

# The Effect Analysis of Predisposing, Enabling and Reinforcing Factors on Employees Infected with Covid-19 at RSU Dr. H. Koesnadi Bondowoso

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**Abstract:-** The aims of study were to analyze effect of predisposing, enabling and reinforcing factors on employees who contracted COVID-19 at RSU dr. H. Koesnadi Bondowoso. This type of research used observational analytic with case control study design. The number of samples were 216 respondents. Methods of data analysis used chi-square and logistic regression. The results showed that there were an effect between predisposing factors including comorbidities, education level, knowledge and attitudes towards employees who had contracted COVID-19. There was an effect between reinforcing factors including supervision by hospital leaders on employees who have contracted COVID-19. There is no effect between predisposing factors including age on employees who have contracted COVID-19. There is no effect between enabling factors including the availability of PPE, availability of hand washing/hygiene facilities, availability of health information for employees who have contracted COVID-19. There is no effect between reinforcing factors including the existence of regulations/laws on employees who have contracted COVID-19. There is an effect between predisposing factors (comorbid, education level, knowledge level, attitude) on employees who have contracted COVID-19. There is an effect between the reinforcing factor (supervision by the leadership) on employees who have contracted COVID-19. The most dominant variables influencing include attitude, supervision by hospital leadership, education level and comorbidities. There is no effect between reinforcing factors including the existence of regulations/laws on employees who have contracted COVID-19. There is an effect between predisposing factors (comorbid, education level, knowledge level, attitude) on employees who have contracted COVID-19. There is an effect between the reinforcing factor (supervision by the leadership) on employees who have contracted COVID-19. The most dominant variables influencing include attitude, supervision by hospital leadership, education level and comorbidities. There is no effect between reinforcing factors including the existence of regulations/laws on employees who have contracted COVID-19. There is an effect between predisposing factors (comorbid, education level, knowledge level, attitude) on employees who have contracted COVID-19. There is an effect between the reinforcing factor (supervision by the leadership) on employees who have contracted COVID-19. The most dominant variables

**influencing include attitude, supervision by hospital leadership, education level and comorbidities.**

**Keywords:-** Predisposing, Enabling, Reinforcing Factor, COVID-19.

## I. INTRODUCTION

Corona virus disease 19 or known as COVID-19 was the cause of the extraordinary event that occurred at the end of December 2019 which was first reported in Wuhan, Hubei province, China (Susilo et al., 2020; Wang et al., 2020; Wu, Chen and Chan, 2020). Initially the disease was known as the 2019 novel coronavirus (2019-nCov), the results of the samples studied showed the etiology of the new coronavirus. 11 February 2020 WHO announced a new name, namely Coronavirus Disease (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) (Susilo et al., 2020; World Health Organization (WHO), 2020b). On March 12, 2020, WHO declared COVID-19 a pandemic. Initially, it was reported that about 66% were infected in the Wuhan market, some time there were 100 cases reported that spread in several provinces in China, including Hubei, Zhejiang, Guangdong, Henan, Hunan, Beijing and Shanghai. Currently, this disease is spreading almost all over the world (WHO, 2020a).

Globally, as of December 18, 2020, there were 74.9 million cases of COVID-19, with 1.66 million deaths. The first case of COVID-19 in Indonesia was reported on March 2, 2020, 2 cases were found. As of December 18, 2020, there were 636,000 cases of COVID-19, with 19,248 deaths (Ministry of Health RI, 2020; WHO, 2020a). Reports of cases to medical personnel globally, especially from Europe and countries around America, are estimated to be around 14% of COVID-19 cases. The proportion of transmission of medical personnel varies widely, ranging from 2-35%. According to the IDI report, there were 647 deaths of medical personnel due to COVID-19 in Indonesia, consisting of doctors, dentists, nurses, midwives, pharmacists and laboratory personnel. The highest cases of medical personnel dying from COVID-19 were in East Java as many as 198 people (Kemenkes RI, 2021).

Bondowoso Regency is one of the regencies in East Java that has also been affected by the COVID-19 case. Data as of December 18, 2020 shows the number of cases as many as 1,337 cases, with the number of deaths as many as 65

cases (Ministry of Health RI, 2020). Based on data from the tracing section of the COVID-19 Handling Team, dr. H. Koesnadi Bondowoso said that between August 2020 - January 2021 there were 112 employees who were infected with COVID-19, the second highest in the former Besuki career after RSD Soebandi Jember.

Preventive efforts can be carried out by reviewing the behavior of employees who have been infected with COVID-19, and as a comparison reviewing the behavior of employees who have never contracted COVID-19. The form of prevention of contracting COVID-19 is implementing 5M which consists of wearing masks, maintaining distance, washing hands, reducing mobility and staying away from crowds. In addition to implementing 5M, hospital employees are required to apply health protocols in accordance with WHO recommendations. One of the behavioral theories that can be used is the theory of L. Green (1980). L. Green's theory consists of 3 factors, namely predisposing factors (age, gender, education, knowledge, religious attitudes and beliefs of values), enabling factors (availability of health facilities and infrastructure) and reinforcing factors (regulations or norms, supervision and endorsement).

The general purpose of this research is to find out the behavior of employees at RSU dr. H. Koesnadi Bondowoso based on L. Green's Theory. The specific objective is to analyze the predisposing, enabling and reinforcing factors of employees who have contracted COVID-19 at RSU dr. H. Koesnadi Bondowoso.

## II. LITERATURE REVIEW AND HYPOTHESES

### Behavior

Behavior is basically goal oriented. Generally, behavior is motivated by a desire to achieve certain goals. Factors that determine behavior are called determinants (Winardi, 2004). According to Skinner (1938) a psychologist formulated that behavior is a person's response or reaction to a stimulus (stimulus from outside), because the behavior occurs through the process of a stimulus to the organism and then the organism responds. Based on Skinner's theory this is called "SOR" or Stimulus Response Organisms. Skinner distinguished two responses:

1. *Respondent response* or reflexive, namely the response caused by certain stimuli. This kind of stimulus is called electing stimulation because it causes relatively fixed responses.
2. *Operant response* or instrumental response, which is a response that arises and develops then is followed by a certain stimulus or stimulus. This stimulus is called reinforcing stimulation or reinforcer, because it strengthens the response (Skinner, 1996 in MRL A. et al, 2019)

Judging from the form of response to this stimulus, this behavior can be divided into two:

1. Covert behavior (covert behavior) A person's response to a stimulus in the form of covert or covered (covert).
2. Overt behavior is a person's response to a stimulus in the form of real or open action (Skinner, 1996 in MRL A. et al, 2019).

Notoatmodjo (2010) states that behavior is an activity or activity of the organism or living thing in question. Therefore, from a biological point of view, all living things, including animals and humans, have their own activities. According to Mubarok, Chayatin, Rozikin and Supradi (2007) behavior from the analysis of factors that effect health-related behavior according to Lawrence Green's theory, is determined by 3 main factors, namely predisposing factors, supporting factors, and driving factors. MRL A. et al (2019) explains that the 3 factors in Lawrence Green's theory are:

1. Predisposing factors (predisposing factors), namely factors that exist from within can be manifested in the form of age, gender, income, occupation, knowledge, attitudes, beliefs, values, and so on.
2. Supporting factors (enabling factors), which are manifested in the physical environment, the availability or unavailability of health facilities or facilities, such as health centers, medicines, contraceptives, latrines, transportation, and so on.
3. Reinforcing factors that are manifested from factors that exist outside the individual can be manifested in the form of attitudes and behavior of health workers, reference groups, behavior of community leaders, religious leaders, existing regulations or norms. Regulations, legislation, and decrees from government and regional officials.

### Lawrence Green's Theory (1980)

Lawrence Green tries to analyze human behavior from the level of health. The health of a person or society is effected by 2 main factors, namely behavioral factors (behavior causes) and factors outside of behavior (non-behavior causes). Factors caused by behavior include, predisposing factors, enabling factors and reinforcing factors.

#### 1. Driving Factors (Predisposing Factors)

Predisposing factors are factors that become the basis of a person's motivation or intention to do something. The driving factors include knowledge, attitudes, beliefs, values and perceptions, traditions, and other elements contained in individuals and communities related to health.

#### 2. Enabling Factors

Enabling factors are factors that enable or facilitate behavior and actions. Enabling factors include facilities and infrastructure or health facilities. An example of the availability of PPE, in accordance with Law no. 1 of 1970 article 14 point c states that management (entrepreneurs) are required to provide free personal protective equipment required for workers under their leadership and provide for every other person who enters the workplace, accompanied by the necessary instructions. according to the instructions of supervisory staff or work safety experts.

