



Individual and Organizational Factors with Compliance with Infection Prevention and Control Standarts in Public Health Center in The COVID-19 Pandemic

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Abstract

Coronavirus Disease 2019 (COVID-19) has spread to all countries including Indonesia. The spread of COVID-19 is increasingly widespread in Indonesia, including in Demak Regency, making the government pay more attention to the health of health workers. Compliance of health workers in implementing the prevention and control of COVID-19 infection. In implementing Infection prevention and control compliance, it is influenced by individual and organizational factors. This study aims to analyze individual factors and organizational factors on Infection prevention and control compliance in Demak Regency. The type of research used is quantitative with a cross sectional design. The subjects of this study were all Public health center health workers consisting of doctors, nurses, midwives, health analysis at 10 Public health center in Demak Regency. This research uses chi square test and

Spearman Rank Correlation test. The results showed that there was a relationship between ability ($p = 0.000$), knowledge ($p = 0.008$), leadership ($p = 0.000$), remuneration ($p = 0.000$), and work environment ($p = 0.000$) with infection prevention and control compliance (Infection prevention and control). The conclusion of this study is that there is a relationship between individual and organizational factors with infection prevention and control (Infection prevention and control) compliance in Demak Regency. Related parties, especially the Public health center in Demak Regency, immediately coordinated to make strategies and follow-up plans to improve nurse compliance in infection prevention and control. The conclusion of this study is that there is a relationship between individual and organizational factors with infection prevention and control (Infection prevention and control) compliance in Demak Regency. Related parties, especially the Public health center in Demak Regency, immediately coordinated to make strategies and follow-up plans to improve nurse compliance in infection prevention and control.

Keywords: Individual Factors; Organizational Factors; Obedience; Infection Prevention and Control (Infection prevention and control)

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Introduction

The spread of Coronavirus Disease 2019 (COVID-19) has spread to all countries including country Indonesia. The number of COVID-19 cases increased and spread in various countries in a short time. The total number of COVID-19 cases in Indonesia on May 10, 2021 was around 1.17 million cases, around 1.56 million cases recovered and 48,842 cases died. In Central Java, 6,116 COVID-19 cases were being actively treated, and 172,226 were confirmed to have recovered. In Demak Regency, the number of COVID-19 cases was 4,892 with details: 63 people have not recovered, 4260 people have recovered, and 569 people have died. (National Covid Task Force, nd). The spread of COVID-19 is increasingly widespread in Indonesia, including in Demak Regency, making the government (central, provincial, district/city) pay more attention to the health of health workers. For minimise the risk of SARV-CoV-2 virus exposure needs to pay attention to the infection prevention and control principle by implementing patient isolation precautions, administrative control, conducting education and training (National Covid Task Force, nd).

In the prevention and control of the COVID-19 pandemic, Public health center have an important role. Implementation of infection prevention and control (Infection prevention and control) in health centers aims to break the cycle of transmission of infectious diseases. According to data from the monitoring and evaluation results by the Demak District Health Office in 2021, information was obtained that there were many COVID-19 cases handled by the Public health center, so health workers at the Public health center had the potential to transmit the COVID-19 virus. (Response to COVID-19 Central Java Province, nd).

Nurse compliance is the main key to success in preventing the transmission of COVID-19 infection. Nurse compliance is a nurse's behavior towards a recommendation, procedure, or regulation that must be obeyed. Compliance is a manifestation of one form of behavior in the health sector to prevent and overcome diseases or disorders that can endanger the health. (Hamdiah & Umar, 2021).

Health workers in health care facilities are very important in preventing and controlling COVID-19 infections. In providing service behavior of medical personnel or health workers is influenced by several factors. 3 factors influence work behavior, namely individual factors, psychological factors, and organizational factors. Behavior in organizations comes from two sources, namely individuals and groups. Both individual and group behavior are divided into important discussions in organizations because they interact with each other at some point in time, it is no longer possible to distinguish the origins of behavior in an organization. (Sopiah, 2008)

Several factors affect the performance of work behavior, namely organizational factors consisting of resources, leadership, compensation (financial and non-financial), structure, and job design. As well as individual factors consisting of abilities and expertise, individual background and demographics (Notoatmodjo, 2012b). A person's abilities and expertise depend on various factors, it can be related to the length of work which is assumed that the longer a person works, the more extensive or extensive work experience he has so that he has good work skills.



In organizations, leadership influences internal processes to determine organizational goals, motivates the behavior of followers or members to achieve goals, and influences the improvement of the group and its culture. The way a leader influences the behavior of subordinates to cooperate and work productively to achieve organizational goals (Samsudin, 2007). In complying with the regulations in complying with infection prevention and control, employees receive a service fee. Compensation for services is income that is given based on the severity of the duties of the position occupied by the employee. Compensation for services from the company provided by employees in the form of money or facilities that can be adjusted to the value of money following the employee's performance in achieving company goals (Ruky, 2001). In carrying out work tasks, the work environment has an effect on carrying out his work duties (Sutrisno, 2016). A good work environment is an environment that is safe, clean, quiet, bright and free from all kinds of threats and distractions that can hinder employees from working optimally. (Sunnyoto, 2015)

Methods

The type of research used is quantitative with a cross-sectional design. The population of this study was all health workers of the Public health center consisting of doctors, nurses, midwives, and health analysis at 10 Public health centers in Demak Regency as many as 365 people. The sample of this study was part of all health center workers consisting of doctors, nurses, midwives, and health analysis at 10 Public health centers in Demak Regency as many as 191 people. The inclusion and exclusion criteria for this study. The inclusion criteria were confirmed (+) COVID-19 or not, civil servant or non-civil servant status, not working >2 years at the Public health center, not currently on leave, the health worker is a midwife (PKD is affordable/not far from the Public health center), and is willing to be a respondent. The exclusion criteria were: Being confirmed (+) COVID-19, working <2 years at the Public health center, being on leave, the health worker being a midwife (PKD is not reachable/far from the Public health center), and is not willing to be a respondent. The research data collection time was carried out for 3 months in 10 health centers in Demak Regency. This research has been declared to have passed the ethical review through a certificate issued by the Research Ethics Commission of the Faculty of Public Health Number 300/EA/KEPK-FKM/2021.

Results and Discussion

Characteristics of respondents are characteristics possessed by respondents as part of their identity obtained from charging questionnaire as a data collection instrument (Pratiwi & Anggiani, 2020). Based on the research, the characteristics of the respondents in this study were divided into 5, namely:



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Table 1. Characteristics of Respondents and Frequency Distribution of Research Variables

Characteristics	f	%
Age		
=<40 years	97	50.8
>40 years old	94	49.2
Gender		
Man	21	11.0
Woman	170	89.0
Education		
D3/D4 Health	124	64.9
S1/S2 Health	67	35.1
Years of service		
<10 years	64	33.5
>= 10 years	127	66.5
Training/Training		
Never	174	91.1
Once	17	8.9

The results of the study found that the average age of the respondents was less than 40 years with the female sex as much as 89% and the working period of fewer than 10 years as much as 66.5%. Most of the educational backgrounds graduated from D3/D4 Health (64.9%).

Table 2 describes the relationship between the characteristics of research respondents and Infection prevention and control compliance. As seen in the group of respondents whose compliance is less, those aged > 40 years have a higher percentage than those aged ≤ 40 years (47.9% and 47.4%). Respondents with a tenure of 10 years had less good compliance with the percentage (48.0%) compared to those with a tenure of < 10 years in the same group.

Table 2. Infection prevention and control Compliance based on Research Variables

Variable	Infection prevention and control compliance				<i>p-value</i>
	Not good		Well		
	n	%	n	%	
Age					
40 years	46	47.4	51	52.6	1,000
> 40 years	45	47.9	49	52.1	
Gender					
Man	11	52.4	10	47.6	0.819
Woman	80	47.1	90	52.9	
Education					
D3/D4 Health	55	44.4	69	55.6	0.277
S1/S2 Health	36	53.7	31	46.3	



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Years of service					
<10 years	30	46.9	34	53.1	1,000
10 years	61	48.0	66	52.0	
Training/Training					
Never	86	49.4	88	50.6	0.186
Once	5	29.4	12	70.6	

The results of the chi-square statistical test showed that there was no relationship between age and Infection prevention and control compliance ($p=1,000$). This happens because the mature age coefficient is very weak (Maulana, 2017). Nurse compliance is not only influenced by age, even though a person's age is considered a late adult but in the field of work the lack of facilities that support compliance, a large workload and less time are inhibiting factors for a person to comply.(Pundar et al., 2019).

These results are also in line with the research of I Gusti Agung (2021) that there is no relationship between age and compliance with the application of standard precautions, because a person's age is not the only one that can determine compliance behavior, because it can depend on one's self-maturation and adjustment to the surrounding environment.(Pradyana & Muliawan, 2021).

The results of the chi-square statistical test showed that there was no relationship between gender and Infection prevention and control compliance ($p=0.819$). Gender is mostly female. The world of nursing or health is dominated by women(Arifin et al., 2019).

This result is also in line with Aung's research (2017) on the application of standard precautions to nurses in Myanmar which states that there is no relationship between gender and the application of standard precautions. Gender as a socio-demographic factor is only a determinant of individual perceptions of vulnerability, severity, benefits, and barriers that have an indirect impact on individual behavior(Aung et al., 2017).

The results of the chi square statistical test show that there is no relationship between education and Infection prevention and control compliance ($p=0.277$). The higher the education, the more knowledge, the higher a person's education, the easier it is to receive information, so the more knowledge one has.(Susanto, 2021).

Education is one of the processes of behavior change, which is the guidance given by someone to the development of others. Education affects work behavior, the higher education will be positively related to work behavior(Guidance, 2018)

Education is generally regarded as a global term that refers entirely to the process, result/product and science of conveying or utilizing people's knowledge to obtain conditions conducive to developing, and acquiring knowledge.(Rwanamiza, 2009).

The results of the Chi-square statistical test showed that there was no relationship between years of service and Infection prevention and control compliance ($p=1,000$). The absence of a relationship between years of service and Infection prevention and control compliance maybe because some nurses with longer tenures will not dare to be reprimanded by juniors if they make



mistakes, and there is no sanction/punishment for a health nurse who does not comply with the Infection prevention and control.(Handayani et al., 2019).

The period of work is part of the individual characteristic factors that shape a person's behavior, will be more familiar with workplace conditions based on the length of work and keep in mind that each nurse's adaptation is different, some are fast and some are slow depending on individual motivation, so that nurses who are familiar with the environmental conditions in which they work work and the dangers of his work both for himself and for others, the health worker will be obedient to the safety of himself and others(Notoatmodjo, 2012a).

Compliance with the standard planning process affects the quality of planning. Monitoring-evaluation factors, staffing, facilities, and organizing influence according to the planning standards of the Public health center.(Sriatmi et al., 2020)

This result is also in line with Ratnawati (2018) that there is no relationship between tenure and nurse compliance in applying Hand Hygiene. The term of service is related to the length of time a person works to carry out a particular job. Nurses who work longer hours are expected to be more experienced and senior(Ratnawati & Sianturi, 2018).

The results of the chi-square statistical test showed that there was no relationship between education and training and adherence to infection prevention and control standards (Infection prevention and control) ($p=0.186$). Training is one of the efforts so that the skills of nurses in the application of Infection prevention and control can be increased, especially if it is done continuously(Nurkhasanah & Sujianto, 2014).

The longer the time spent on education and training, the higher the ability and competence to do the job. Previous research conducted by Farooq and Aslam Khan (2011) on educational institutions in Pakistan, concluded that training has a significant effect on employee performance.(Banjarnahor & Ragini, 2018).

