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# Relationship of Knowledge with the Motivation of Health Officers in COVID-19 Prevention at Humana Prima Mother and Children's Hospital

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## Abstract

**Background:** COVID-19 cases in Indonesia are still increasing, the increase in cases is also accompanied by an increase in the number of deaths due to COVID-19. Most of the deaths occurred in health workers. Health workers need to have motivation in using self-protection devices to prevent COVID-19 infection.

**Objectives:** Assessing the relationship of knowledge with the motivations of health workers in the prevention of COVID-19.

**Method:** This is a quantitative study with a cross-sectional design. The population of this study is health workers including Doctors, Nurses, Midwives, Health Analysts, and Radiographers. The sampling technique used is quota sampling. Sampling is done to health workers who treat patients with suspicion or have confirmed COVID-19. The statistical test used is the Chi-Square test.

**Results:** Most of the health workers have good knowledge (68.3%) of the prevention of COVID-19. Most health workers have the high motivation (63.4%) for the prevention of COVID-19 in the use of personal protective equipment. There is a link between knowledge and motivation in covid-19 prevention.

**Conclusion:** Health workers who have sufficient knowledge are 8 times more likely to not have the motivation to prevent COVID-19 in using personal protective equipment compared to health workers who have good knowledge

**Keywords:** Knowledge, Motivation, Prevention of COVID-19, Personal Protective Equipment.

## Introduction

Coronavirus 2019 (COVID-19) pandemic is a problem that occurs in more than 200 countries around

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the world. COVID-19 has been identified as the cause of an outbreak of infectious respiratory diseases in Wuhan, China.<sup>1</sup> COVID-19 is highly contagious because most people do not have immunity to this new virus. Currently, COVID-19 efforts are only carried out for the treatment of symptoms, treatment, and prevention of complications, but no cure can yet cure the disease. Therefore, the best strategies for maintaining prevention such as maintaining social distance or wearing masks can help us prevent

infections.<sup>2</sup> Government actions that shut down public services led to the collapse of industries that negatively impacted the economy.<sup>3</sup>

The new coronavirus, 2019-nCoV, is a single-strand, positive, stranding RNA virus and is in the genus betaCoV, which also includes SARS-CoV and MERS-CoV. 2019-nCoV shares 89% nucleotide identity with SARS-like CoVZXC21 and 82% identity with human SARS-CoV.<sup>4</sup> Therefore, 2019-nCoV is named SARS-CoV-2. Initial studies reported possible transmission of SARS-CoV-2 from animals to humans, and transmission from human to human through droplets or direct contact.<sup>5</sup> For the prevention of the spread of the virus, some studies show that 2019-nCoV is sensitive to ultraviolet and heat rays like other CoV. Also, CoV can be functionally disabled by using different solvents to include ethanol (70%), ether (75%), disinfectants containing clenbuterol, and others.<sup>6</sup>

Indonesia from December 30 to May 9, 2020, there were 13,112 positive cases. New cases totaled 336, and a total of 943 deaths.<sup>7</sup> COVID-19 cases are still increasing. Almost every province in Indonesia is infected with the COVID-19 virus, while Indonesia with local transmission in DKI Jakarta, Banten, West Java, Central Java, and East Java. Data spread COVID-19 cases at the West Java Health Office on March 25, 2020, there were 3669 people under monitoring, 460 people under supervision, 73 positive people and 5 people healed, 10 people died among them, health officials. For people monitoring visualized data as much as 1,076 out of 3,669 cases and 24 from 27 districts/cities. Meanwhile, 172 of the 572 cases and 20 of the 27 districts/cities were monitoring data. And for patients who confirmed positive COVID-19 data visualized 72 out of 73 cases and 14 from 14 districts/cities.<sup>8</sup>

Standard recommendations to prevent the spread of infection are regular handwashing according to the WHO, applying the ethics of coughing and sneezing, avoiding direct contact with livestock and wild animals, and avoiding contact with anyone who shows symptoms of respiratory diseases such as sneezing and coughing. Also, implementing infection prevention and control while in emergency department health facilities.<sup>9</sup>