#### 3. Reinforcing Factor

Reinforcing factors are factors that encourage or strengthen someone's behavior due to the attitude of husbands, parents, community leaders or health workers. In addition to driving factors, reinforcing factors are effected by regulations and supervision. An example of a regulation on the use of PPE which is regulated in Permenakertans No.1 of 1981 article 5 paragraph 2 states "Workers must wear the required personal protective equipment to prevent

occupational diseases". The behavior of a person or society regarding health is determined by the knowledge, attitudes, beliefs, traditions, and so on of the person or society concerned. In addition, the availability of facilities, attitudes and behavior of health workers towards health will also support and strengthen the formation of behavior.

**COVID-19 Epidemiology**

Since the first case in Wuhan, there has been an increase in COVID-19 cases in China every day and peaked between late January to early February 2020. Initially, most reports came from Hubei and surrounding provinces, then increased to other provinces and throughout China. (Wu and McGoogan, 2020). On January 30, 2020, there were 7,736 confirmed cases of COVID-19 in China, and 86 other cases were reported from various countries such as Taiwan, Thailand, Vietnam, Malaysia, Nepal, Sri Lanka, Cambodia, Japan, Singapore, Saudi Arabia, South Korea, Philippines, India, Australia, Canada, Finland, France and Germany(World Health Organization (WHO), 2020).

Covid-19 was first reported in Indonesia on March 2, 2020 in a number of two cases (WHO, 2020b). Data on January 19, 2021 showed that globally confirmed cases were 94,961,632, with a death toll of 2,031,129. The following is the average case per 7 days per 3 months. Data on January 19, 2021, confirmed 896,642 in Indonesia, with 8,269,701 deaths. Average 7 days of COVID-19 cases per 3 months in Indonesia. East Java Province is the fourth highest with 101,197 cases and 6,833 deaths. Data on January 19, 2021, COVID-19 in Bondowoso district was 1,805, with 115 deaths (East Java Provincial Government, 2021).

The hypotheses in this study are as follows:

1. There is an effect of the determinants of predisposing factors on employees who are infected with COVID-19 at Dr H. Koesnadi Bondowoso General Hospital
2. There is an effect of the determinant of enabling factors on employees who are infected with COVID-19 at RSU dr H. Koesnadi Bondowoso
3. There is an effect of reinforcing factor determinants on employees who are infected with COVID-19 at RSU dr H Koesnadi Bondowoso

4. There is the most dominant factor that causes employees to contract COVID-19 at Dr H. Koesnadi Bondowoso General Hospital.

**III. METHODS**

The type of research is analytic observational with case control study. This research was conducted at RSU dr. H. Koesnadi Bondowoso in April – June 2021. The population in this study were all employees who had been infected and had never contracted COVID-19. Determination of the sample using non-probability sampling technique with total sampling method. The number of samples in this study was 216 people, with a 1:1 ratio of 108 cases each (employees who had contracted COVID-19): 108 controls (employees who had never contracted COVID-19).

This research has passed the ethical test number 1191/UN25.8/KEPK/DL/2021 from the research ethics committee of the Faculty of Dentistry, University of Jember. The variables included predisposing factors consisting of respondents' characteristics including age, education level, knowledge and attitudes. The enabling factor consists of the availability of PPE (Personal Protective Equipment), hand washing/hygiene facilities, and health information. The reinforcing factor consists of the existence of regulations/laws regarding the prevention of COVID-19 and supervision by the hospital leadership. Bivariate data analysis using chi-square test and multivariate using multiple logistic regression test.

**IV. RESULT**

The distribution of research results and bivariate test results consisted of predisposing factors including age, comorbidities, education level, knowledge and attitudes. Enabling factors consist of the availability of PPE, hand washing/hygiene facilities, and health information. Reinforcing factors consist of regulations/laws regarding the prevention of COVID-19 and supervision by hospital leaders are presented in Table 1. The results of the multivariate analysis are presented in Table 2.

