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#### LITERATURE REVIEW ARTICLE

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### The Knowledge and Attitude of Nurses as an Efforts to Prevent Covid-19

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#### ABSTRACT

**Background:** Coronaviruses are a large family of viruses that are transmitted zoonically (between animals and humans) and can cause mild to severe symptoms. SARS-CoV-2 infection in humans causes symptoms of acute respiratory distress such as fever, cough, and shortness of breath. In severe cases, the disease can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. Efforts to break the chain of spread of COVID-19 require a good understanding and knowledge of all elements including nurses. **Objective:** To find similarities, advantages, and disadvantages regarding the Description of Nurses' Knowledge and Attitudes to prevent Covid-19 disease in 2021. **Methods:** This study used a descriptive type with a Literature review design obtained from sources from the International Journal of Nursing Research (IJNR) and the National Library. The keywords in this study were Description, Knowledge, Attitudes, Nurses, Covid-19 Prevention. **Results:** From five articles on the Description of Nurses' Knowledge and Attitudes to prevent Covid-19 disease, four articles had good knowledge and attitudes and there was one article which stated that nurses' knowledge and attitudes were still not good. **Conclusion:** This study aims to determine the similarities, advantages, and disadvantages of using a literature review. Of the five articles, it shows that the five research journals have research similarities in this research method, the five journals use descriptive research methods, there are 4 journals that have similarities in the sample, namely nurses, the third equation there are five journals that use a cross sectional approach. The advantages of this study are that there are four complete studies in accordance with the research objectives, and the drawback of this research is that there is one incomplete article whose research is not in accordance with its objectives.

**Keywords:** knowledge; attitude; nurse; Covid-19 prevention

#### INTRODUCTION

##### Background

Coronaviruses are a large family of viruses that are transmitted zoonically (between animals and humans) and it can cause mild to severe symptoms. Previously, there were two types of coronavirus known to cause disease in humans, namely Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (MERS-CoV)<sup>(1)</sup>. On February, 11<sup>th</sup> 2020, World Health Organization (WHO) announced the official name of this new disease, namely as "COVID-19" (Coronavirus Disease 2019) listed on International Classification Of Diseases (ICD).

SARS-CoV-2 infection in humans causes symptoms of acute respiratory distress such as fever, cough, and shortness of breath. In severe cases, the disease can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. Symptoms of this disease can appear within 2-14 days after exposure to the virus<sup>(1,2)</sup>.

According to data from <sup>(3)</sup> So far, there have been 88,506,564 cases of Covid-19 worldwide. The number of patients who recovered were 63,614,848 while the number of patients who died were 1,906,770. The country with the highest number of cases was occupied by the United States with a total of 21,857,616 cases. Meanwhile, Indonesia occupied the 20th position with the highest number of cases in the world.

Knowledge of medical personnel regarding the use of personal protective equipment when dealing with COVID-19 is important as a way of preventing transmission from COVID-19's patients to medical personnel, knowledge of medical personnel regarding the use of personal protective equipment can affect the attitude of medical personnel towards the use of personal protective equipment in an appropriate manner. rational and appropriate <sup>(4)</sup>.

Despite having a professional obligation to care for patients during a pandemic, many nurses have concerns about their work and the impact on themselves. In particular, concerns about the risk of infection, transmission to family members, stigma about work and restrictions on personal freedom are the main problems <sup>(5)</sup>. Situational conflict among nurses during a pandemic is a logistical issue related to the availability of personal protective equipment <sup>(6)</sup>.

Based on the results of the study, almost all nurses on duty at Paguyangan community health center already know a set of personal protective equipment, as evidenced by the results of answers to several questions regarding personal protective equipment. However, the reality in the field was that there were still nurses who did not use standard personal protective equipment when performing actions on patients such as gloves, protective gowns (aprons), face shields and closed shoes. This situation was due to various factors that cause nurses did it, including nurses' understanding that personal protective equipment was used in emergency conditions, for example in patients suffering from infectious diseases, as well as the limited personal protective equipment provided by the management of community health center. This showed that nurses' knowledge significantly influences behavior in the use of personal protective equipment <sup>(7,8)</sup>.

The behavior of nurses in using personal protective equipment can be influenced by factors of knowledge and attitudes of nurses about personal protective equipment. The results of the study by <sup>(9)</sup> stated that good knowledge and positive attitudes lead to appropriate infection control prevention practices. However, the results of previous studies found that the majority of nurses' knowledge about personal protective equipment (PPE) was obtained in the less category (68.9%) <sup>(10)</sup>. This can affect the low compliance of nurses in using personal protective equipment.

