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Knowledge, attitudes, and practices of COVID-19 management among nursing officers at Base Hospital Homagama, Sri Lanka

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Abstract

Introduction: The COVID-19 outbreak challenges health systems and their ability to effectively manage public health emergencies. Nurses are not only at the forefront of the fight against this highly contagious disease but are also directly or indirectly affected by it.

Objective: To describe the knowledge, attitudes, and practices of COVID-19 management among nursing officers at Base Hospital Homagama

Methodology: A cross-sectional descriptive study was carried out among nursing officers at Base Hospital Homagama. All nurses were taken into the study. A pre-tested self-administered questionnaire was used to collect data. Knowledge, attitudes, and practices were categorized into good and poor according to cut-off values decided by experts in relevant fields. Data analysis was done using the SPSS statistical package.

Results: Response rate for the study was 96% (232). Among them, 220 (94.8%) were females while 12 (5.2%) were males. The majority of nurses had only a nursing diploma (215, 92.7%) while the rest had a BSc or MSc (17, 7.3%). Most nurses had good knowledge of COVID-19 management (201, 86.6%) while the rest had poor knowledge. Eighty-two percent (190) nurses had good attitudes toward COVID-19 management and almost all had good practices on COVID-19 management (223, 96.1%).

Conclusion: Most of the nurses at Base Hospital Homagama had good knowledge, attitudes, and practices on COVID-19 management.

Introduction

Healthcare workers (HCWs) are at the frontline of the COVID-19 pandemic fight and are exposed to dangers like pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, and stigma [10]

A poor understanding of the disease among HCWs can result in delayed identification and treatment leading to the rapid spread of infections. Over 100 healthcare workers have lost their lives to COVID-19. However, a study with the majority of Asian HCWs revealed that they had insufficient knowledge about COVID-19 but had a positive attitude toward the prevention of COVID-19 transmission [11]

Justification

The COVID-19 pandemic challenges health systems and their ability to effectively manage public health emergencies. HCWs are not only at the frontline of the fight against this highly infectious disease but are also directly or indirectly affected by it. It is therefore important to have adequate knowledge about all aspects of this disease. Nursing officers are directly involved in patient management and infection control. Their activities restore health and save lives.

Base Hospital Homagama, Sri Lanka functioned as a COVID-19 treatment center

since the end of March 2020. Within a short period, it had to transform from its routine functions to a COVID-19 treatment center. During this transformation, it had to face many obstacles creating the need to upgrade knowledge, attitude, and practices among the healthcare workers. This research is a step towards identifying gaps and providing solutions with the goal of giving the best possible care to the patients.

Objective

To describe the knowledge, attitudes, and practices of COVID-19 management among nursing officers at Base Hospital Homagama, Sri Lanka

Methodology

A cross-sectional descriptive study was carried out to describe the knowledge, attitudes, and practices of COVID-19 management among nursing officers at Base Hospital Homagama, Sri Lanka.

Study setting

Base Hospital Homagama has the second highest catchment population in Sri Lanka and is the only tertiary care institution between Avissawella District General Hospital and Colombo South Teaching Hospital. With the COVID-19 pandemic, Base Hospital Homagama was designated as one of the hospitals treating only COVID-19-diagnosed patients.

Study population

The study population consisted of nurses working at Base Hospital Homagama Sri Lanka**.** The total number of nurses at Base Hospital Homagama was 281. Therefore, all nurses in Base Hospital Homagama were selected for the study.

Inclusion criteria

A nurse who was working in Base Hospital Homagama, Sri Lanka.

Exclusion criteria

A nurse who was on maternity leave or other special leave for more than three months' duration.

Study period

June 2020- April 2021

Preparation of the study instrument

The instrument was a self-administered questionnaire with four parts. It was administered in the Sinhala language as all nurses in Base Hospital Homagama could read and write in the Sinhala language.

Pre-test of the questionnaire

The questionnaire was pre-tested in Colombo East Base Hospital to assess the validity and feasibility of administration. The necessary alterations were done following the pre-test. Five practical issues were encountered

during its administration.

Investigation team

The investigation team was composed of four medical officers and the principal investigator. Data collection was supervised by the principal investigator himself in the field.

Method of data collection

Permission for the study was obtained from the hospital administration. Investigators were introduced to the nurses and explained to them the objectives and purpose of the study. After obtaining informed consent the questionnaires were distributed among the nurses. Every step was taken during all the above procedures to minimize the disturbances to the routine ward work.

Data management and analysis

During the collection of the filled questionnaires, each one was examined for its completeness. If found to have any missing data, it was attended to at that point itself. Data analysis was done using the SPSS statistical package. The relationship between the associated factors was analyzed using statistical tests such as the Chi-square test.

Ethical and administrative considerations

Permission was sought from the respective authorities. Ethical clearance for the study was obtained from the Ethical Review Committee of the University of Sri Jayewardenepura.

Results

The response rate of the study was 96%. Analysis of the study population showed that the majority consisted of females (94.8%%) and the male: female ratio was approximately 1:19. Most of the nurses had only a diploma (92.7%) while five nurses (2.2%) had MSc qualifications or above. Almost all nurses had training on Personal Protective Equipment (PPE). Most of them were trained at the Base Hospital, Homagama (88.4%) while eleven nurses had training in several places. However, six (2.6%) nurses had no training at all on PPE. More nurses were working in the operation theater (17.2%) or the preliminary care unit (14.7%) compared to the OPD (0.9%) and the PBU (2.1%). Many other places except for ward 11 had more than 10 nurses.

