Knowledge regarding prevention and management of COVID-19 among Under Graduate Nursing students

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ABSTRACT

Background of the study: The rapid spread of COVID-19 poses a serious threat to human health and is impacting severely on public health, global communications, and economic systems worldwide. The battle against COVID-19 is still continuing in India. To guarantee the final success, people's adherence to these control measures is essential, which is largely affected by their knowledge, towards COVID-19. Nurses are key members of healthcare teams charged to control and prevent the spread of infectious diseases and should be familiar with scientific updates of COVID-19 disease to assess, categorize the triage system, and management of patients.

Aims: The aim of the study was to assess the knowledge regarding prevention and management of COVID -19 among Under Graduate Nursing students of a selected Nursing college in Mysuru.

Methods: Research approach adopted for the study was descriptive, survey approach. Simple random sampling was used to select 105 Nursing students for the study. The knowledge of nursing students regarding prevention and management of COVID-19 was assessed using structured knowledge questionnaire

Results: The results of the study revealed that only 23.80% of nursing students were having good knowledge regarding prevention and management of COVID-19. There was statistically significant association between the knowledge of Nursing students regarding prevention and management of COVID-19 and their age ($P < 0.05$).

CONCLUSION

Study findings high light the need for implementing educational strategies regarding the prevention and management of COVID-19 among Nursing students, which in turn equip them to work as the front line health workers in fighting with the clinical management, infection control practices and the preventive strategies of COVID-19.

Keywords: Knowledge, prevention and management of COVID-19, nursing students.

INTRODUCTION

Corona virus or novel corona virus which is taxonomically termed as SARS-CoV-2 and named by World Health organization as COVID-19 has caused unprecedented panic across the world.[1]The SARS-CoV-2

virus is similar to Middle East Respiratory Syndrome Corona virus (MERS-CoV) and Severe Acute Respiratory Syndrome corona virus (SARS-CoV), which have their origins in bats[2]

Clusters of COVID-19, first reported from the Wuhan Metropolitan in People's Republic of China, in December 2019, have rapidly assumed a global form.[3] The rapid transmission of this virus from human to human made the World Health Organization to declare this as the public health emergency of international concern on January 30, 2020, and as a global pandemic on 11 March 2020. As per the statistics of WHO updated on 23rd July 2021, there have been 192,284,207 confirmed cases of COVID-19 globally, with 4,136,518 deaths[4]

In India, the first laboratory-confirmed case of COVID-19 was reported from Kerala on January 30, 2020. As per the statistics on 23rd July 2021, India has reported a total of 3,13,32,159 laboratory-confirmed cases, including 4,20,016 deaths.[4]. Karnataka has reported a total of 28,91,699 cases including 36323 deaths due to COVID-19.[5]

During the current pandemic, most countries are responding to contain the COVID-19 pandemic by retarding infection spread using different strategies such as contact tracing and self-quarantine, arrangement of health system infrastructures to treat infected patients, and encouraging people to apply hygienic health measures.[2] This requires a high level of knowledge about COVID-19 preventive measures among health care workers and people [2]

The battle against COVID-19 is still continuing in India. To guarantee the final success, people's adherence to these control measures are essential, which is largely affected by their knowledge, towards COVID-19.[6] The rapid spread of COVID-19 poses a serious threat to human health and is impacting severely on public health, global communications, and economic systems worldwide. Nurses are key members of healthcare teams charged to control and prevent the spread of infectious diseases. Moreover, nurses work on the front line, providing direct care to individuals infected with COVID-19.[8]

The multiple roles and functions played by nurses are particularly important during this COVID-19 pandemic. Nurses should be familiar with scientific updates of COVID-19 disease and use of appropriate methods to assess, categorize the triage system, different tests and management of patients.[7]Literature has documented that the knowledge and attitudes of healthcare professionals about COVID-19 are an important factor in combating the outbreak and getting results against this pandemic[8]

STATEMENT OF THE PROBLEM

A study to assess the knowledge regarding prevention and management of COVID-19 among
Under Graduate nursing students of selected Nursing college in Mysuru

OBJECTIVES

1. To determine the knowledge regarding prevention and management of COVID -19 among Under Graduate Nursing students.
2. To determine the association between the knowledge of Under Graduate Nursing students   regarding prevention and management of COVID-19 and their selected personal variables.

