is the lack of personal protective equipment (PPE) in the workplace. Health workers are at risk of experiencing psychological disorders in treating COVID-19 patients due to feelings of depression, the main cause of which is self-protection which is still less than the needs of health workers. With the lack of availability of complete personal protective equipment according to the WHO protocol, it will affect their readiness to treat COVID-19 patients and tend to have anxiety disorders compared to if personal protective equipment is obtained as needed [12]. Personal protective equipment is one of the COVID-19 protocols that must be met if you want to have direct contact with patients, especially patients in hospitals [13].

The results of statistical analysis using the Chi-square test obtained $p \text{ value} = 0.410 > 0.05$, thus at the 95% confidence level, H0 failed to be rejected, which means that there is no relationship between health status and the readiness of students to transfer to STIKes Medistra Indonesia as health workers in COVID management 19 at the Hospital. This result is not in line with the research of [1]

that the health condition of health workers plays an important role in optimizing the services provided to COVID-19 patients.

If health conditions are not excellent, the immune system of health workers will decrease, thereby increasing the risk of exposure to the COVID-19 virus. This greatly affects the readiness of health workers in treating COVID-19 patients. Healthy is not only physically healthy but also psychologically and emotionally healthy. According to [14], health is the main factor in efforts to break the chain of the spread of COVID-19. Every health worker involved in treating COVID patients must be provided with health insurance facilities such as regular PCR examinations, adequate supply of nutrition, and provision of vitamins [15].

The results of statistical analysis using the Chi-square test obtained p value = $0.231 > 0.05$, thus at the 95% confidence level H_0 failed to be rejected, which means that there is no relationship between giving rewards and the readiness of students to transfer the level of STIKes Medistra Indonesia as health workers in management COVID-19 in the Hospital. This is because health workers are not allowed to differentiate between types of patients, whether they are COVID patients or not.

So that giving rewards is not merely a basis for health workers to want to treat COVID-19 patients. For example, a nurse who is pregnant cannot choose where she works just because she is worried that she is pregnant and is at risk of being exposed to COVID. The results of this study are not in line with research by [6] that providing incentives to nurses on time will greatly affect readiness in treating COVID-19 patients. This is because reward is one of the external motivations that can affect a person's performance in carrying out duties and responsibilities [16]. Rewards affect a person's performance in taking actions, because this reward affects the fulfillment of one's needs so that if a person works more with a higher risk, it will automatically have an impact on the reward he gets in readiness to work [17].

Conclusion

Family status and availability of PPE factors are related to the readiness of health personnel for COVID-19 treatment in hospital. Otherwise, knowledge, health status, and giving rewards have no relationship with the readiness to manage COVID-19 patients in hospital. It means, we have to optimize our nursing services because it has been our duty and responsibility as a health personnel to treat COVID-19 patients.

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