When the demographic characteristics were concerned it was found that most of the nurses had households with members over 60 years of age (57.8%). About 33% of nurses had households with members having immune-compromised disease conditions.

Most of the nurses had good knowledge about COVID-19 management (86.6%) while only 31 (13.4%) nurses had poor knowledge. About eighty percent of the nurses had good attitudes toward COVID-19 management while 18 percent had poor attitudes toward the same. Almost all nurses

(96.1%) had good practices in COVID-19 management while only nine had poor knowledge about COVID-19 management.

The prevalence of knowledge, attitudes, and practices in relation to nurses' education level is given in table 1.

Knowledge (p=0.346), attitudes (p=0.956), or practice (p=0.656) on COVID-19 management did not significantly associate with nurses' education.

Discussion

Most of the nurses had good knowledge, attitudes, and practices on COVID-19 management. The main reason for such attributes might be the fact that the Base Hospital Homagama functioned as a COVID-19 treatment center from the beginning of the COVID-19 pandemic. Most of the study population had nursing diplomas only (92.7%). Although the knowledge and the practices on COVID-19 management were comparatively better in the high-education group good practices were observed more in the diploma group. However, there was no statistically significant association with the nurses' education level. The reason for that might be the fact that all nurses received training and education on COVID-19 management irrespective of their level of education at the beginning of the pandemic. Therefore, it can be the same reason for most of the nurses irrespective of their education level having good knowledge, attitudes, and practices on COVID-19 management.

Almost all nurses received PPE training at least in a single institution. Most of them were trained at the Base Hospital, Homagama (88.4%) while eleven nurses had been trained in other training centers. However, 6 (2.6%) nurses had no training at all on PPE. That might be because some nurses were not directly involved with patient management due to their illnesses and other personal reasons. So, they did not require to wear PPE and in that sense, they did not need

Table 01. The prevalence of knowledge, attitudes, and practices in relation to nurses' education

COVID-19 Management	Diploma No.	%	Above diploma No.	%	Significance
Knowledge Good					χ^2=0.886
Poor	185	86.0	16	94.1	df = 1
	30	14.0	1	5.9	p=0.346
Attitudes					χ^2= 0.0026
Good	176	81.9	14	82.4	df = 1
Poor	39	12.1	3	17.6	p=0.956
PracticesGood					χ^2= 0.197
Poor	207	96.2	16	94.1	df = 1
	8	3.8	1	5.9	p=0.656
Total	215	92.7	17	7.3	

training on PPE.

Since most of the nurses had high-risk members in their households, they had to be extra cautious by taking preventive measures with better knowledge of pathology and its prevention.

As it was a self-administered questionnaire, the responses might not have reflected the actual attitude and practices and it would have been biased. Another limitation was that the majority of the study population consisted of females. The male: female ratio was approximately 1:19 as there were fewer male nurses in the sample. However, since it is consistent with the usual male: female ratio of nurses in Sri Lanka, it can be assumed that the sample of this study represented the Sri Lankan nurses population.

Conclusions and Recommendations

Most of the nurses have good knowledge, attitudes, and practices on COVID-19 management. However, interventions that help to improve knowledge, attitudes, and practices on COVID-19 management are necessary to sustain these attributes. Therefore, regular training for healthcare workers to update them about new guidelines and developments on COVID-19 will be an imperative strategic measure to effectively control and prevent future outbreaks in Sri Lanka.

References

1. Naming the coronavirus disease (COVID-19) and the virus that causes it [Internet]. [cited 2020 May 26]; Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(COVID-2019)-and-the-virus-that-causes-it

2. WHO Coronavirus Disease (COVID-19) Dashboard [Internet]. [cited 2020 May 26]; Available from: https://COVID19.who.int/

3. Statement of the Twenty-Fourth IHR Emergency Committee [Internet]. [cited 2020 May 26]; Available from: https://www.who.int/news-room/detail/08-04-2020-statement-of-the-twenty-fourth-ihr-emergency-committee

4. COVID-19 situation reports [Internet]. [cited 2020 May 26]; Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

5. COVID-19 pandemic in Sri Lanka [Internet]. In: Wikipedia. 2020 [cited 2020 May 26]. Available from: https://en.wikipedia.org/w/index.php?title=COVID-19_pandemic_in_Sri_Lanka&oldid=958968170

6. Epidemiology Unit [Internet]. [cited 2020 May 26]; Available from: https://www.epid.gov.lk/web/

7. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia. N Engl J Med 2020;382(13):1199–207.

8. Coronavirus [Internet]. [cited 2020 May 26]; Available from: https://www.who.int/westernpacific/health-topics/coronavirus

9. Advice for public [Internet]. [cited 2020 May 26]; Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

10. Coronavirus disease (COVID-19) outbreak: rights, roles, and responsibilities of health workers, including key considerations for occupational safety and health by WHO.

11. Bhagavathula AS, Aldhaleei WA, Rahmani J, Mahabadi MA, Bandari DK. Novel Coronavirus (COVID-19) Knowledge and Perceptions: A Survey of Healthcare Workers. medRxiv 2020;2020.03.09.20033381.