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KNOWLEDGE AND AWARENESS AMONG NURSING STUDENTS TOWARDS COVID-19 PANDEMIC: A WEB-BASED SURVEY IN NORTHERN INDIA.

Nursing

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ABSTRACT

Background: The nurses as health care providers are at the front line of the outbreak response of that pandemic of COVID19 and exposed to hazards that put them at risk of infection. Rapid spread of the COVID-19 pandemic has a major concern with the healthcare profession in all over the world. This research paper deals with the knowledge and awareness among nursing students towards Covid-19.

Methods: By non-probability snowball sampling method the sample size was 250. Predesigned and pretested questionnaire was used in this study. Questions were related to knowledge and awareness about COVID-19. The participant was directed to complete the self-report by web-based survey. The data was tabulated and analyzed statistically. MS-Excel Window-7 and Statistical Package for Social Sciences version 20 used for all statistical analysis.

Results: A total of 250 nursing students participated in this study. Over all mean score of knowledge and awareness was 8.58±2.099. The range of score was from 0 to 14. Around 75.2% respondents were having moderate knowledge. 17.2% participants were having good knowledge followed by 7.6 % were having below moderate knowledge. There was significant association of knowledge and awareness score with the age, year of study and source of health information was found to be statistically significant at $p<0.05$ level of significance.

Conclusions: The study participants showed moderate knowledge and awareness of 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.

KEYWORDS

Corona virus, Illness, Nursing students, COVID-19.

INTRODUCTION:

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow). The previous outbreaks of corona viruses such as severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome-coronavirus (MERSCoV) in 2003 and 2015 show similarities to the novel corona virus, which was first reported in December 2019, and is currently the disease in questions resulting in the worldwide coronavirus disease-2019 outbreak, COVID19. It was first reported by China in Wuhan city, at the end of December 2019. Empirical clinical data have shown that the overall case fatality rate of COVID-19 is 2.3% in China, much lower than those of SARS (9.5%), MERS (34.4%), and H7N9 (39.0%).

COVID-19 affects different people in different ways. Most common symptoms are fever, dry cough, tiredness and less common symptoms are body aches and pains, sore throat, diarrhea, conjunctivitis, headache, loss of taste or smell, a rash on skin, or discoloration of fingers or toes. Serious symptoms are difficulty in breathing or shortness of breath, feel chest pain or pressure, loss of speech or movement. Seek immediate medical attention if you have serious symptoms. Always call before visiting your doctor or health facility. People with mild symptoms who are otherwise healthy should manage their symptoms at home. On average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days. At this time, there are no specific vaccines or treatments for COVID-19. However, there are many ongoing clinical trials evaluating potential treatments.

Nurses play a vital role in health care system and health team. All health care providers especially nurses are on the frontline battling against this pandemic and providing services to patients which is helpful to prevent and control COVID-19 pandemic. Everyone is grateful to all corona warriors, especially nurses because they are working round the clock, staying away from home and family, putting them self at risk, to fight against this pandemic. India has 1.7 nurses per 1000 population, 43% less than the world health organization norm (3 per 1000). Nursing students are the future health care providers, their quality training and teaching will definitely affect the outcomes.

The objective of this study was to assess the knowledge and awareness of COVID-19 among nursing students with selected Nursing Colleges. This was an on web-based survey study, in which questionnaire was prepared from current interim guidelines and information for healthcare personnel provided by World Health Organization (WHO) and Indian Council of Medical Research (ICMR).

METHODS:

This was a cross-sectional study was carried out by M.M. College of Nursing, Solan, Himachal Pradesh with collaboration Faculty of nursing SGT Gurugram, Haryana, Dasmesh College of Nursing, Faridkot, Punjab and SGL College of Nursing, Jalandhar, Punjab, India. This study was conducted in the month of May to July 2020 when all students were at their home due to the lock down period. The non-probability snowball sampling method was used and the sample size was 250. Out of 430 students, 250 students participated voluntary in study, some students were excluded due to participation confirmation was not received. All undergraduate and postgraduate nursing students from first year to final year were involved in this study. A predesigned and pretested questionnaire was used in this study. No personal information of students was asked in the questionnaire. Total 14 questions were included in questionnaire, related to basic knowledge and awareness about current COVID-19. The questionnaire was prepared from current interim guidelines and information for healthcare personnel provided by WHO and ICMR.

After approval of ethics committee, consent was taken from all the participants before starting the web-based survey. All participants were explained about purpose of the study and directed to complete the web-based survey. The obtained data were coded, validated, and analyzed using SPSS version 20.0. Descriptive analysis was applied to calculate frequencies, proportions and statistical test of significance was tested at $p<0.05$.

RESULTS:

The findings of the study indicated that nearly half (51.8%) of the nursing students were in the age group of 18-20 years. Majority (98.4%) of them were female. Majority (81.4%) of them were pursuing B.Sc. Nursing. Most (70.2%) of them were in first year. Most (65.4%) of them were residing in rural area. Nearly half (51.8%) of them were belonging to Sikh religion. 33.5% of them were having television as source of COVID-19 information shown in Figure no. 1 to 7.

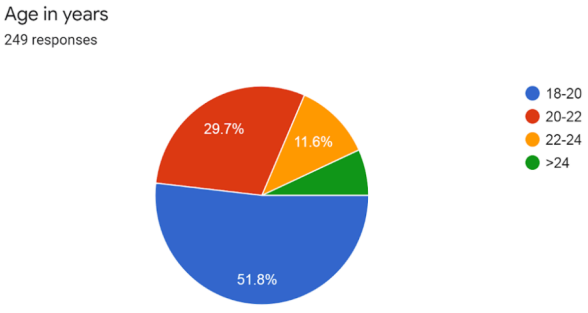

Figure-1: Age in years

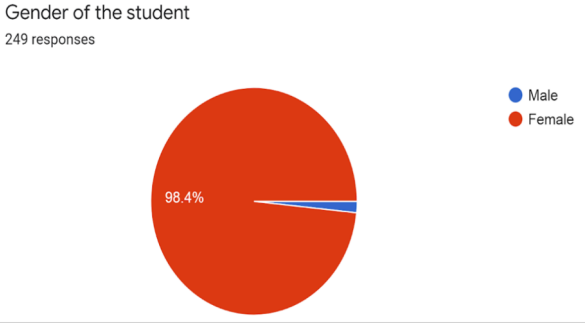

Figure-2: Gender of the student

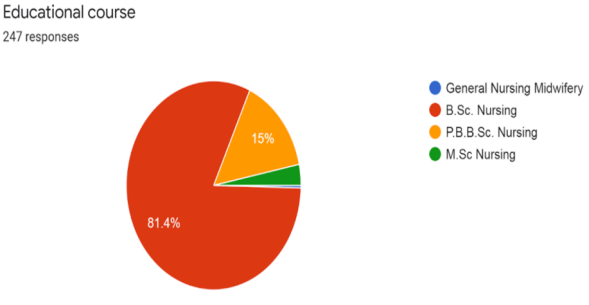

Figure-3: Education course

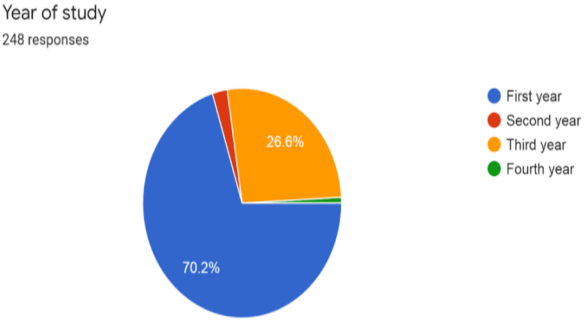

Figure-4: Year of Study

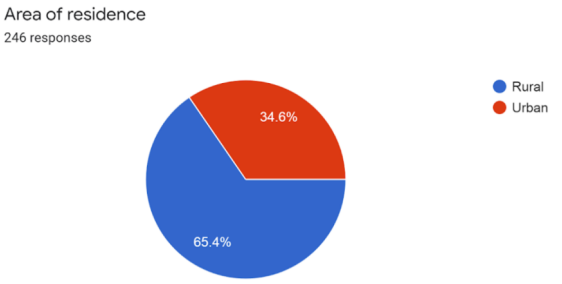

Figure -5: Area of residence

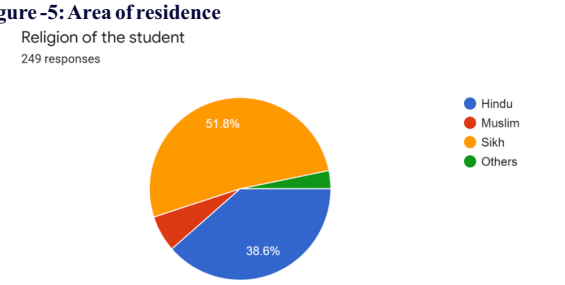

Figure-6: Religion of the Student

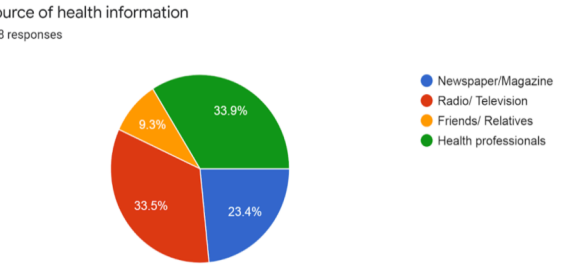

Figure-7: Source of Information

Table-1: Association of knowledge and awareness among nursing students towards Covid-19 Pandemic with socio demographic variables

N=250

S. No.	Demographic profile	Mean±SD	df	F/t	p-value
1.	**Age in years**	8.312 ± 2.071	3/246	1.444	0.018**
	a) 18-20	8.127 ± 2.046			
	b) 20-22	8.568 ± 2.097			
	c) 22-24	8.431 ±2.083			
	d) >24				
2.	**Gender**	8.430 ± 2.084	248	0.497	0.858NS
	a) Female	8.432 ± 2.086			
	b) Male				
3.	**Educational status**	8.569 ± 2.097	3/246	0.622	0.759NS
	a) GNM	8.226 ± 2.042			
	b) B.Sc. Nursing	8.690 ± 2.097			
	c) Post basic B.Sc. Nsg.	8.943 ± 2.099			
	d) M.Sc. Nursing				
4.	**Year of study**	8.065 ± 2.078	3/246	1.060	0.001**
	a) First year	8.875 ± 2.099			
	b) Second year	8.078 ± 2.092			
	c) Third year	8.943 ± 2.099			
	d) Fourth year				
5.	**Area of residence**	8.434 ± 2.084	248	1.424	0.186NS
	a) Rural	8.432 ± 2.086			
	b) Urban				
6.	**Religion**	8.176 ± 2.083	3/246	1.174	0.315NS
	a) Hindu	8.231 ± 2.081			
	b) Muslim	8.032 ± 2.092			
	c) Sikh	8.831 ± 2.099			
	d) Others				

7.	**Source of health information**		3/246	1.044	0.003**
	a) Newspaper/ Magazine	8.312 ± 2.071			
	b) Radio/Television	8.653 ± 2.097			
	c) Friends/ Relatives	8.534 ± 2.096			
	d) Health Professionals	8.653 ± 2.097			

NS-non-significant at p>0.05 level *Minimum score=00,*
***-significant at p<0.05 level of significance* *Maximum Score=14*

Findings further revealed that mean of the knowledge score was 8.58±2.099. The range of score was from 0 to 14. Most (75.2%) of them were having moderate knowledge and 17.2% as having good knowledge followed by 7.6 % as having poor knowledge. Study findings also revealed that the association of knowledge scores with age in years, year of study and source of health information was found to be statistically significant at p< 0.05 level of significance.

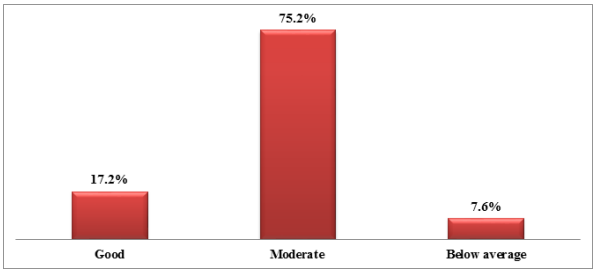

Figure-8: Level of knowledge & awareness towards COVID-19

Table 2: Frequency and percentage distribution of students as per their level of knowledge and awareness towards COVID-19

N=250

Sr. No.	Level of knowledge & awareness	Score	f	%
1.	Good	>10	43	17.2
2.	Moderate	6-10	188	75.2
3.	Below average	≤ 5	19	7.6

Mean ± S.D. = 8.58±2.099 *Maximum score-14*
Minimum score-00

Table 2 shows the distribution of students as per their level of knowledge and awareness regarding COVID-19. It shows that majority (75.2%) of the students had moderate level of knowledge and awareness, followed by 17.2% with the good level of knowledge and awareness and only 7.6% had below moderate regarding COVID-19.

