

Knowledge, Attitude, and Practice Regarding COVID-19 among Community Health Nurses

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Abstract

Background: Corona Virus Disease 2019 also known as COVID-19 is a rapidly expanding pandemic caused by a novel human Corona Virus (SARS-COV-2). This is posing a threat at global level and needs an urgent intervention and control measures. The community health nurses are front line warriors in providing primary health care. The knowledge and attitude greatly influences the behaviour pattern of people, therefore this descriptive cross-sectional study assessed the Knowledge, Attitude, and Practice regarding COVID-19 among Community Health Nurses at College of Nursing, Christian Medical College, Vellore, India.

Methods: Using total enumeration sampling method, a structured self-administered questionnaire was given to all the Community Health Nurses and data were obtained. The questionnaire assesses the demographic and personal profile of participants, Knowledge, Attitude, and Practice regarding COVID-19, which is developed by the investigator using the WHO module on “Emerging respiratory viruses, including COVID-19, methods for detection, prevention, response and control” and CDC – Corona Virus Disease 2019 modules.

Conclusion: This study reveals that 10.8% among the community health nurses had adequate knowledge regarding COVID-19, 44.2% had favourable attitude towards COVID-19 and 98.3% had adequate practices related to prevention of COVID-19. There was a significant correlation found between Knowledge and Practice ($p= 0.002$), Attitude and Practice ($p= 0.001$) of the Community Health Nurses which was statistically significant. There were significant association found between the demographic variables such as qualification ($p=0.020$) and the level of knowledge, education ($p=0.015$) and knowledge and years of experience of the community health nurses ($p=0.009$) and their attitude.

Key words: Corona Virus Disease, COVID-19, Community Health Nurses, awareness.

Introduction

COVID-19 is transmitted from person-to-person through inhalation of aerosols from an infected

individual. Old age and patients with pre-existing illnesses (like hypertension, cardiac disease, lung disease, cancer, or diabetes) have been identified as potential risk factors for severe disease and mortality. To this date, there is no antiviral curative treatment that has been recommended for COVID-19.

More information about its distribution, transmission, pathophysiology, treatment, and prevention are being studied. World Health

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Organization (WHO) recommends prevention of human-to-human transmission by protecting close contacts and health care workers from being infected and stopping infections from animal sources.^[1] Primary preventive measures include regular hand washing, social distancing, and respiratory hygiene (covering mouth and nose while coughing or sneezing).^[2] Healthcare workers (HCWs) are at the frontline of COVID-19 pandemic response and are exposed to dangers like pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout and stigma, and physical violence.^[3] A poor understanding of the disease among HCWs can result in delayed identification and treatment leading to rapid spread of infections. Over 100 health workers have lost their lives to COVID-19, a tragedy to the world and a barrier to fight against the disease.^[4] Guidelines for healthcare workers and online refresher courses have been developed by WHO, CDC, and various governmental organizations in various countries to boost the knowledge and prevention strategies.^[5] A study with majorly Asian Health Care Workers and medical students revealed that they had insufficient knowledge about COVID-19 but had a positive attitude toward prevention of COVID-19 transmission.^[6]

The community health nurses are the frontline health care providers in combating the global pandemic, who need to be equipped with adequate knowledge to protect and promote the health of the public. A learning needs assessment would enable the investigator to provide an education session to empower the nurses in providing care to the community. As there is social stigma attached to this disease, it is essential that a nurse needs to carry a positive attitude in caring for the patients and family with COVID-19. Hence a study on knowledge, attitude and practice regarding COVID-19 among community health nurses would give way for planning future continuing education programme and further related

studies.

Objectives

1. To assess the Knowledge, Attitude, and Practice of Community Health Nurses regarding COVID – 19.
2. To find the relationship between the Knowledge, Attitude and Practice of Community Health Nurses regarding COVID – 19.
3. To find the association between the Knowledge, Attitude and Practice of Community Health Nurses regarding COVID-19 and their demographic variables.

Methods

Design and sampling

A descriptive cross- sectional study was carried out to assess the knowledge, attitude and practice regarding COVID-19 among Community Health Nurses at College of Nursing, Christian Medical College, Vellore, India. Using total enumeration sampling method, a structured self-administered questionnaire was given to all the community health nurses and data were obtained.

Instruments

The questionnaire assesses the demographic and personal profile of the participants' knowledge, attitude and practice regarding COVID-19, which was developed by the investigator using the WHO module on “Emerging respiratory viruses, including COVID-19, methods for detection, prevention, response and control” and CDC – corona virus disease 2019 modules. The validity and reliability was established by doing a pilot study for 10% the participants. The content validity index of the questionnaire was 0.90.