Nurses who have less knowledge have 7.8 times risky of not being obedient in using PPE <sup>(11)</sup>. The results of the research by <sup>(12)</sup> stated that the level of knowledge about the five good hand washing times is directly proportional to its application. Likewise, in handling the Covid-19 pandemic, knowledge was one of the most important things to pay attention to, especially for health workers. This supports the previous research statement which states that increasing knowledge about the Covid-19 disease was very necessary for health workers for more holistic and comprehensive disease management <sup>(13)</sup>.

Thinking about the easy way of spreading or transmitting from Covid-19, ways to anticipate the increase in the spread and number of community infections <sup>(14)</sup>. The way to anticipate the spread of Covid-19 is to adopt a healthy lifestyle according to health protocols during the Covid-19 pandemic, cover your mouth when coughing or sneezing using your arm <sup>(15)</sup>. Face masks are a form of self-protection during the Covid-19 pandemic <sup>(14)</sup>. Face masks are very important to use because they not only serve as protection, but also prevent the spread of Covid-19 infection <sup>(16)</sup>.

Furthermore, maintaining personal hygiene during the Covid-19 pandemic such as washing hands is one of the steps that the community needs to take <sup>(14)</sup>. Washing hands cannot be done haphazardly by the community. Washing hands properly within 20 seconds or more using running water and liquid soap is an effective method that is recommended and really needs to be implemented by the community <sup>(14)</sup>.

As the pandemic accelerates, the access of health workers to PPE (Personal Protective Equipment) is a major concern. PPE shortages have been reported in the most affected facilities in many countries. Some health facilities are waiting for equipment or may be equipped with materials that do not meet the requirements, while health workers have seen patients who may be infected <sup>(15)</sup>.

In addition to concerns for their safety, nurses are also concerned about passing the infection on to their families. Therefore, practical measures should be applied (a distance of 1.5-2 meters from everyone who is sick), wash hands frequently with soap or alcohol-based scrubbing for at least 20 seconds, and should not touch any part of the body with unwashed hands <sup>(17)</sup>.

Several studies have been conducted on the knowledge, attitudes, and practices of nurses during the Covid-19 pandemic. In Iran it measured the level of knowledge among nurses. More than half of the nurses (56.5%) had almost good knowledge and attitudes about sources of information related to Covid-19, transmission, signs and symptoms, prognosis, treatment and mortality. Most nurses got information related to Covid-19 from official reports (WHO) and the social media of the Ministry of Health (48%) and traditional media (42%). However, overall knowledge scores were not significantly different according to age, low level of education and work experience. The researchers suggest that providing more information could lead to better control of infectious diseases such as Covid-19 <sup>(18)</sup>.

Research result of <sup>(19)</sup> a total of 393 health care workers completed the questionnaire. Only 45% of participants had correct knowledge about the agent while 97% knew that close contact with an infected person

was a very important risk factor. Only 63% had correct knowledge about the role of antibiotics in the treatment of Covid-19.

The majority of health workers' attitudes are worried because there was a high possibility that it can pose a risk to the family. Bringing infection home was the most commonly reported fear, 92%. Washing hands frequently or always was 11.5% and 87%, respectively. Around 71% wore a mask while working. Knowledge was better among physicians than non-physician while attitudes and practices between the two groups were comparable<sup>(18,20-23)</sup>.

Meanwhile, the results of the study are based on this background that Nurse Knowledge as an effort to prevent Covid-19 and greatly influences the prevention/transmission of Covid-19 disease. So I feel interested in conducting a research entitled "Overview of Knowledge and Attitudes of Nurses in the prevention of Covid-19 disease in 2021 from 5 countries".

## Purpose

The purpose of this literature review research was to determine the similarities and differences in the knowledge and attitudes of nurses in preventing Covid-19 disease of 5 countries in 2021.

