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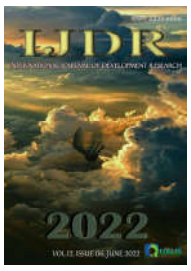

RESEARCH ARTICLE OPEN ACCESS

AN EXPLORATORY STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF STUDENT NURSES TOWARDS COVID-19 IN COLLEGE OF NURSING, CHRISTIAN MEDICAL COLLEGE AND HOSPITAL, LUDHIANA, PUNJAB

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ABSTRACT

On 31 December 2019, WHO was informed of cases of pneumonia of unknown cause in Wuhan City, China. A novel coronavirus was identified as the cause by Chinese authorities on 7 January 2020 and was temporarily named "2019-nCoV". The official names COVID-19 and SARS-CoV-2 were issued by the WHO on 11 February 2020. All caregivers, including all student nurses, actively participated in the strengthening of care teams. The present study was conducted with the purpose to assess the knowledge and attitude of student nurses regarding COVID-19 with objectives: to assess the level of knowledge and attitude of student nurses related to COVID-19, to find out the correlation between knowledge and attitude , to find out the relationship of knowledge and attitude of student nurses regarding COVID-19 with selected variables like age, gender, training course, year of study, residential area, source of information, exposure with COVID-19 patient and Is any family member or neighbor had COVID-19. A Knowledge Assessment Tool and Attitude Assessment Scale on COVID-19 were developed and used. The pilot study was conducted to ensure the reliability of the tool and feasibility of the study. Data was collected from 230 student nurses of College of Nursing, Christian Medical College, Ludhiana, Punjab, by using non-probability, purposive sampling technique. Maximum number of student nurses 71.30% had good level of knowledge & only 0.87% student nurses have below average level of knowledge and 90.87% student nurses has positive attitude regarding COVID-19. The coefficient of correlation between knowledge & attitude score was 0.119 which shows weak positive correlation. Age, Gender and Training Course had significant impact on knowledge score and only one variable i.e., Is any family member or neighbor had COVID-19, had significant impact on attitude score of student nurses.

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INTRODUCTION

The epidemics of COVID-19 have been recorded over 200 countries, territories, and areas with 2 878 196 confirmed cased and 198 668 death cases. On 11 March 2020, WHO changed the status of the COVID-19 emergency from public health international emergency (30th January 2020) to a pandemic. Nonetheless, the fatality rate of the current pandemic is on the rise (between 2%-4%), relatively lower than the previous SARS-CoV (2002/2003) and MERS-CoV outbreaks (Malik YS, Sircar S, Bhat S, Vinodhkumar OR, Tiwari R, Sah et al.). In India, a confirmed case of COVID-19 was reported on 30th January 2020, who was a student travelled from Wuhan, China, and has successfully recovered from the infection on 14th February 2020. On 27th April 2020, the Ministry of Health and Family Welfare confirmed a total of 28 380 confirmed cases, 6 362 cured/ discharge cases, and 886 death cases in the country from 32 states/ union territories. The infection rate of COVID-19 in India is

reported to be 1.7%, significantly lower than the worst affected countries, as the report on 29 March 2020. After a 14-hour voluntary public curfew named as 'Janta Curfew', India immediately announced the implementation of a nation-wide complete lockdown for 21 d *(i.e*. up to 14th April 2020), which only allowed essential services to operate over the entire 130 million population of India. The battle against COVID-19 is still unending in India. People's observance of the prevention measures is essential for controlling the spread of COVID-19, which is affected by their knowledge and attitudes towards COVID-19. Therefore, we conducted a survey to investigate the towards COVID-19 among the nursing students of nursing colleges during the rapid rise period of the COVID-19 outbreak (Singhal T., 2020).

Need of the study: Increasing numbers of confirmed diagnoses, including in healthcare professionals, has indicated that person-to-person spread of SARS-CoV-2 is occurring. The preliminary reproduction number (i.e. the average number of cases a single case generates over the course of its infectious period) is currently estimated to be between 1.4 to 2.5, meaning that each infected individual could infect between 1.4 and 2.5 people. SARS are spread by respiratory droplets produced by an infected person when they sneeze or cough. Measures to guard against the infection work under the current assumption that SARS-CoV-2 is spread in the same manner. The case definition for COVID-19 is based on symptoms regardless of travel history or contact with confirmed cases. Diagnosis is suspected in patients requiring admission to hospital with signs and symptoms of pneumonia, acute respiratory distress syndrome or influenza, and in those with a new, continuous cough or fever who are well enough to stay in the community. A new symptom, a loss or changed sense of normal smell or taste (anosmia), was added on 18 May 2020. A diagnostic test has been developed, and countries are quarantining suspected case. As the student nurses are future professional nurses and they are supposed to provide quality nursing care to the patients but it is depending on the attitude and knowledge they are having related to caring of patient who are corona positive. Review of literature, clinical experience and investigator's observation give evidence that lack of knowledge and not having positive attitude may affect patient's health condition. So, the investigator decided to take up the topic for research study.

Aim of the study: The aim of the study is to gain insight regarding the Knowledge and Attitude of Student Nurses Regarding Covid-19 with a view to conduct a class to increase their knowledge.

Operational Definitions

Knowledge: The knowledge refers to the state or act of recalling factual information as a response to the given questionnaire on Covid-19.

Attitude: It refers to the views & opinions of student nurses regarding COVID-19 as expressed through attitude scale.

Covid-19: COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019 –n CoV.

Assumption: The assumption of the study is that student nurses do have some knowledge and not having positive attitude towards Covid-19.

METHODOLOGY

Research Approach and Design: A quantitative research approach and non-experimental research design used for the present study as it aimed at exploring the Knowledge and Attitude of Student Nurses Regarding Covid-19 of College of Nursing of Christian Medical College & Hospital, Ludhiana, Punjab.

Research Setting and Target Population: The study was conducted in College of Nursing and the target population was all student nurses in College of Nursing, Christian Medical College & Hospital, Ludhiana, Punjab.

Sample & Sampling Technique: The sample of the study was 230 student nurses, selected by using non-probability purposive sampling technique.
Selection & Development of Tool: Self-structured knowledge questionnaire & attitude scale was used to assess knowledge and attitude of student nurses regarding Covid-19 of College of Nursing, Christian Medical College & Hospital, Ludhiana, Punjab.

Description of Tool: The research tool was made on Google Form

The tool was consisted of three parts.

Part-I: Sample characteristics of subjects in the sample.

Part-II: knowledge questionnaire on Covid-19.

Part-III: Attitude scale

Validity of tool: The validity of the tool was established by experts of various fields of medical and nursing profession. The changes were made and items were added, deleted or modified as per the suggestions.

Reliability of tool: Reliability of the tool was ascertained by using split half method, Karl Pearson's coefficient of correlation and Spearman's Brown Prophecy formula. The reliability of Knowledge Questionnaire was 'r'=0.74 and Attitude Scale was 'r'=0.72. hence, tools were reliable.

Data collection procedure: A Google form was made to collect the data. Prior information was given to the student nurses, WhatsApp numbers of student nurses were collected by the researcher and link was sent to the students. The subjects were very cooperative and showed interest in filling the Google form.

Ethical consideration: Approved by Research Ethical committee, College of Nursing, Christian Medical College & Hospital, Ludhiana, