



Knowledge, attitude and practice (KAP) related to infection control measure among the registered nurses in private hospital during COVID-19 pandemic

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Abstract

Coronavirus Disease is a pandemic that requires people worldwide to take quick precautions to avoid the infection. Nurses are considered the backbone of the healthcare system, especially during this Covid-19 pandemic. They make up the largest percentage of the workforce in any healthcare facility worldwide. In Malaysia, men and women have become increasingly engaged in healthcare. This is supported by the growth of nursing schools that educate Malaysian men and women to become the country's primary and top health professionals. This study aimed to identify the knowledge, attitude and practice of infection control measures among the Registered Nurses in one of the Specialist hospitals. The research design chosen in this study is a descriptive quantitative design. It will include a descriptive analysis of key demographics, variables, reliability analysis, Cronbach's Alpha correlation of variables, Kruskal- Wallis, Mann- Whitney, Pearson Correlation and hypotheses testing. The method used for data collection is a self-administered questionnaire with 37 questions of Yes or No and a Likert Scale, which was distributed to 169 nurses. The researcher will use the online survey using google Forms due to the pandemic situation. The researcher also will utilize several strategies to reach the respondents via Whats App messages. The population of this study is all the RN working at one of the private hospitals in Klang Valley. There was approximately 314 RN working in the hospital. According to Krejcie and Morgan's Table (1970), the total number sample size for the total population of 314 RN is 169 samples. Of 152 respondents, 151 (99.3%) had a good knowledge level, and only 1 (0.7%) had a moderate knowledge level on Covid-19. For the level of attitude, 152 (100%) of the respondents had a good attitude towards Covid-19. For the level of practice, all the respondents, 152 (100%), had good care practice for Covid-19 patients.

Keywords: knowledge, attitude, practice, covid-19, measure, infection control

Introduction

The COVID-19 pandemic is Malaysia's deadliest infectious illness outbreak since the 1918 Spanish Flu, which killed 34,644 persons, or 1% of the nation's total population. The Nipah virus outbreak in 1999 took the lives of 105 Malaysians, while the SARS outbreak in 2003 claimed only two lives. Over 24,078 Malaysians have died directly from the ongoing COVID-19 outbreak, with the total number of cases of Covid-19 about 2,127,934. The WHO has established a stringent rule to follow throughout the pandemic as there is no safe and effective treatment against COVID-19. Infection control measures and standard precautions are very important for health care providers, especially RN, because of their direct contact with the patients. According to a study conducted by Rifin, Ganapathy, Hasani, Perialathan, Kaundan and Ahmad (2021) ^[13], Coronavirus Disease 2019 (COVID-19) was declared a pandemic in mid-March due to the disease's high contagiousness and rapid spread over the globe. Understanding the knowledge and practice of healthcare workers is also critical, particularly among frontline workers, who must protect themselves while assisting in disease prevention education for their patients and the general public. COVID-19 has caused chaos in healthcare systems in Malaysia and around the world. The epidemic has pushed normal operations into upheaval, causing an estimated 28 million operations to be backlogged, highlighting system and supply chain vulnerabilities, pushing health workers' physical and mental limits to the test, and causing a quick implementation of electronic solutions. Despite these tremendous challenges, there are possibilities to effect positive change during these trying times. Health systems will need new functioning methods to address these demands until a vaccine is discovered when they go from crisis response to resilience, recovery, and the post-pandemic new reality. COVID-19 has the potential to quicken existing transformational improvements in more mature healthcare companies, bringing us closer to the future reality.

Methodology

Design and sampling

This cross-sectional study was conducted in 2021 at one of the private hospitals in Selangor, Malaysia. The study population (N=314) excluded the registered nurses on a probation period. The sampling method used in this study was the purposive sampling technique that would be employed to recruit approximately 169 registered nurses. Based on Krejcie and Morgan's (1970) table, since in this study, the population is 314 RN (N=314), so the sample for this study is 169 nursing students (S=169).