HYPOTHESIS

H_1: There will be statistically significant association between the knowledge of Under Graduate Nursing students regarding the prevention and management of COVID-19 and their selected personal variables

MATERIALS & METHODS

A descriptive, survey approach was adopted for the study. Formal administrative permission for conducting the study was obtained from the principal of the selected Nursing College. Data related to the demographic variables of Nursing students and the knowledge regarding prevention and management of COVID -19 was

collected using structured questionnaire. Tools were validated by the subject experts and Split half method was used to establish the reliability of the tool. Pilot study was conducted to assess the feasibility of the tools.

Simple random sampling was used to select the 105 Nursing students pursuing the 2nd, 3rd and 4th year BSc degree programs in Nursing in the selected college. An informed consent was obtained from each sample indicating their willingness to participate in this study. Structured knowledge questionnaire consisted of 28 items and was prepared with the knowledge items divided under the headings: definition, causes, risk factors, transmission, clinical manifestations, laboratory tests, clinical management and complications of COVID-19.

RESULTS

1. **Findings related to the selected personal variables of under graduate nursing students**

A total of 105 Nursing students participated in the study and majority of them (91.42%) were in the age group of 21 to 22 years and 28.57% of were between 18-20 years. Most of them (68.57%) were females and 31.42% were males. Regarding the previous exposure to educational programs related to COVID-19, 80% of students expressed previous exposure to the information through media. The majority of students used internet, social media and mass media as sources of information about COVID-19.
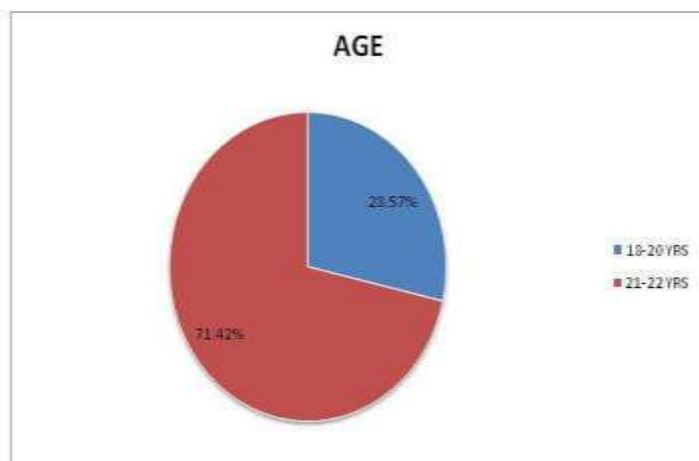

Figure 1: Frequency and Percentage distribution of nursing students according to their age

2. Findings related to knowledge of Under graduate Nursing students regarding prevention and management of COVID-19

Table 1
Mean, Median, Range and Standard deviation of the knowledge regarding prevention and management of COVID-19

n=105

Mean	Median	Range	Standard Deviation
17.67	19	06-24	±4.48

Data presented in Table 1 shows that the mean knowledge of nursing students regarding prevention and management of COVID-19 was 17.67. Scores ranged from 06-24, with a SD of ±4.48.

Table-2

Frequency and Percentage distribution of the knowledge of Under Graduate Nursing students regarding prevention and management of COVID-19

n=105

Level of Knowledge	Frequency	Percentage
Good Knowledge	25	23.8
Average Knowledge	58	55.2
Poor Knowledge	22	20.9

Data presented in Table 2 reveals that, only 23.80% students had good knowledge, 55.23% students had average knowledge and 20.29% students had poor knowledge regarding prevention and management of COVID-19. Questions related to the epidemiology of the disease were answered correctly by 44% of students and 58% of students answered correctly to the questions related to infection control practices.

Study conducted by Suphi etal among nurses working in University Medical Faculty Hospital at Turkey reported that 89.43% of the nurses had good knowledge about COVID-19 and 73.17% received relevant training from their work place .[8] Reem etal reported that 96.85% of nurses who worked during the COVID-19 outbreak in Saudi Arabia, had excellent knowledge of COVID-19 and more than half of the nurses (60.4%) had high positive attitudes toward caring for COVID-19 patients.[9] An online survey conducted by Jyoti etal among Indian nurses reported that good knowledge was observed in 50.6% of nurses and, the practices proved to be excellent among 83.1% of participants.[10]

A cross sectional Study conducted by Joshy etal among nursing students also reported that 75.58% of students showed good knowledge and awareness about COVID-19 and stressed the need for implementing periodic educational interventions and training programs on infection control practices and other updates of COVID-19 across all healthcare professions including nursing students.[11]

3. Findings related to association between the knowledge of nursing students regarding prevention and management of COVID-19 and their selected personal variables.