The demographic profile includes their age, religion, marital status, qualification, designation and years of experience; personal variables includes the

details of their workplace and exposure to the resources about COVID-19. The knowledge represents the understanding of the staff regarding COVID-19 which will be measured by a questionnaire on characteristics of the disease, symptoms, incubation time, route of transmission, investigation, treatment, home, hospital and community quarantine, care patient at home and hospital, prevention and control of the disease. The attitude represents the feelings and belief of the staff regarding COVID-19 which is measured using a 5 point likert scale. The practice refers to the behaviour of the staff regarding prevention and control of COVID-19 which is measured by a 5 point likert scale.

Knowledge of the staff regarding COVID-19 was assessed using a questionnaire which includes 22 questions. The correct answers were awarded 1 point and the incorrect points were awarded 0 point. The overall knowledge score ranged from 0 to 22 which were converted to percentages. Individuals scoring <50% were categorized as having inadequate knowledge, 51-75% as having moderate knowledge and above 76% as adequate knowledge regarding COVID-19.

Attitude of the staff was assessed using 5 point likert scale with 12 statements. The total attitude scale ranged from 0 to 60, which was converted to percentages. A score of <50% was classified as unfavourable, 51-75% as moderately favourable, and more than 76% as highly favourable attitude towards COVID-19 respectively.

Practice regarding COVID-19 was assessed using 12 questions with a 5 point likert scale with total

scores ranging from 0 – 60, which was converted to percentages. A score of <50% was classified as inadequate, 51-75% as moderately adequate and above 76% as adequate practice towards COVID-19 respectively.

Data collection and analysis

Permission was obtained from research committee of College of Nursing and the Head of the Department. The study was conducted during June 2020 among the Community Health Nurses in College of Nursing, Christian Medical College, Vellore, after obtaining a written informed consent.

The data collected were entered and analyzed using SPSS 25.0. All study variables were summarized using descriptive statistics and inferential statistics. The Chi-square test was used to compare categorical data. Pearsons correlation coefficient was used to find the relationship between the knowledge, attitude and practice of the community health nurses towards COOVID-19. The Chi-square test was used to determine the association between demographic variables and Knowledge, Attitude and Practices of the community health nurses regarding COVID-19.

Results and Discussion

In this study, majority of the community health nurses are than 25 years of age (78.4%), most of them are unmarried (79.2%), majority of them are staff nurses (92.5%) with less than one year of experience (56.7%) and 5.83% of them recovered from COVID-19 [Table 1].

Table 1: Description of the demographic variables of community health nurses

Demographic variables	n (%)
Age in years <25 26-45 >46	94(78.4) 19(15.8) 7(05.8)
Gender Male Female	2 (01.7) 118 (98.3)
Religion Christian Hindu Muslim	91 (75.8) 28 (23.3) 1 (0.8)
Marital status Married Unmarried	25 (20.8) 95 (79.2)
Qualification BSc GNM PBBSc	77 (64.2) 36 (30.0) 7 (5.8)
Designation Staff Tutor	111 (92.5) 9 (7.5)
Years of experience <1 2-5 6-25 >25	68 (56.7) 38 (31.7) 7 (5.8) 7 (5.8)
Exposure to education Yes No	61 (50.8) 59 (49.2)
Affected with Covid-19 Yes No	7 (5.83) 113 (94.17)
Quarantined Yes No	36 (30.0) 84 (70.0)

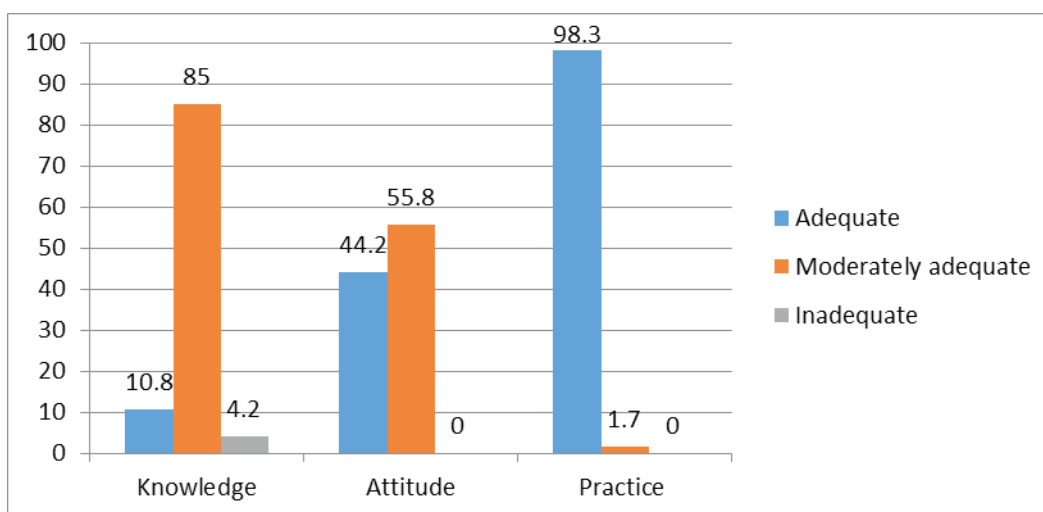


Figure 1: Level of knowledge, attitude and practice regarding COVID-19 among community health nurses