Study tools

The self-administered questionnaire adopted by Rifin *et al.* (2021) [13] has been chosen as the research tool of this study. All questionnaires were presented in English because English is the principal language used in hospitals and communication for nurses in the clinical context. The questionnaire consists of four sections: Socio-demographics, knowledge, attitude and practice. Section A consists of 6 items that may include Gender, Age, Highest Qualification/Education, Designation, Ward Specialty and Years of Experience, which the participant will fill. Section B consist of nine items, questioning the main symptoms, general knowledge and transmission route of Covid-19 with Yes, No and I'm Not Sure options. Meanwhile, Section C consists of twelve items, questioning the attitude and response of the nurses if they develop Covid-19 symptoms, with 5 points on the Likert Scale (Strongly not effective, Not effective, Neither effective nor not effective, Effective, Strongly effective). Next, Section D consists of ten items questioning the practice of Covid-19 preventive measures among nurses towards infection control measures of covid-19 with Yes or No options. The reliability of the questionnaire was tested using Cronbach's Alpha to determine the internal consistency, $\alpha=0.836$. This result suggests good internal consistency.

Due to the Covid-19 pandemic, the hard copy questionnaire was transformed into Google form, which is an electronic form that gives the researcher easy access to the respondents. A letter with an information sheet outlining the study and a self-reporting questionnaire was delivered to the nurses by WhatsApp, requiring them to click the link given. Before that, permission to conduct the survey was informed and acknowledged by the Chief Nursing Officer (CNO). This is to assure the confidentiality of the answers and that their identity will not be disclosed in the final reports. The IBM Statistical Package for Social Sciences (SPSS) version 26.0 was used to analyse the data of this study. The analysis reflected the results of the questionnaire used during the research.

The research design chosen in this study was a descriptive quantitative design, including a descriptive analysis of key demographics, variables, reliability analysis, Cronbach's Alpha correlation of variables, Kruskal-Wallis, Mann-Whitney, Pearson Correlation and hypotheses testing.

Ethical considerations

Ethical clearance was sought from the University affiliation's Research Management Committee (RMC). The proposal for this study was reviewed and approved by RMC. The purpose of the study, informed consent and the respondent criteria regarding privacy and confidentiality are attached and briefly explained in the google form. Ethical Clearance and Approval to Conduct Research Study code number is XXXX/RMC/SON/EC/2021/369.

Results

Table 1 shows the distribution data collected on demographic information. Regarding gender, 140 (92.1%) of the respondents are female, and only 12 (7.9%) are male. For the age group, the highest respondents with the age range from 21 – 30 years old with 66 (43.4%), followed by 62 (40.8%) from 31 – 40 years old, 22 (14.5%) from 41 – 50 years old and only 2 (1.3%) is 51 years old and above. For the highest education level, most of the respondents are diploma holders, with 65 (42.8%) respondents, the least respondent with a Master in Nursing with 2 (1.3%) responses, and there are 44 (28.9%) and 41 (27%) respondents with Bachelor of Nursing and post basic respectively. For the designation data, there are 57 (37.5%) of the respondents are Registered Nurses, followed by 39 (25.7%) Specialist Nurses, 21 (13.8%) Senior Specialist Nurses, Unit Managers, 13 (8.6%) respondents, 11 (7.2%) are Senior Registered Nurse. In comparison, 7 (4.6%) of respondents were Assistant Unit Managers, and 4 (2.6%) were Nurse Instructors. The distribution data for the ward speciality care, 27 (17.8%) of the medical and surgical ward respondents, respectively. At the same time, 98 (64.5%) of the respondents come from other departments. For the working experience, most of the respondents have worked more than 10 years and above, with 56 (36.8%) respondents. There, 40 (26.3%) of the respondents have worked for 4 - 6 years, and there are 33 (21.7%), and 23 (15.1%) have been working for one year – 3 years and 7-9 years, respectively.

Section B questionnaire is regarding the level of knowledge on covid-19. For the level of knowledge of Covid-19, 151 (99.3%) of the respondents have a good level of knowledge, and only 1 (0.7%) of the respondents have moderate knowledge of Covid-19. The normality of the distribution was tested by using a histogram and normality curve on the histogram. The variable is not normally distributed; skewed to the left. It means the nurses had a good knowledge of infection control measures during this pandemic of Covid-19. The results are displayed in Table 2.

Section C, the results as per in Table 3, is a section to assess the attitude of the registered nurse towards Covid-19. The data was collected and analyzed. For the level of attitude, there are 152 (100%) of the respondent have good levels of Attitude towards Covid-19. The normality of the variable was tested by histogram and normality

curve on the histogram. The data is not normally distributed; skewed to the left. Table 4.4 indicates that the attitude among nurses is very good towards infection control measures during this pandemic of Covid-19. Section D is a section related to the care practice of Covid-19 patients among registered nurses. For the level of practice, all the respondents, 152 (100%), have good practice of care for Covid-19 patients. The normality of the variable was tested by histogram and normality curve on the histogram. The data is not normally distributed; skewed to the left. The results are shown in Table 4.