Table 1. Effect Distribution of Predisposing Factors, Enabling Factors and Reinforcing Factors on Employees Infected with COVID-19 at RSU dr H. Koesnadi Bondowoso 2021

Variable	Case		Control		p-value
	Total (n)	Percentage (%)	Total (n)	Percentage (%)	
<b>Predisposing Factor</b>					
<b>Age</b>					
<20 years	3	2.8	6	5.6	0.307
20 years	105	97.2	102	94.4	
<b>Comorbid</b>					
There is	13	12	5	4.6	0.049
Nothing	95	88	103	95.4	
<b>Level of education</b>					
Middle school/equivalent	2	1.9	1	1	0.000
High school / equivalent	14	13	17	15	
Diploma/ Bachelor/ Equivalent	92	85.1	90	84	
<b>Knowledge</b>					
Good	82	75.9	50	46.3	0.011

Variable	Case		Control		p-value
	Total (n)	Percentage (%)	Total (n)	Percentage (%)	
Enough	24	22.2	51	47.2	0.013
Less	2	1.9	7	6.5	
<b>Attitude</b>					
Good	21	19.4	7	6.5	0.013
Enough	75	69.4	91	84.3	
Less	12	11.1	10	9.3	
<b>Enabling Factor</b>					
<b>Availability of PPE</b>					
There is	106	98.1	107	99	0.561
Nothing	2	1.9	1	1	
<b>Availability of Hand Washing/ Hygiene Facilities</b>					
There is	106	98.1	108	100	0.155
Nothing	2	1.9	0	0	
<b>Availability of Health Information</b>					
There is	105	97.2	108	100	0.081
Nothing	3	2.8	0	0	
<b>Reinforcing Factor</b>					
<b>There are regulations/laws</b>					
There is	104	96.2	106	98.1	0.15
Nothing	4	3.8	2	1.9	
<b>There is supervision</b>					
There is	5	4.6	14	13	0.031
Nothing	103	95.4	94	87	

Table 2. Results of Analysis of the Most Dominant Factors Affecting Employees Infected with COVID-19 at RSU dr. H. Koesnadi Bondowoso in 2021

Variable	OR (odds Ratio)	p-value
Comorbid	4,694	0.015
Level of education	7,238	0.000
Attitude	27.78	0.000
Leadership Supervision	8,533	0.003

Based on the results of the study, it can be explained as follows.

1. The results of statistical tests using multiple linear regression on comorbid variables with a p-value of 0.015, with an OR value of 4.694. This means that employees who do not have comorbidities tend not to contract COVID-19 4.694 times higher than those who have comorbidities.
2. The results of statistical tests using multiple linear regression tests on the variable of the last education level of junior high school tend to be more infected with COVID-19 7, 238 times higher than the last education level of diploma/bachelor.
3. The results of statistical tests using multiple linear regression tests on the variable of bad attitude tend to be more infected with COVID-19 27.78 times higher than employees who have a good attitude.
4. The results of the statistical test using the multiple linear regression test on the variables of employees who received supervision from hospital leaders tended not to contract COVID-19 8,533 times higher than employees who worked without supervision from hospital leaders.

## V. DISCUSSION

Based on the results of data analysis showed that the age distribution of most of the case and control groups of respondents aged 20 years were 105 people (97.2%) and 102 people (94.4%). The results of statistical tests showed that there was no effect between age on employees contracting COVID-19 ( $p=0, 301 > \alpha$ ). In line with the research of Barret et al. (2020) and Voinsky et al. (2020) stated that most of the respondents who contracted COVID-19 were >20 years old. This shows that the older you get, the higher the prevalence of contracting COVID-19. Age is related to the prognosis of COVID-19, the older the age, the more severe the symptoms (Canning et al., 2020). The results of this study indicate that most of the respondents aged > 20 years,

The distribution of comorbidities in most cases and controls did not have comorbidities as many as 95 people (88%) and 103 people (95.4%). The results of statistical tests showed that there was an effect between comorbidities on employees contracting COVID-19 ( $p=0.049 < .$ ). COVID-19 is a new case and research is still limited, but several studies have shown that cases of COVID-19 accompanied by comorbidities can increase infection. Comorbidities not only increase the risk of pneumonia but also affect the prognosis of several diseases, especially pneumonia (Ticinesi et al., 2020; Cilloniz et al., 2020; Sanyaolu et al., 2020). In line with the research of Liu et al. (2020) stated that from a sample of 78 respondents, 62.8% of respondents mostly did not have comorbidities. The small sample size and random sampling have not been able to describe the effect of comorbidities on the prognosis of COVID-19 (Liu et al., 2020). Research conducted by Guan et al. This is the first study nationwide to evaluate the impact of comorbidities on clinical characteristics and prognosis in patients with COVID-19 in China. The results showed that patients with at least one or more comorbidities were associated with poor clinical outcomes.