Knowledge and awareness of mode of disease transmission, basic hygiene principles and measures in public health crisis are vitally important for developing effective control measures. This study reveals that among the community health nurses 10.8% had adequate knowledge, 44.2% had favourable attitude and 98.3% had adequate practices related to prevention of COVID-19. A similar population based

study was conducted in Iran among 8591 people to evaluate the knowledge, attitude and practice of Iranians at the time of COVID-19 pandemic, which reveals that 60.8% of them had adequate knowledge. Regarding attitude and practice towards COVID-19, an overall score of 90% and 89% were achieved among the given population. [7]

Table 2: Correlation between knowledge, attitude and practice of the community health nurses regarding COVID-19.

Variables	r value	p value
Knowledge and attitude	.029	.199
Knowledge and practice	.805	.002*
Attitude and practice	.868	.001*

* Correlation is significant at the 0.05 level

Table 2 shows that was a significant relationship between knowledge and practice ($p=.002$) and attitude and practice ($p=.001$) of the community health nurses regarding COVID-19. A study with majorly Asian Health Care Workers and medical students revealed that they had insufficient knowledge about COVID-19

but had a positive attitude toward prevention of COVID-19 transmission. [6]

Association between demographic variables and the knowledge, attitude and practice of community health nurse towards COVID-19

There was a significant association found between qualification ($p = 0.020$) and the level of knowledge of community health nurses. A significant association was found between exposure to in-service-education ($p = 0.015$) and knowledge of the community health nurses regarding COVID-19. There was also a significant association found between years of the community health nurses ($p = 0.009$) and their attitude. Similarly a study was conducted among Chinese residents on knowledge, attitude and practice towards COVID-19 during the rapid of the outbreak, which reveals that most Chinese residents of a relatively high socioeconomic status, in particular women, are knowledgeable about COVID-19, hold optimistic attitudes and have appropriate practices towards COVID-19. Health education programs aimed at improving COVID-19 knowledge are helpful for Chinese residents to hold optimistic attitudes and maintain appropriate practices. [8]

Conclusion

World Health Organization and Centre for Disease Control provides a tool kit of interventions that countries can select and calibrate based on their local context. National and local authorities must, balance interventions to address the direct health impact of COVID-19 with strategies to limit short-term and long-term consequences on health and socioeconomic wellbeing. However it is the fundamental responsibility of the primary health care services in combating against this deadly pandemic. This also poses the community health care workers a great challenge to be prepared for any kind of unprecedented threat to the people around the world.

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Ethical Clearance: The study was approved by

the College of Nursing Research Committee, CMC, Vellore.

References

1. World Health Organisation. Coronavirus Disease (COVID-19) Advice for the Public. (2020). Available online at: www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public (Last accessed April 01, 2020).
2. World Health Organisation. Coronavirus Disease (COVID-19) Outbreak: Rights, Roles and Responsibilities of Health Workers, Including Key Considerations for Occupational Safety and Health. (2020). Available online at: [www.who.int/publications-detail/coronavirus-disease-\(covid-19\)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health](http://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health) (Last accessed April 05, 2020).
3. World Health Organisation. Coronavirus disease 2019 (COVID-19) Situation Report - 90. Geneva: WHO. (2020). Available online at: www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports (Last accessed April 20, 2020).
4. MedScape. In Memoriam: Healthcare Workers Who Have Died of COVID-19. (2020). Available online at: www.medscape.com/viewarticle/927976 (Last accessed April 06, 2020).
5. World Health Organisation. Emerging Respiratory Viruses, Including COVID-19: Methods for Detection, Prevention, Response and Control. (2020). Available online at: www.openwho.org/courses/introduction-to-ncov (Last accessed March 18, 2020).
6. Bhagavathula AS, Aldhaleei WA, Rahmani J, Mahabadi MA, Bandari DK. Novel coronavirus (COVID-19) knowledge and perceptions: a survey on healthcare workers. medRxiv.

- [Preprint]. (2020). doi: 10.2196/19160). (Last accessed on April 10, 2020)
7. Erfani A, Shahriarirad R, Ranjbar K, Mirahmadizadeh A & Moghadami M. Knowledge, Attitude and Practice toward the Novel Coronavirus (COVID-19) Outbreak: A Population-Based Survey in Iran. [Preprint]. Bull World Health Organ. E-pub: 30 March 2020. doi: <http://dx.doi.org/10.2471/BLT.20.256651> (Last accessed on September 12, 2020)
 8. Bao-Liang Zhong, Wei Luo, Hai-Mei Li, Qian-Qian Zhang, Xiao-Ge Liu, Wen-Tian Li, Yi Li. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *International Journal of Biological Sciences* 2020; 16(10): 1745-1752. doi: 10.7150/ijbs.45221 (Last accessed on September 12, 2020)