## METHODS

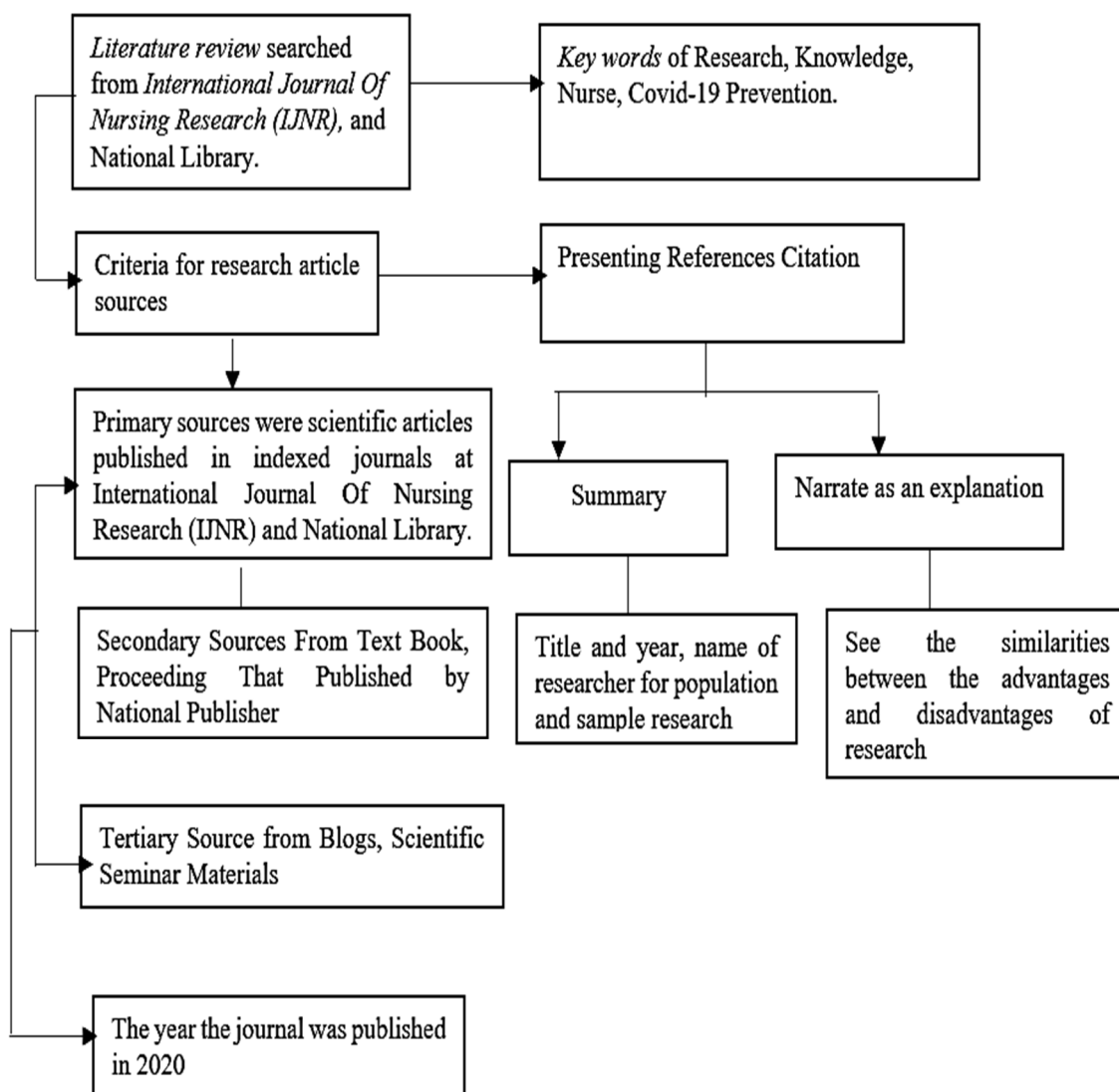


Figure 1. Flow chat diagram of literature searching

## RESULTS

## Resume

Table 1. Description of Nurse Knowledge Efforts to Prevent Covid-19 Published in Journals in 2020