Statistically significant association was observed between the knowledge of nursing students regarding prevention and management of COVID-19 and their age ($P < 0.05$). This implies that age of the nursing students had an influence on their knowledge regarding prevention and management of COVID-19. Study findings also revealed that there was no statistically significant association between the knowledge and the selected personal variables of nursing students viz. gender, religion, residence and previous exposure to awareness programs regarding prevention and management of COVID-19.

Study conducted by Amin etal among university students in Jordan reported that the college of study and educational level of students significantly $(P < 0.05)$ associated with students' knowledge regarding COVID-19. [2]

CONCLUSION

Study findings highlights the need for implementing educational strategies regarding COVID-19 among Nursing students, which in turn equip them to work as the frontline health workers in fighting with the clinical management, infection control practices and the preventive strategies of COVID-19.

LIMITATIONS

The identified limitation of the study was the inability to ensure a large sample of nursing students. Similar studies and educational interventions could be conducted among students from various health disciplines to update their knowledge regarding COVID -19 which is very much essential for fighting with this pandemic

REFERENCES

1.Vasantha Raju N , S.B. Patil. Indian Publications on SARS-CoV-2: A bibliometric study of WHO COVID-19 database.Diabetes MetabSyndr. 2020 September-October; 14(5): 1171–1178.Published online 2020 Jul 10. doi: 10.1016/j.dsx.2020.07.007

2.Amin Olaimat, Iman Aolymat, Hafiz M., Richard Holley. Knowledge and Information Sources About COVID-19 Among University Students in Jordan: A Cross-Sectional Study. Front. Public Health, 29 May 2020 | https://doi.org/10.3389/fpubh.2020.00254

3. Pranab Chatterjee , NaziaNagi , Anup Agarwal , Bhabatosh Das , Sayantan Banerjee , Swarup Sarkar,, Nivedita Gupta , Raman R. Gangakhedkar. The 2019 novel coronavirus disease (COVID-19) pandemic: A review of the current evidence.Indian J Med Res 151, February & March 2020, pp 147-159 DOI: 10.4103/ijmr.IJMR_519_20

4. WHO Official Updates - Coronavirus Disease 2019 - who.int·https://www.who.int/covid-19/information

5. COVID-19 Live Dashboard - Check Updates On COVID-19
 Ad·https://www.mygov.in/information/covid-19

6. Abirami P.,Suseelal T.,Jelin Elizabeth G., Dr. C. Kanniammal. Knowledge Regarding COVID-19 Pandemic amongStudent Nurses: Online Cross-sectional Survey

7.CHEN, Shu-Ching; LAI, Yeur-Hur; TSAY, Shiow-Luan .Nursing Perspectives on the Impacts of COVID-19.Journal of Nursing Research: June 2020 - Volume 28 - Issue 3 - p e85
doi: 10.1097/jnr.0000000000000389

8. Suphi Aydin, Aydin Balci.COVID-19 Knowledge Level Research in Nurses. Journal of Surgery and Research 3 (2020): 198-203.

9.Reem Al-Dossary etal. Awareness, Attitudes, Prevention, and Perceptions of COVID-19 Outbreak among Nurses in Saudi Arabia.International Journal of Environmental Research and Public Health. Int. J. Environ. Res. Public Health 2020, 17, 8269; doi:10.3390/ijerph17218269

10. Jyoti, Khina Sharma.Cross sectional study on knowledge and practices among Indian nurses about covid 19.The Malaysian Journal of NursingVOL. 12 NO. 2 (2020)

11. K. P. Joshi, Leena Madhura. Deepak Jamadar.Knowledge and awareness among nursing students regarding the COVID-19: a cross sectional study. International Journal of Community Medicine and Public health. Vol 7, No 7(2020).https://www.ijcmph.com › ijcmph