DISCUSSION: -

As per ICMR, SARS-CoV-2 (COVID-19) testing status 2, 60, 15,297 cumulative total samples around 7, 33,449 and samples were tested on 11/8/2020 in India. 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 and awareness 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 350 study participants, the overall responses to the survey were satisfactory because, overall correct responses of moderate knowledge and awareness were recorded as 75.2%. 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 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 from 4 nursing college 2 from Punjab and 1 each states like, Haryana and Himachal Pradesh state of North India region, which do not truly represent the all nursing students of the entire country.

CONCLUSION:

The study participants showed moderate knowledge and awareness of 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. 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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REFERENCES

1. CDC. (2020, May 11). Coronavirus Disease 2019 (COVID-19). Centers for Disease Control and Prevention. https://www.cdc.gov
2. CDC. (2020, April 14). Coronavirus Disease 2019 (COVID-19). Centers for Disease Control and Prevention. https://www.cdc.gov/
3. Carlos, W. G., Dela Cruz, C. S., Cao, B., Pasnick, S., & Jamil, S. (2020). Novel Wuhan (2019-nCoV) Coronavirus. American Journal of Respiratory and Critical Care Medicine, 201(4), P7–P8. https://doi.org/
4. Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., Qiu, Y., Wang, J., Liu, Y., Wei, Y., Xia, J., Yu, T., Zhang, X., & Zhang, L. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. The Lancet, 395(10223), 507–513. https://doi.org/
5. Epidemiology Working Group for NCIP Epidemic Response, Chinese Center for Disease Control and Prevention. (2020). [The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China]. Zhonghua Liu Xing Bing Xue Za Zhi = Zhonghua Liuxingbingxue Zazhi, 41(2), 145–151. https://doi.org/10.3760
6. Healthcare services in India: India facing shortage of 600,000 doctors, 2 million nurses: Study—The Economic Times. (n.d.). Retrieved July 18, 2020, from https:// economic times.
7. Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19) | CDC. (n.d.). Retrieved July 12, 2020, from https://www.cdc.gov/
8. Indian Council of Medical Research (ICMR). Available at: https://www.icmr.gov.in/. (Accessed on 12August 2020).
9. Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19) | CDC. (n.d.). Retrieved July 10, 2020, from https://www.cdc.gov/c
10. Knowledge and awareness regarding spread and prevention of COVID-19 among the young adults of Karachi. - Abstract—Europe PMC. (n.d.). Retrieved August 12, 2020, from https://europepmc.org/
11. Modi, P. D., Nair, G., Uppe, A., Modi, J., Tuppekar, B., Gharpure, A. S., & Langade, D. (2020). COVID-19 Awareness Among Healthcare Students and Professionals in Mumbai Metropolitan Region: A Questionnaire-Based Survey. Cureus. https:// doi. org/ 10.7759
12. Modi, P. D., Kumar, P., Solanki, R., Modi, J., Chandramani, S., Gill, N., D, M. P., P, K., R, S., J, M., S, C., & N, G. (2017). Hand Hygiene Practices Among Indian Medical Undergraduates: A Questionnaire-Based Survey. Cureus Journal of Medical Science, 9(7). https://doi.org/10.775
13. Novel Coronavirus (COVID-19) Knowledge and Perceptions: A Survey of Healthcare Workers | medRxiv. (n.d.). Retrieved July 10, 2020, from https://www.medrxiv.org/
14. Ong, S. W. X., Tan, Y. K., Chia, P. Y., Lee, T. H., Ng, O. T., Wong, M. S. Y., & Marimuthu, K. (2020). Air, Surface Environmental, and Personal Protective Equipment Contamination by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) From a Symptomatic Patient. JAMA, 323(16), 1610–1612. https:// doi. org/ 10.1001/ jama.2020.3227
15. WHO | Chapter 5: SARS: lessons from a new disease. (n.d.). Retrieved April 12, 2020, from https://www.who.int/
16. WHO. Coronavirus disease 2019 (COVID-19): World Health Organization. 2020. Available at: https://www.who.int/novelcoronavirus-2019. Accessed on 10 May 2020.
17. Yin, Y., & Wunderink, R. G. (2018). MERS, SARS and other coronaviruses as causes of pneumonia. Respirology (Carlton, Vic.), 23(2), 130–137. https://doi.org/10.11
18. Zhou, M., Zhang, X., & Qu, J. (2020). Coronavirus disease 2019 (COVID-19): A clinical update. Frontiers of Medicine, 1–10. https://doi.org/10
19. Zhong, B.-L., Luo, W., Li, H.-M., Zhang, Q.-Q., Liu, X.-G., Li, W.-T., & Li, Y. (2020). 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, 16(10), 1745–1752. https://doi.org/10.71