No.	Title / Year	Title	Researchers	Purpose	Method	Sampling	Results
	Knowledge, Attitudes and Practices of Health Workers About Covid-19 Disease in Saudi Arabia Year: 2020	Journal Epidemiology and Global Health	Name : Unaib Rabbani & Abdullah Mohammed Al Aaigul	The purpose of this study was to assess the knowledge, attitudes and practices of nurse health workers about Covid-19	Research Method Using descriptive cross sectional analysis.	Population : Health Workers Sample : 398 people	The results showed that as many as 398 nurse health workers completed the questionnaire. Only 45% of the participants had the correct knowledge about Covid-19 Prevention while around 97% knew that close contact with an infected person was the most important risk factor. Clean hands properly and correctly of 87%, and about 71% wear a mask during work.
	Overview of Knowledge among nurses about Covid-19 prevention Based on a Questionnaire survey Year: 2020	International Journal Of Nursing Research (IJNR)	Name : Kuldeep Patidar, Maneeh Sharma, Ashiah Gautam, Dinesh K, Jayeh Jain.	Purpose. This study was conducted to assess the description of nurses' knowledge about Covid-19.	This type of research was descriptive with a cross sectional design.	Population: Nurses The research sample were 380 nurses.	The results of this study indicated that the description of nurses' knowledge about Covid-19 was quite good and positive.
	Nurse's knowledge, attitude and practice towards Covid-19 disease in Lebanon Year: 2020	Wilay online library journal	Name: Danielle Saadeh, Hala Sacre, Souheil Halit, dan Rita Farah.	The purpose of the study was to assess knowledge, attitudes, and practices towards the Covid-19 disease among Lebanon nurses.	This researcher used a descriptive cross sectional design method.	Population : Nurse Sample : of study were 311 Lebanese nurses	The results of this study stated that only 2% of nurses worked in special Covid-19 wards and as many as 20% of nurses had treated Covid-19 patients. The majority of nurses had sufficient knowledge, attitudes, and practices about Covid-19 (84%) stated participated in infection prevention and control while (16%) still did not follow control due to lack of knowledge about Covid-19.
	Knowledge and attitude of nurses to handle Covid-19 patients. Year: 2020	Wilay online library journal	Name: Abdulqadir J. Naswan, Ahmad A. Abujaber, Ahmed S. Mohamed.	The purpose of this study was to assess the role of nurses' knowledge and attitudes regarding their willingness to work with patients diagnosed with Covid-19 in Qatar.	This study used a descriptive cross-sectional study design	Population: Nurses The research sample were 580 Nurses.	The results of this study, A total of 580 nurses who completed the survey only 377 or (65%) nurses completed the survey with a good and correct level of knowledge and attitude while 203 or (45%) nurses still had low knowledge about Covid-19. From this study stated the average age of the participants was 35 years, of them 61.5% were women. Participants expressed their willingness to work with Covid-19 patients while 11.9% did not want to handle them.

No.	Title / Year	Title	Researchers	Purpose	Method	Sampling	Results
	Assessment Of Knowledge And Anxiety Of Iranian Nurses of Covid-19 During The Current Outbreak In Iran	Endocrinology and metabolism research center shirazataversity al medical science	Name: Marizeh Nemati, Baherah Ebrahimi & Fatemeh Nemati	The purpose of this study was to measure the level of knowledge of nurses during the Covid-19 outbreak	This Research Method was a descriptive cross sectional.	Population: The sample nurses in this study were 85	The results of this study were as many as (57%) nurses had good knowledge about the Covid-19 disease while (43%) had lack knowledge and lacked information to increase this knowledge.
Year: 2020							

### List of Similarity

- The first similarity of five articles' contain were its have the same goal to see an overview of the knowledge and attitudes of nurses in preventing Covid-19 disease.
  - The overview of knowledge, attitudes and practices of health workers about Covid-19 disease in Saudi Arabia.
  - The Overview of knowledge among nurses about Covid-19 prevention.
  - The Overview of nurses' knowledge, attitudes, and practices towards Covid-19 disease in Lebanon.
  - The overview of knowledge and attitude of nurses to handle Covid-19 patients.
  - The assessment of knowledge and anxiety of Iranian Nurses during the current outbreak of Covid-19 in Iran.
- The second similarity of 4 articles' contains was same sample, namely nurses.
- The third similarity in this study was that there were 4 journals had a good level of knowledge and attitude, more than half of the sample had good knowledge.
  - Nurses' knowledge, attitudes, and practices towards Covid-19 disease in Lebanon. This study concluded that more than 50% of nurses had good knowledge and attitudes in preventing Covid-19 disease. Most nurses (44.7%) spent about 1-2 hours per day, and 23.8% spent more than 3 hours per day getting information related to the Covid-19 outbreak. Sources of information related to the Covid-19 outbreak obtained were the World Health Organization (WHO) (74.6%) and the MOPH website (65.6%). However, 41.5% of nurses stated that they got information from the internet or social media and 36.7% nurses got information from television news.
  - Knowledge and attitude of nurses to handle Covid-19 patients. This study resulted in as many as 65% of nurses having good knowledge and attitudes in handling Covid-19 patients. From these results, it was found that nurses who obtained good knowledge and attitudes received online medical services that exceeded 4.26 million consultations about Covid-19. One strategy to stop the spread of the virus is to obtain knowledge and information, therefore nurses obtained sources of information from the World Health Organization, Communicable Disease Center and MOPH.
  - Assessment of knowledge and anxiety of Iranian Covid-19 nurses during the current outbreak in Iran. This study resulted in as many as (57%) nurses having good knowledge about the Covid-19 disease. More than half of the sample had good knowledge of the source, transmission, signs and symptoms, treatment and mortality from Covid-19. From this study, it was conveyed that to obtain this knowledge, nurses obtained sources of information from the World Health Organization and the Ministry of Health (55.29%), social applications (45.23%) and media (42.358). The researcher concluded that the knowledge of nurses about the prevention of Covid-19 was quite good. Therefore, WHO and the Minister of Health still have to provide more information to medical personnel to control infectious diseases better in the future.
  - Knowledge description among nurses about Covid-19 prevention based on the questionnaire survey of this study showed that the nurses' knowledge of Covid-19 was quite good and positive.
- The fourth similarity was 5 journals use the same descriptive method
- The fifth similarity in this study were 5 journals use same cross sectional approach.