Table 1: Demographic characteristics of the sample (n=152)

Characteristic	Frequency (n)	Percentage (%)
Gender		
Male	12	7.9
Female	140	92.1
Age		
21-30	66	43.4
31-40	62	40.8
41-50	22	14.5
51 and above	2	1.3
Highest Education		
Diploma in Nursing	65	42.8
Bachelor of Science in	41	27.0
Post Basic	44	28.9
Master in Nursing	2	1.3
Designation		
Registered Nurse	57	37.5
Senior Registered Nurse	11	7.2
Specialist Nurse	39	25.7
Senior Specialist Nurse	21	13.8
Assistant Unit Manager	7	4.6
Unit Manager	13	8.6
Nurse Instructor	4	2.6
Ward Specialty		
Medical	27	17.8
Surgical	27	17.8
Others	98	64.5
Working Experience		
1 – 3 years	33	21.7
4 – 6 years	40	26.3
7 – 9 years	23	15.1
10 years and above	56	36.8

Table 2: RN level of knowledge (n=152)

Items	Frequency (n)	Percentage (%)	Mean	Std. Deviation	
B1. The main symptoms of COVID-19 are fever, cough and shortness of breath.	Yes	148	97.4	1.95	0.321
	Not sure	0	0		
	No	4	2.6		
B2. COVID-19 can cause respiratory tract infections	Yes	150	98.7	1.98	0.181
	Not sure	1	0.7		
	No	1	0.7		
B3. Signs of infection can be seen within 14 days of being infected with a virus.	Yes	135	88.8	1.80	0.591
	Not sure	3	2.0		
	No	14	9.2		
B4. An individual infected with COVID 19 but doesn't display any symptoms can infect other individuals	Yes	148	97.4	1.95	0.321
	Not sure	0	0		
	No	4	2.6		
B5. Elderly and people with existing health problems have higher risks of getting severe/serious infection	Yes	152	100	2.00	0.000
	Not sure	0	0		
	No	0	0		
B6. Transmission route of COVID-19 is by touching or handshaking with people having COVID 19 symptoms	Yes	140	92.1	1.84	0.541
	Not sure	0	0		
	No	12	7.9		
B7. Transmission route of COVID-19 is by exposed to droplets from cough or sneeze by people having COVID-19 symptoms	Yes	150	98.7	1.99	0.081
	Not sure	2	1.3		
	No	0	0		
B8. The transmission route of COVID-19 is by touching surfaces or equipment contaminated with the COVID-19 virus, for example, a doorknob, elevator button, ladder	Yes	144	94.7	1.91	0.405
	Not sure	2	1.3		
	No	6	3.9		

holder etc.					
B9. The transmission route of COVID-19 is sharing food or drinks with people with COVID-19 symptoms.	Yes	142	93.4	1.88	0.479
	Not sure	1	0.7		
	No	9	5.9		

Table 3: Level of the attitude of RN (n=152)

Items		Frequency (n)	Percentage (%)	Mean	Std. Deviation
C1. Immediately seek treatment at the clinic/hospital	Strongly not effective	1	0.7	4.71	0.647
	Not effective	0	0		
	Neither effective nor not effective	10	6.6		
	Effective	20	13.2		
	Strongly effective	121	79.6		
C2. Rest at home and avoid going out	Strongly not effective	1	0.7	4.64	0.685
	Not effective	0	0		
	Neither effective nor not effective	12	7.9		
	Effective	26	17.1		
	Strongly effective	113	74.3		
C3. going out to public places or gathering	Strongly not effective	2	1.3	4.84	0.400
	Not effective	0	0		
	Neither effective nor not effective	0	0		
	Effective	20	13.2		
	Strongly effective	130	85.5		
C4. Wear face mask all the time	Strongly not effective	0	0	4.82	0.383
	Not effective	0	0		
	Neither effective nor not effective	0	0		
	Effective	27	17.8		
	Strongly effective	125	82.2		
C5. lose mouth and nose with a tissue when coughing or sneezing	Strongly not effective	0	0	4.81	0.498
	Not effective	2	1.3		
	Neither effective nor not effective	1	0.7		
	Effective	21	13.8		
	Strongly effective	128	84.2		
C6. Throw the used tissue and face mask in the rubbish bin	Strongly not effective	4	2.6	4.58	0.903
	Not effective	5	3.3		
	Neither effective nor not effective	4	2.6		
	Effective	25	16.4		
	Strongly effective	114	75.0		
C7. Keep 1-meter distance from people with COVID 19 symptoms like coughing and sneezing	Strongly not effective	2	1.3	4.70	0.662
	Not effective	1	0.7		
	Neither effective nor not effective	2	1.3		
	Effective	31	20.4		
	Strongly effective	116	76.3		
C8. Always wash hand with water and soap	Strongly not effective	0	0	4.82	0.406
	Not effective	0	0		
	Neither effective nor not effective	1	0.7		
	Effective	26	17.1		
	Strongly effective	125	82.2		
C9. Bring along and use hand sanitizer	Strongly not effective	0	0	4.84	0.400
	Not effective	0	0		
	Neither effective nor not effective	2	1.3		
	Effective	20	13.2		
	Strongly effective	130	85.5		
C10. Avoid sharing a	Strongly not effective	1	0.7	4.76	0.620

toothbrush, towel, etc. with healthy individuals	Not effective	1	0.7		
	Neither effective nor not effective	6	3.9		
	Effective	18	11.8		
	Strongly effective	126	82.9		
C11. Avoid sharing food or drinks with healthy individuals.	Strongly not effective	1	0.7	4.66	0.700
	Not effective	2	1.3		
	Neither effective nor not effective	8	5.3		
	Effective	25	16.4		
	Strongly effective	116	76.3		
C12. Wash cooking utensils with water and soap	Strongly not effective	1	0.7	4.68	0.614
	Not effective	0	0		
	Neither effective nor not effective	6	3.9		
	Effective	32	21.1		
	Strongly effective	113	74.3		

Table 4: Level of practices of the RN (n=152)

Question		Frequency (n)	Percentage (%)	Mean	Std. Deviation
D1. Keep a 1-meter distance from people with COVID-19 symptoms.	Yes	152	100	1.00	0.000
	No	0	0		
D2. Wear masks in public places	Yes	152	100	1.00	0.000
	No	0	0		
D3. Wash your hand with water and soap	Yes	152	100	1.00	0.000
	No	0	0		
D4. Bring along hand sanitiser in public places	Yes	152	100	1.00	0.000
	No	0	0		
D5. Use hand sanitiser that is provided in public places	Yes	151	99.3	0.99	0.081
	No	1	0.7		
D6. Avoid sharing food and drinks with people having COVID-19 symptoms.	Yes	149	98.0	0.98	0.140
	No	3	2.0		
D7. Avoid sharing personal items with people having COVID-19 symptoms	Yes	148	97.4	0.97	0.161
	No	4	2.6		
D8. Avoid attending events/gatherings. Ex: wedding. Birthday celebrations	Yes	148	97.4	0.97	0.161
	No	4	2.6		
D9. Avoid going to public areas such as supermarkets, theatre	Yes	144	94.7	0.95	0.224
	No	8	5.3		
D10. Avoid travelling	Yes	146	96.1	0.96	0.195
	No	6	3.9		

Table 5: Relationship Knowledge with gender, age, highest education, designation, ward speciality and working experience

Variables with Knowledge	P-Value
Gender	0.149
Age	0.056
Highest education level	0.039
Designation	0.116
Ward speciality	0.175
Working experience	0.365

Table 6: Relationship Attitude with gender, age, highest education, designation, ward speciality and working experience

Variables with Attitude	P-Value
Gender	0.837
Age	0.842
Highest education level	0.028
Designation	0.000
Ward specialty	0.002
Working experience	0.270

Table 7: Relationship Practices with gender, age, highest education, designation, ward speciality and working experience

Variables with Practices	P-Value
Gender	0.807
Age	0.736
Highest education level	0.115

Designation	0.399
Ward specialty	0.474
Working experience	0.767

Discussion

The Level of Knowledge Related to Infection Control Measures on Covid-19

In this study, the findings showed that the majority had good knowledge of infection control measures for Covid-19. For the level of knowledge of Covid-19, 151 (99.3%) of the respondents have a good level of knowledge, and only 1 (0.7%) have moderate knowledge of Covid-19. In a similar study by Rifin, Ganapathy, Hasani, Perialathan, Kaundan and Ahmad (2021) [13], the Ministry of Health staff had inadequate knowledge of COVID-19. Inadequate knowledge could have been the result of improper information being conveyed. Covid-19 control requires a good understanding of the disease's transmission patterns and preventative measures. (Bekele et.al, 2020). Numerous studies in Asia demonstrated that healthcare workers have higher COVID-19 knowledge. Establishing information between studies is difficult because the evaluation and scoring methodology differs. Regardless, the Ministry of Health utilized a variety of sources to provide accurate information about COVID-19 and its prevention measures. Acquiring the appropriate knowledge and good performance among nurses is very important since they are the frontline staff in the battle against this disease and must protect themselves as well as educate their patients on disease prevention measures. If the knowledge is lacking and there is less awareness of the condition, it is possible that the disease will be discovered late and treatment initiatives will be delayed. This could result in the rapid spread of illnesses before they are discovered. The Prevention and Control of Infection (PCI) team has taken proactive steps to address some pandemic concerns by providing practice strategies to improve employee knowledge. Good awareness of the modes of transmission and preventive strategy for COVID-19 plays a pivotal role in controlling the disease. There is an ongoing activity by the PCI team at the hospital supported by the national program and the health facilities and staff at the facility level.

The Attitudes Related to Infection Control Measures on Covid-19

This research aims to identify the attitudes related to infection control measures on Covid-19 among nurses. For the level of attitude, there are 152 (100%) of the respondent have good levels of Attitude towards Covid-19. Another significant conclusion was that most participants had a positive attitude toward COVID-19. On the attitude items, in the study conducted by Shahwana (2021), less than half (47.3%) of the nurses who participated in the study scored 80% and above. Generally, healthcare providers in Pakistan, China, and Jordan expressed confidence about containing the pandemic where the study was conducted. Overall, more than 70% of participants in most research conducted had a positive attitude towards Covid-19, comparable with a systematic review analysis of general infection concepts among nurses.

Furthermore, the findings of this study are consistent with those of individual studies on the general population in Malaysia (83.1%) and Indonesia (96%), the exact cause of which is unknown; however, it could be due to health policies and training groups involved in increasing the Covid-19 knowledge. Participants involved in the study conducted by Alobuia (2021) in the United States (27–52%) expressed a negative view towards COVID-19, which contradicts the current study's findings. It could be attributable to the general government's insufficient information about COVID-19, the uncertain origin of coronavirus, the world's sudden outbreak of coronavirus, and the various types of research groups in the two studies.

The Practices Related to Infection Control Measures on Covid-19

For the level of practice, all the respondents, 152 (100%), had good practice towards adherence to COVID-19-related infection control measures. The good practice is because the PCI team in the hospital provided the staff with Covid-19 related training programs, Personal Protective equipment (PPE), and the required practical skills. Frequent audits and rounds by the team also contributed to the good practices conveyed by the nurses. On the other hand, a study conducted by Bekele, Sheleme and Fekadu (2020) [2, 5] concerning the practice section, wearing a face mask was practised commonly in China, Turkey and Saudi Arabia to fight the disease where else, whereas staying at home and avoiding crowded environment was common in United States, United Kingdom and Malaysia. In addition, in a study conducted in Nepal by Dahal, Tamrakar, Shakya, Jacobson and Shrestha in 2020, most healthcare workers (98.6%) had good COVID-19 practices. Since the infection prevention unit instructs healthcare professionals about infection prevention measures inside the hospital (even before the breakout of COVID-19), healthcare workers have maintained safe practices notwithstanding these exposures to infectious diseases. Most participants had appropriately performed infection prevention procedures such as avoiding face contact, hand washing frequently, and donning and doffing personal protective equipment and surgical masks.

Relationship between Knowledge with Socio-demographic

As per Table 5, Knowledge with gender, age, highest education level, designation, ward speciality and working experience. This study that the researcher conducted found no statistically significant relationship between levels of knowledge and gender. It could be defined that the gender of the respondent did not influence the level of Knowledge. In this study majority of the gender are Female. The researcher also conducted the relationship between levels of knowledge with age, and there is no statistically significant relationship.

This study also tested the relationship between knowledge and education levels. There is a statistically significant relationship between levels of knowledge with the highest level of education. According to the study conducted by Yazew, 2021^[21], knowledge is influenced by higher education. As they study higher, they will have a broader perspective to look positively at something.

In this study, the relationship between the level of knowledge and designation was tested, and there is no statistically significant relationship. There is no statistically significant relationship between knowledge levels with ward speciality in this study. The relationship between knowledge and working experience levels was tested, and there is no statistically significant relationship.

