An Online Cross Sectional Survey Study to Assess Knowledge, Attitude and Practice Regarding Covid-19 among Nursing Students in Sgt University, Gurugram

Mr. Rahul Bisht[1], Ms. Jyoti Shokeen[2]*, Mr. Sunil Kumar Dular[2]

[1]Simulation Specialist, Vidyanta Skill Institute, Gurugram, Haryana
[2] Tutor (PG), Child Health Nursing, Faculty of Nursing, SGT University, Gurugram, Haryana
[2]HOD, Community Health Nursing, Faculty of Nursing, SGT University, Gurugram, Haryana
Email: [2]skdular@sgtuniversity.org

ABSTRACT

Purpose: Nurses are the forefront COVID 19 response. They need to have adequate knowledge and updated with latest guidelines for practice as well. Aims and Objectives: The objectives of the study were to assess the knowledge, attitude and practice of nursing students regarding COVID -19 and to find association between knowledge score and selected demographic variables. Material and Methods: An online Cross sectional survey design was used for the study. Total of 300 nursing students at Faculty of Nursing, SGT University who met the inclusion criteria were selected using convenient sampling technique. The tools used to collect data from the sample were a structured Knowledge Questionnaire to assess knowledge, Likert scale to assess the attitude whereas Likert item questions to assess practice regarding COVID 19 pandemic among nursing students. The reliability of the structured knowledge questionnaire was established by Kudar Richardson 20 and it was found to be 0.72. For the attitude scale, Crohnbach alpha was used and reliability was found to be 0.85. Results: Findings of the study revealed that the mean knowledge score was 7.50. It is found that mean %, median and standard deviation of knowledge score were 68.18, 7 and 1.875. The range of score was from 3 to 11. A large part of the subjects (88 %) had a favourable attitude towards COVID 19. A greater part of the study subjects (78.3%) had inadequate practice regarding COVID 19. Demographic variables age and religion were found to be statistically significant. There is a slight positive relationship between knowledge and attitude. It was found to have a positive correlation between the level of knowledge and practice, but the magnitude of the correlation was found to be low (r = .119). the analysis also showed that there is a slight positive relationship between attitude and practice as revealed by r = .15 Conclusion: It is concluded that there is a strong need to implement periodic educational interventions and training programs on infection control practices and other updates of COVID-19 across all healthcare professions including nursing students.

INTRODUCTION

Corona virus Disease 2019 also known as COVID-19 is a swiftly mushrooming pandemic caused by a novel human coronavirus (SARS-COV-2) previously known as 2019-nCov[1,2]. COVID-19 was first reported in December 2019 among patients who were found to be related with the Huanan seafood market in Wuhan, in the Hubei province of China, where other non-aquatic animals were also being sold before the outbreak[5]. Patients were found with viral pneumonia symptoms in Wuhan, China[3,4]. India has so far confirmed 73,70,468 cases of COVID-19 as of 17th October 2020[6,7].

SARS-COV-2 is transmitted from one-to-another through inhalation of aerosols from an infected individual[3]. Old age and patients with comorbid conditions (like hypertension, cardiac disease, lung disease, cancer, or diabetes) have been identified as potential risk factors for severe disease and mortality[8,9]. To date, there is no antiviral curative treatment or vaccine that has been recommended for COVID-19[10]. More information about its distribution, transmission, pathophysiology, treatment, and prevention are being studied. Primary preventive measures include regular hand washing, social distancing, and respiratory hygiene (covering mouth and nose while coughing or sneezing)[11,12].

Nurses 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[13]. A poor understanding of the disease among nurses can result in delayed identification and management 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[14]. 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[15]. There is paucity of literature on KAPs of nurses toward the COVID-19 pandemic. The purpose of the study was to assess the KAPs of nursing students in SGT University, Gurugram toward COVID-19.

MATERIALS AND METHODS

To accomplish the objectives of the studyan online Cross sectional survey design was employed for the study in May 2020. Ethical permission was obtained from ethical committee SGT University, Budhera, Gurugram in accordance with the guidelines of ICMR 2006. The written informed consent was obtained from each study participants before conducting the study. The sample of the study consisted of 300 nursing students at Faculty of Nursing, SGT University who met the inclusion criteria were selected using convenient sampling technique. The inclusion Criteria consisted of Nursing students who are willing to participate and Nursing students who have internet connectivity, email account, WhatsApp account and smart phone. Nursing students who are able to understand the content of questionnaire.