Table 3. Infection prevention and control compliance with research variables using Rank Spearmen

Variable	Infection prevention and control compliance				sig
	Not good		Well		
	n	%	n	%	
Abilities and Skills					
Not good	62	68.1	29	31.9	0.000
Well	29	29.0	71	71.0	
Knowledge					
Not good	38	56.7	29	43.3	0.090
Well	53	42.7	71	57.3	
Leadership					
Not good	62	67.4	31	32.6	0.000
Well	29	29.6	69	71.4	
Employee Benefits					



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Not good	52	61.2	33	39.8	0.001
Well	29	36.8	67	63.2	
Work environment					
Not good	63	69.2	28	30.8	0.000
Well	28	28.0	72	72.0	

The results of the Spearman Rank Correlation analysis showed that there was a significant relationship between ability and skill in Infection prevention and control compliance ($p = 0.000 < 0.05$). Infection Control and Prevention (Infection prevention and control) compliance is still low, possibly due to the low ability of health workers to implement the Infection prevention and control program. The ability of nurses is still minimal and the lack of self-development makes nurses still lacking in knowing and understanding of the function of control and prevention compliance (Infection prevention and control). (Nurhadi, 2018).

The results of the Spearman Rank Correlation analysis showed that there was no significant relationship between knowledge and Infection prevention and control compliance ($p = 0.090 > 0.05$). A person's level of knowledge affects individual practice, where the better one's knowledge, the better one's practice in complying with infection prevention and control (Infection prevention and control). Knowledge is the result of human sensing / the result of someone knowing about objects through their senses (Puspasari, 2015).

The level of knowledge of health workers shows that most of the knowledge is above average. This is because most health workers already know that they are obliged to maintain the health and safety of themselves and others and are responsible for implementing policies set by the hospital. (Puspasari, 2015). Knowledge is the experience of what we get, namely a direct connection with the environment through our sensory systems, and then processed by the brain. (Bolisani & Bratianu, 2018).

The results of the Spearman Rank Correlation analysis showed that there was a significant relationship between leadership and Infection prevention and control compliance ($p = 0.000 < 0.05$). The quality of leadership contained in the organization plays a very dominant role in the success of the organization in carrying out its activities. Evaluation of quality management and patient safety in hospitals will be carried out properly if the hospital has a policy direction that is equipped with implementation to be obeyed by all hospital employees. (Sundoro, 2021)

The results of the Spearman Rank Correlation analysis showed that there was a significant relationship between service fees and Infection prevention and control compliance ($p = 0.001 < 0.05$). The organizational determinants, namely leadership, and rewards affect the performance of individuals or organizations through motivation. sarifudin At the compliance stage, individuals comply with recommendations or instructions without being willing to take these actions and often because they want to avoid punishment or sanctions if they do not comply with the rules, and will get rewards. comply with these rules. So the rewards greatly affect the adherence to infection control and prevention (Infection prevention and control). (Awliyawati, 2015).



The results of the Spearman Rank Correlation analysis showed that there was a significant relationship between the work environment and Infection prevention and control compliance ($p = 0.000 < 0.05$). The work environment is something that exists around the workforce, both physical and non-physical, directly or indirectly, which can influence individuals and their work when working.(Rodyah, 2015).

A fairly good work environment has an effect on Infection prevention and control compliance, because the work environment is an external factor in the formation of behavior. The non-physical work environment is also known as the psychological work environment(Utomo, 2019).

Conclusion and Recommendation

This study shows that there is a relationship between organizational factors and Infection prevention and control compliance in Demak Regency. Organizational factors include leadership, remuneration, and work environment that influence work behavior on Infection prevention and control compliance. There is no relationship between some individual factors and Infection prevention and control compliance in Demak Regency. Individual factors include age, gender, education, years of service and training/training which have no effect on work behavior on Infection prevention and control compliance. There is a relationship between individual factors (ability and knowledge) on Infection prevention and control compliance.

The importance of increasing the influencing factors in infection control and prevention (Infection prevention and control) compliance, it is necessary for the relevant parties to increase the ability, knowledge, leadership, service fees and work environment to prevent the transmission of COVID-19 infection at the Demak District Health Center.



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