Relationship between Attitudes with Socio-demographic

Attitudes with gender, age, highest education level, designation, ward speciality and working experience are well explained in Table 6. In this study, the researcher also conducted the relationship between levels of attitudes with gender, and there is no statistically significant relationship. The relationship between levels of attitudes with age was tested, and there is no statistically significant relationship. The relationship between levels of attitudes with the highest education level was tested in this study, and there is a statistically significant relationship.

This study has a statistically significant relationship between levels of attitudes with the designation. The relationship between attitudes and ward speciality levels was also tested, and there is a statistically significant relationship. According to Xen *et al.* 1, 2021, the nurses who worked in the isolation ward had better attitudes and a good perception of infection control measures during this Covid-19 pandemic. This study has no statistically significant relationship between levels of attitudes with working experience.

Relationship between Practices with Socio-demographic

Practices with gender, age, highest education level, designation, ward speciality and working experience are shown in Table 7. The relationship between levels of practices with gender was tested in this study, and there is no statistically significant relationship. This study has no statistically significant relationship between levels of practices with age. The relationship between levels of practice with the highest education level was tested, and there is no statistically significant relationship in this study. This study has no statistically significant relationship between levels of practices with the designation. The relationship between levels of practices with ward speciality was tested, and there is no statistically significant relationship. This study has no statistically significant relationship between levels of practices with working experience. In the study conducted by Shahwana, 2021, stated that efforts still needed to improve the healthcare workers, especially the nurses, on infection control measures during this pandemic of Covid-19.

Limitations and Recommendations

Limitations are major influences over which the researcher has had no control. They are imperfections, conditions, or influences beyond the researcher's control and impose conditions on your methodology and results. Any restrictions that may have an impact on the outcome should be mentioned (Polit and Beck, 2020). This study had its disadvantages and limitations. One of the limitations of this study is that the researcher studies feels that respondents may not feel encouraged to provide accurate and honest answers, and these factors will interfere with the reliability of the data.

Additionally, the selection of limited research populations in one hospital makes the study population too small and makes it difficult to obtain a wider outcome. The study was also too limited because it was conducted at one hospital and was not done at other KPJ hospitals. The limitations during the survey process as the world are currently under a pandemic situation by Covid-19, most of the hospital staff were in quarantine, and it took them a few days to complete the survey. But after being followed up with them or their Unit Managers, they collected the answers for the survey.

The research results prove that nurses had very good levels of Knowledge, Attitude and Practices related to Infection Control measures during the Covid-19 pandemic. Since this is the first study we are aware of that examines the knowledge, Attitudes, and Practices of the nurses, we need to conduct more studies to examine the sustainability of their Knowledge, Attitude and Practices. The most important clinical recommendation was that the KAP be improved by establishing more training programs to sustain their Knowledge. Future studies with a larger sample size is recommended. The Hospital's Infection Control team needs to make more determinations to improve the healthcare workers, especially the nurses, on infection control measures during this pandemic of Covid-19.

Conclusion

KAP is directly associated with the severity of infectious diseases. In today's world, social networking is one of the channels that can be used to educate healthcare personnel and the public to understand more. The technique that can potentially be implemented to inhibit the spread of COVID-19 is good KAP relevant to infection control measures. Based on this study's findings, the hospital can determine whether nurses need to advance in their careers, stay current, and deliver better patient care. With the right information and Attitude, RNs may use their learning abilities. The findings of this study disclose nurses had a good level of Knowledge, a relatively optimistic attitude, and appropriately used protective measures against Covid-19 during the ongoing pandemic.

In conclusion, this study conducted by the researcher strongly proved that nurses had a very good level of Knowledge, Attitude and Practices towards Infection Control Practices during this Pandemic of Covid-19. This research will also provide data and evidence to the hospital on staff Knowledge, Attitude and Practices on the effectiveness of preventive measures taken by staff to prevent disease transmission, as well as measures they would take if they were infected or developed symptoms of COVID-19 disease. As an inference, COVID-19 attitudes and practices will be influenced by thorough knowledge. KAP is connected to the existence of significant infectious diseases. In today's society, social media is one platform that can inspire healthcare personnel and the general public to learn more. The instrument that can be applied to prevent the spread of COVID-19 is good KAP about infection control measures. Nurses' knowledge, attitude, and practices of protective measures against Covid-19 should be refreshed whenever new information is available during the current pandemic. More efforts are still necessary to guarantee that healthcare is protected, especially for nurses.

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