The tools used to collect data from the sample were a structured Knowledge Questionnaire to assess knowledge, Likert scale to assess the attitude whereas Likert item questions to assess practice regarding COVID 19 pandemic among nursing students. The reliability of the structured knowledge questionnaire was established by Kudar Richardson 20 and it was found to be 0.72. For the attitude scale, Crohnbach alpha was used and reliability was found to be 0.85. The data was analyzed and interpreted in terms of objectives of the study. Descriptive and inferential statistics were utilized for the data analysis. A p value ≤0.05 was considered as significant for the present study.

RESULTS

Table No 1: Frequency (f) and percentage (%) wise distribution of nursing students according to their selected personal variable **N=300**

S. No	Variables	Frequency (f)	Percentage (%)
1.	**Age in years**		
1.1	18-22years	210	70%
1.2	23-27 years	90	30%
2.	**Gender**		
2.1	Female	245	81.7%
2.2	Male	55	18.3%
3.	**Educational status**		
3.1	M.Sc. Nursing	19	6.3%
3.2	B.Sc. Nursing	189	63%
3.3	Post Basic B.Sc. Nursing	38	12.7%
3.4	GNM	54	18%
4.	**Year**		
4.1	First year	97	32.3%
4.2	Second year	112	37.3%
4.3	Third year	60	20%
4.4	Fourth year	31	10.4%
5.	**Area of residence**		
5.1	Rural	133	44.3%
5.2	Urban	167	55.7%
6.	**Type of diet**		
6.1	Vegetarian	217	72.3%
6.2	Non vegetarian	83	27.7%
7.	**Religion**		
7.1	Hindu	267	89%
7.2	Muslim	14	4.6%
7.3	Sikh	11	3.7%
7.4	Christian	8	2.7%
8.	**Source of COVID-19 information**		
8.1	Newspaper	13	4.3%
8.2	Television	139	46.3%
8.3	Social media	112	37.3%
8.4	Online training	14	4.8%
8.5	Arogyasetu mobile application	22	7.3%

The findings of the study indicated that most (70%) of the nursing students were in the age group of 18-22 years. Majority (81.7%) of them were female. Most (63%) of them were pursuing BSc Nursing. 37.3% of them were in second year. Nearly half (55.7%) of them were residing in urban area. Most (72.3%) of them were vegetarian. Majority (89%) of them were belonging to Hindu religion. Nearly half(46.3%) of them were having television as source of COVID-19 information.

Table No.2: Knowledge score regarding COVID-19 among study participants.

Knowledge score	Total score	Range of score	Median	Mean ±SD	Mean %
	11	3-11	7.00	7.50±1.875	68.18

Findings of the study further revealed that the mean of the knowledge score was 7.50. It further revealed that mean %, median and standard deviation of knowledge score were 68.18, 7 and 1.875. The range of score was from 3 to 11.
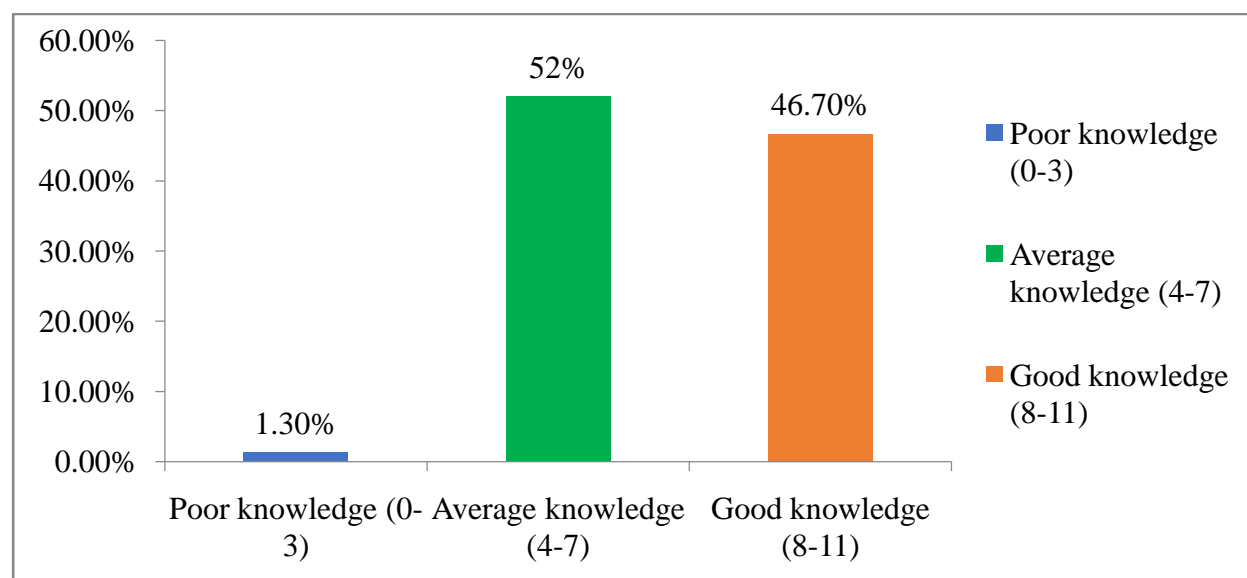