The distribution of education levels was mostly in the case and control groups who graduated from Diploma/Bachelor degrees, respectively, as many as 92 people (85.1%) and 90 people (84%). Statistical test results show that there is an effect between education level on employees contracting COVID-19 ( $p = 0.000 < .$ ). In line with the research of Gannica et al. (2020) that out of 310 respondents 85.2% were highly educated with good COVID-19 prevention behavior. Another study conducted by Zhong et al. (2020) who conducted research on people in China stated that the level of education was good for prevention of contracting COVID-19, but showed a high number of people infected with COVID-19. The results of the review article Chou et al. (2020) regarding the risk factors for the transmission and prevention of COVID-19 stated that the level of education, both formal and non-formal, had an effect on the transmission of COVID-19. The level of education affects the ability to think. The higher the level of education, the easier it is for individuals to think rationally and capture new information, so the higher one's education, the higher one's knowledge (Yaslina and Yunere, 2020; Chou et al., 2020).

The distribution of knowledge was mostly in the good case group as many as 82 people (75.9%), while in the control group mostly 51 people (47.2%). Statistical test results show that there is an effect between knowledge on employees contracting COVID-19 ( $p=0.011 > .$ ). In line with research conducted by Arslanca et al. (2021) stated that research conducted on health workers consisting of general practitioners, specialists and nurses had a level of knowledge about COVID-19  $>90%$  but the implementation of preventive behavior was still low, especially male respondents. Most women are better at implementing COVID-19 prevention. Another study conducted by Sembiring and Meo (2020) stated that there was a relationship between knowledge and the risk of contracting COVID-19. Supported by research conducted by Suharmanto (2020) it is stated that most of the respondents' knowledge levels are good (80.7%). Knowledge

improvement can be done by sharing information in the form of posters, regulations and training on COVID-19.

The distribution of attitudes was mostly in the case and control groups, which were mostly adequate as many as 75 people (69.4%) and 91 people (84.3%). The results of the statistical test showed that there was an effect between attitudes towards employees contracting COVID-19 ( $p=0.013 < .$ ). In line with the research of Lin et al. (2020) stated that out of a total of 2,121 respondents, 86.7% of respondents had sufficient attitudes to implement COVID-19 prevention. Most respondents know the impact of less COVID-19 prevention will increase the chance of contracting COVID-19. Based on the research of Al-Hanawi et al. (2020) stated that there is a relationship between attitudes and the incidence of COVID-19 in the Kingdom of Saudi Arabia. Another study conducted by Suharmanto (2020) stated that there was a relationship between attitude and behavior to prevent transmission of COVID-19.

The distribution of the availability of PPE, mostly in the case and control groups stated the availability of PPE as many as 106 people (98.1%) and 107 people (99%). The results of statistical analysis showed that there was no effect between the availability of PPE on employees contracting COVID-19 ( $p=0.561 > \alpha$ ). Based on the results of the study, respondents who served in the COVID-19 room always used PPE in accordance with WHO recommendations. The availability of PPE in hospitals is adequate compared to the beginning of the pandemic. In addition to the availability of adequate PPE, WHO has also released the optimization of overcoming problems if a hospital experiences a shortage of PPE. The availability of adequate PPE does not guarantee that hospital employees are not infected with COVID-19 if the use and reuse process is not up to standard (WHO, 2020). Another study by Sari et al. (2021) stated that the availability of ADP has nothing to do with employee compliance to use PPE. In addition to the availability of PPE and knowledge of the function of PPE, many other factors effect behavior.

The distribution of the availability of hand washing/hygiene facilities in the case and control groups mostly stated that there were 106 people (98.1%) and 108 people (100%) respectively. The results of statistical tests showed that there was no effect between the availability of hand washing/hygiene facilities on employees contracting COVID-19 ( $p=0.155 > .$ ). The results of observations made by researchers in each room provided a hand sanitizer, sink and hand soap. Even in addition to the room, in every hospital hallway and waiting room, hand washing/hygiene facilities are available. Based on the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/328/2020, health services are required to provide a sink, running water, antiseptic soap for washing hands and hand sanitizer as a form of infection prevention. Based on research conducted by Ismawati et al. (2020) stated that the availability of hand washing facilities did not affect the transmission of COVID-19. The availability of hand washing facilities must be adjusted to the compliance with the application of hand washing behavior. The application of hand washing must be in accordance with the provisions set by WHO, namely washing hands in 6 steps using running