### DISCUSSION

Of the five articles on the description of the knowledge and attitudes of nurses to prevent Covid-19 disease, nurses already have fairly good knowledge and attitudes because the results of the five journals that have been studied were three journals have knowledge of which more than half of the sample had the same knowledge and

attitudes. quite good and there is one article that states. The results of this study indicated that the description of nurses' knowledge about Covid-19 was quite good and positive without including the number of samples who had good and bad knowledge. However, there were also those who had lack knowledge and attitudes. One of the causes of the lack knowledge and attitude of nurses in preventing Covid-19 was the lack of information for nurses.

Knowledge was the participant's understanding of the given topic. Knowledge was the ability to receive, retain, and use information, which was influenced by experience and skills. Most of the knowledge of a person has come from formal and informal education, personal experience and other people, the environment, and the mass media <sup>(24)</sup>.

A nurse was said to be professional if she has the knowledge, skills and has a professional attitude according to the professional code of ethics. Nurses' knowledge can continue to increase if the hospital can continue to improve their capabilities with various training and education in all aspects of disease prevention. The determination of the COVID-19 public health emergency was carried out considering the extraordinary spread of COVID-19 marked by the number of cases and/or the number of deaths that had increased and spread across regions and across countries and had an impact on political, economic, social, cultural, defense and security aspects. , as well as the welfare of the people in Indonesia. In addition, considering that the spread of COVID-19 has an impact on increasing the number of victims and property losses, expanding the coverage of the affected area, as well as having implications for broad socio-economic aspects in Indonesia, Presidential Decree Number 12 of 2020 concerning Determination of Non-Natural Disasters for the Spread of Corona Virus has also been issued. Disease 2019 (COVID-19) As a National Disaster <sup>(1)</sup>.

One of the aspects that has received the most impact from this pandemic is the health sector. Along with the spread of this disease, the problems in the health sector are increasingly visible. Some of the significant problems are the lack of infrastructure for health facilities, with the lack of availability of ICUs and ventilators for COVID-19 patients, lack of COVID-19 test capacity, limited availability of Personal Protective Equipment (PPE), especially for health workers. The real time reverse-transcription polymerase chain reaction (RT-PCR) test capacity per 1 million population is only around 5,616 people, which is a low number compared to other countries in the world. The unpreparedness of health facilities (Puskesmas, Referral Hospitals, Main Hospitals) in dealing with the COVID-19 situation can be seen from the suboptimal management of health human resources, dependence on imports of medicines and medical devices, poor health infrastructure, and the lack of focus on strengthening basic health service standards and health insurance. and the performance of health services is still low. All of these things will certainly have an impact on the risk of getting infected and being exposed to medical personnel will be higher <sup>(17,25,26)</sup>.

In this era of pandemic, so many scientific controversies have arisen regarding COVID-19. For this reason, a rational scientific attitude is needed in dealing with it. Nurses have an obligation to follow the development of health science and technology through scientific meetings, education, or research to be able to provide the best treatment for patients, especially considering that COVID-19 is a new disease that is still being studied a lot so that there are many changes and updates to information in its management. Nurses are expected not to provide information without a clear and strong scientific evidence basis to the wider community.

## CONCLUSION

Nurses' knowledge and attitudes about Covid-19 prevention are possible to get an overview from the results of the literature review that has been reviewed. But there were also nurses who still have the knowledge and attitude in preventing Covid-19 due to lack of information because information is a source of new knowledge or new discoveries that can become new knowledge. So, from the five journals that have been reviewed, it is hoped that they will illustrate the knowledge and attitudes of nurses in Indonesia in order to further improve prevention efforts in handling the Covid-19 disease. Various health media such as WHO, the Ministry of Health, wear PPE properly and correctly, and apply the procedures of Wearing Masks, Washing Hands, Keeping Distance, Avoiding Crowds so that nurses can know how to control this disease better.

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