Coronavirus 2019 (COVID-19) pandemic is getting faster, the global health care system is becoming overwhelmed with potentially infectious patients seeking

tests and treatments. Preventing the spread of infection to and from health officials (HCW) and patients depending on the effective use of personal protective equipment (PPE), Hospitals that successfully obtain supplies should use the rational use of PPE. Agencies with better resources and some clinical advocates have considered policies requiring all staff to wear masks in public spaces regardless of high-risk exposure, although there is little evidence that this is a wise use of resources.<sup>10</sup>

Based on data from the Infection Prevention and Control Team at Humana Prima mother and child hospital, the percentage of compliance with the use of PPE in health workers is 81.5% in 2018 while in 2019 the compliance with the use of PPE in health workers is 85.5%.<sup>7</sup> In terms of knowledge health officials already know what COVID-19 is and what are the PPE used in efforts to prevent COVID-19 virus transmission, while from the results of observes there are still some health workers who feel anxious because if there are patients with respiratory symptoms and fever then the use of PPE should be complete and other problems that arise is the lack of PPE supply so that many PPE used is not appropriate or modified and incomplete.

## Material and Method

The design used in this study was a quantitative cross-sectional. The population in this study is health workers including Doctors, Nurses, Midwives, Health Analysts, and Radiographers in Ruma Sakit Ibu dan Anak Humana Prima, Kot Bandung. The sampling technique used is quota sampling. Sampling is done to health officials with a level of protection 3, namely a group of health workers who treat patients with suspicion or have confirmed COVID-19 with the number of samples that meet the inclusion criteria.

The analysis used in this study is a univariate analysis which is to know the information about COVID-19 prevention in health officials and the motivational picture of COVID-19 prevention in the use of PPE. Bivariate analysis is used to determine the relationship of knowledge with motivation in COVID-19 prevention. The statistical test used is the Chi-Square test. To determine the amount of risk using the Prevalence Odds ratio (POR).

### Findings:

**Table 1. Distribution of Knowledge About COVID-19 Prevention in Health Workers at Humana Prima Mother and Child Hospital**

Knowledge	Frequency	Percentage
Good	28	68,3
Enough	13	31,7
<b>Total</b>	<b>41</b>	<b>100</b>

Table 1. Shows that most health workers have 68.3% good knowledge of COVID-19 prevention

**Table 2. Motivational Distribution about COVID-19 Prevention in Health Workers at Humana Prima Mother and Child Hospital**

Motivation	Frequency	Percentage
High	26	63,4
Low	15	36,6
<b>Total</b>	<b>41</b>	<b>100</b>

Table 2. Showed that health officials have a high motivation of 63.4% against COVID-19 prevention in the use of personal protective equipment

**Table 3. Knowledge Relationship with Motivation towards COVID-19 Prevention in Health Workers at Humana Prima Mother and Child Hospital**

Knowledge	Motivation				Total		P-Value	POR (95% CI)
	High		Low					
	n	%	n	%	n	%		
Good	22	78,6	6	21,4	28	100	0,005	8,25 (1,87-36,38)
Enough	4	30,8	9	69,2	13	100		
Total	26	63,4	15	36,6	41	100		

Table 3. It showed that health workers who had good knowledge and had high motivation amounted to 78.6%. The proportion difference between good and sufficient knowledge is 47.8%. Chi-Square test results have obtained a p-value of 0.005, meaning there is a significant link between knowledge and COVID-19 prevention motivation in the use of PPE in health workers. While prior results are 95% CI = 8.25 (1.87 – 36.38), it means that health workers who know are quite at risk of being motivated in using PPE as a prevention effort for COVID-19.