Figure 1: Percentage wise distribution of Level of knowledge of nursing students regarding COVID-19

The study findings indicate that a large part of the subjects (88 %) had a favourable attitude towards COVID 19. About 12% of them had moderately favourable attitude and fortunately none of them had an unfavourable attitude towards the same.

A greater part of the study subjects (78.3%) had inadequate practice regarding COVID 19. A minority of the subjects (21.7 %) had moderately adequate practice regarding COVID 19. None of the subjects demonstrated highly adequate skill for the same.

Table 3: Association of knowledge score with selected demographic profile

N=300

S. No.	Demographic profile	Knowledge score			df	F	p-value
		Poor knowledge	Average knowledge	Good knowledge			
1.	Age in years						
	a) 18-22 years	2	112	96	299	1.444	**.027**
	b) 23-27 years	2	44	44			
2.	Gender						
	a) Female	4	128	113	299	.497	.858
	b) Male	0	28	27			
3.	Education status						
	a) M.Sc. Nursing	1	5	13			
	b) B.Sc. Nursing	2	100	87	299	.622	.759
	c) Post Basic B.Sc.	0	19	19			

	Nursing **d) GNM**	1	32	21			
4.	**Year** a) **First year** b) **Second year** c) **Third year** d) **Fourth year**	1 2 1 0	47 57 32 20	49 53 27 11	299	1.060	.391
5.	**Area of residence** a) **Rural** b) **Urban**	4 0	67 89	62 78	299	1.424	.186
6.	**Type of diet** a) **Vegetarian** b) **Non vegetarian**	4 0	115 41	98 42	299	.754	.643
7.	**Religion** a) **Hindu** b) **Muslim** c) **Sikh** d) **Christian**	4 0 0 0	137 9 5 5	126 5 6 3	299	1.174	**.009**
8.	**Source of COVID-19 information.** a) **Newspaper** b) **Television** c) **Social media** d) **Online training** e) **Arogyasetu mobile application**	0 2 2 0 0	7 70 59 7 13	6 67 51 7 9	299	1.044	.403

NS= Not significant

As per the results of the survey it was concluded that, among various demographic variables of the study participants only some of them i.e. age and religion are significantly associated with the knowledge scores. All other personal variables didn't have significant association with the knowledge scores.

The relationship between knowledge, attitude and practice regarding COVID 19were established using the correlation coefficient. The r = .19 implied that there is a slight positive relationship between knowledge and attitude. It was found to have a positive correlation between the level of knowledge and practice, but the magnitude of the correlation was found to be low (r = .119). the analysis also showed that there is a slight positive relationship between attitude and practice as revealed by r = .15.