water using soap for 40-60 seconds or with a hand scrub or Handzanitizer for 20-30 seconds. The most important thing to prevent the transmission of COVID-19 apart from the availability of facilities is the behavior of employees. The application of hand washing must be in accordance with the provisions set by WHO, namely washing hands in 6 steps using running water using soap for 40-60 seconds or with a hand scrub or Handzanitizer for 20-30 seconds. The most important thing to prevent the transmission of COVID-19 apart from the availability of facilities is the behavior of employees. The application of hand washing must be in accordance with the provisions set by WHO, namely washing hands in 6 steps using running water using soap for 40-60 seconds or with a hand scrub or Handzanitizer for 20-30 seconds. The most important thing to prevent the transmission of COVID-19 apart from the availability of facilities is the behavior of employees.

The distribution of the availability of health information in the case and control groups mostly stated that there was health information as many as 105 people (97.2%) and 108 people (100%). The results of the statistical test showed that there was no effect between the availability of health information on employees contracting COVID-19 ( $p=0.081 >$ ). The results of observations made by researchers proved that in every corner of the hospital there was media in the form of posters regarding the prevention of COVID-19 transmission. There is health information in the form of posters in every hospital as a reminder, especially for hospital employees to apply the principles of preventing the transmission of COVID-19. Based on research conducted by Hafizha et al. (2020) stated that health information both online and offline is related to the level of knowledge and attitudes so that they better understand how to prevent, deal with and deal with COVID-19 cases. In line with Widyasari's research (2021), health information can increase knowledge about efforts to prevent COVID-19. Health information aims to further increase awareness regarding the regulations set by the government to implement the prevention of COVID-19 transmission.

The distribution of regulations/laws for the prevention of COVID-19 in the case and control groups mostly stated that there were 104 people (96.2%) and 106 people (98.1%). The results of the statistical test show that there is no effect between the existence of regulations/laws on employees contracting COVID-19 ( $p=0.081 >$ ). The existence of laws/regulations in the hospital environment is proven by the circular letter of Bondowoso Regent Regulation Number 50 of 2020 concerning Guidelines for Implementing a New Lifestyle Order for Community Activities During the COVID-19 Pandemic in Bondowoso Regency. In line with research conducted by Aini and Wardani (2015) stated that there was no effect between employee compliance with regulations. This is because there are other factors that are more influential on employee compliance. The results of this study indicate that most employees state that there are regulations/laws related to the obligation to prevent the transmission of COVID-19. Most of the employees agree that the regulations are disseminated evenly to all employees, so that all employees know and participate in the application of the stipulated regulations/laws.

The distribution of supervision by hospital leaders in the case and control groups mostly stated that there was none, respectively, as many as 103 people (95.4%) and 94 people (87%). The results of the statistical test showed that there was an effect between the supervision by the hospital leadership on employees contracting COVID-19 ( $p = 0.0031 <$ ). Based on research conducted by Zaki, Ferusgel & Siregar (2018), it is stated that people who do not set a rule are due to lack of knowledge, skills, lack of training in procedures or regulations. This shows the need for leadership effect in supporting employees. Another study by Sari et al. (2021) leadership support for employees can be in the form of giving praise, supervising officers while working, or providing sanctions for those who violate the rules. In this study, most of the respondents stated that there was no supervision from the hospital leadership regarding the prevention of COVID-19. Most of the respondents agreed that supervision was carried out by the leadership or formed a COVID-19 prevention supervision team and given sanctions for those who violated the regulations.

The results of multiple logistic regression analysis showed that the independent variables that became the most influential risk factors for contracting COVID-19 at RSU dr. H. Koesnadi Bondowoso was comorbid (OR 4.694,  $p=0.015$ ), education level (OR 7,238,  $p=0.000$ ), attitude (OR 27.78,  $p=0.000$ ) and supervision from hospital leaders related to COVID-19 prevention (OR 8.533,  $p=0.003$ ). In line with the research of Wang et al. (2020) showed comorbidities were 1.1 times more likely to produce a poor outcome in COVID-19 patients; education level and attitude factors are dominant variables that have a real effect on community compliance with health protocols. The form of support has an effect of 1.7 times on preventing the transmission of COVID-19 (Kundari et al., 2020).

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