### Discussion

**Knowledge about COVID-19 Prevention in Health Officials:** Based on the results of the research most health workers are well knowledgeable that is. The results showed

that most health officials know COVID-19 prevention, this is because health officials have been given training and also weekly conducted Focus Group Discussion to improve the knowledge of health workers. Health education using the Focus Group Discussion method can improve a person's knowledge.<sup>11</sup> The knowledge covered in the cognitive domain includes knowing what is defined as recalling a material that has been studied before, understanding an object not just knowing, mentioning but correctly representing the known object, and applying if someone who has understood the object in question can apply it.<sup>12</sup>

Observation results in the field of health officials have been given education in the form of training and socialization about COVID-19 prevention so that the level

of knowledge of most health officials is good.<sup>13</sup> Reveals that knowledge gained from curiosity about a particular object is then felt through experience. So health officials should have good knowledge by participating in training in hospitals, especially in the prevention of COVID-19.

**The motivation for COVID-19 Prevention in Using PPE for Health Workers:** Based on the results of the study most health workers have high motivation. motivation can influence a person to use personal protective equipment. Motivation is one of the factors of activators that will affect compliance using personal protective equipment.<sup>14</sup> Based on its form motivation consists of intrinsic and extrinsic motivations. In this study, one of them was intrinsic motivation. Intrinsic motivation comes from the individual himself. What can give rise to intrinsic motivations include the needs and desires that exist in a person that includes a need, interest, pleasure, and curiosity, because this intrinsic motivation does not need reward and punishment.

Based on observations in the field the majority of respondents were motivated towards COVID-19 prevention, health officials used personal protective equipment at work where the respondent stated that the prevention was for the protection of his health. Factors that influence motivation are internal factors and external factors. That internal factor is one that appears to originate in a person in his health and his satisfaction.<sup>15</sup>

The majority of respondents had a high motivation towards COVID-19 prevention in the use of personal protective equipment. With good motivation, it is hoped that COVID-19 prevention in the use of personal protective equipment will be good later. The high level of motivation is influenced by factors such as knowledge, attitude, distance, socioeconomic conditions, information sources, socio-cultural, and quality of service.<sup>15</sup>

**Knowledge Relationship with COVID-19 Prevention Motivation in the Use of PPE in Health Officials:** The results of the study proved that there is a significant link between knowledge and COVID-19 prevention motivation in the use of personal protective equipment in health workers. Health workers who have sufficient knowledge have an 8 times greater chance of not having COVID-19 prevention motivation in the use of PPE compared to health workers who have good knowledge. Previous research in Klaten Regency showed that there is

a link between knowledge level and motivation.<sup>15</sup> Other studies have also stated the same thing, which is that the level of curiosity is significantly related to motivation.<sup>16</sup>

Based on the results of observations in the field, health officials such as Doctors, Nurses, Midwives, Health Analysts, and Radiographers are motivated in the prevention of COVID-19 especially in the use of personal protective equipment. This motivation arises because of socialization in the form of policies in the prevention of COVID-19 both from local and national governments. The relationship of knowledge of health workers with motivation plays a central role in the prevention of COVID-19 in the use of personal protective equipment. This has a huge effect on health and safety on itself so good knowledge will result in high motivation. The better the knowledge then the higher the motivation or the stronger the motivation.<sup>15,16</sup>

While there are still health officials who have moderate knowledge and have high motivation because some of the officers do not participate in training but the health officer has a high motivation that health officials use personal protective equipment for COVID-19 prevention this is due to the need for themselves. The things that can give rise to intrinsic motivation include the needs and desires that exist in a person.<sup>17</sup>

## Conclusion

Based on the results of the study obtained the conclusion that most health officials in have a good knowledge of COVID-19 prevention, most health officials have a high motivation to prevent COVID-19 in the use of personal protective equipment and there is a significant link between knowledge and motivation in the prevention of COVID-19.

**Conflict of Interest:** All authors have no conflicts of interest to declare.

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**Ethical Clearance:** The study was approved by the institutional Ethical Board of Bhakti Kencana University Semua subjek mendapat informasi lengkap tentang prosedur dan tujuan penelitian ini, setiap subjek sebelum penelitian menandatangani formulir informed consent.

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