DISCUSSION

India is having lockdown measures since 25th March 2020, and currently is in 5.0 lockdown phase. During this period all students were at their home, and we did not give any formal training or orientation to them regarding COVID-19 recently. Whatever level of knowledge, attitude and practice they were having during this survey, possibly it might have been gained through previous orientation and training during the course study and presently by social media, internet, news channels, official websites etc. In this cross-sectional study with 300 study participants, the overall responses to the survey were satisfactory because, overall correct responses of average knowledge was recorded as 52%. In another recent study conducted by (Modi et al., 2020) on similar topic COVID-19 awareness among healthcare students and professionals in Mumbai metropolitan region, the overall correct responses on knowledge was 67.6%, this difference could be due to different settings of both studies. Around 90% of respondents knew that, the most common symptoms of COVID-19 were fever, cough, shortness of breath, etc. A similar finding from the (Chen et al., 2020), 83.54% participants were having correct knowledge about hand hygiene. As described by the WHO, 57.7% were well aware with usage PPE for suspected/confirmed COVID-19 cases, quite similar result were observed by Modi et al. The centers for disease control has provided interim infection prevention and control recommendations for patients with suspected or confirmed coronavirus disease 2019 (COVID-19) in the healthcare settings for PPE. This has been proven from multiple studies published about the COVID 19 disease in China. One of the drawbacks of this study is that all respondents were from same nursing college, which do not truly represent nursing students of the entire country

CONCLUSION

The study participants showed average knowledge, favorable attitude towards COVID-19. There is a strong need to implement periodic educational interventions and training programs on infection control practices and other updates of COVID-19 across all healthcare professions including nursing students. Additional online education intervention and campaigns are also required. Frequent communication between health care providers and the public is recommended to help dispel myths about the disease and to empower the public with the information needed to help the Indian government in containing the disease outbreak. This would definitely improve the confidence and knowledge of nursing students to provide the proper care to their patients and protect them self from COVID-19.

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Ethical clearance: The investigator obtained ethical clearance from the Institutional ethics committee before collecting data and has taken informed written consent from each participant.

REFERENCES

[1]   World Health Organisation. Coronavirus disease 2019 (COVID-19) Situation Report - 51. Geneva: WHO. (2020). Available online at: www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

[2]   Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. (2020) 382:727–33. Available online at: www.nejm.org/doi/pdf/10.1056/NEJMoa2001017

[3]   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) 382:1199–207. Available online at: www.ncbi.nlm.nih.gov/pubmed/31995857

[4]   Lu H, Stratton CW, Tang YW. Outbreak of pneumonia of unknown etiology in Wuhan, China: the mystery and the miracle. J Med Virol. (2020) 92:401–2. Available online at:www.ncbi.nlm.nih.gov/pubmed/31950516

[5]   Cascella M, Rajnik M, Cuomo A, Dulebohn SC, DiNapoli R. Features, evaluation and treatment coronavirus (COVID-19) [Updated 2020 Apr 6]. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing (2020). Available online at: https://www.ncbi.nlm.nih.gov/books/NBK556152/

[6]   Worldometer. COVID-19 Coronavirus Pandemic. Dover, Delaware: Worldometers.info. (2020). Available online at: https://www.worldometers.info/coronavirus/

[7]   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

[8]   Shi H, Han X, Jiang N, Cao Y, Alwalid O, Gu J, et al. Radiological findings from 81 patients with COVID-19 pneumonia in Wuhan, China: a descriptive study. Lancet Infect Dis. (2020) 20:425–34. Available online at: https://www.thelancet.com/article/S1473-3099(20)30086-4/fulltext

[9]   Tian S, Hu N, Lou J, Chen K, Kang X, Xiang Z, et al. Characteristics of COVID-19 infection in Beijing. J Infect. (2020) 80:401–6. Available online at: https://www.ncbi.nlm.nih.gov/pubmed/32112886

[10]   10. Sahin AR, Erdogan A, Agaoglu PM, Dineri Y, Cakirci AY, Senel ME, et al. 2019 novel coronavirus (COVID-19) outbreak: a review of the current literature. EJMO. (2020) 4:1–7. Available online at: www.ejmo.org/10.14744/ejmo.2020.12220/

[11]   World Health Organisation. Infection Prevention and Control During Health Care When Novel Coronavirus (nCoV) Infection is Suspected, World Health Organization: Geneva (2020). Available online at: www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected

[12]   World Health Organisation. Coronavirus Disease (COVID-19) Advice for the Public. (2020). Available online at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

[13]   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: https://ww.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health

[14]   MedScape. In Memoriam: Healthcare Workers Who Have Died of COVID-19. (2020). Available online at: https://ww.medscape.com/viewarticle/927976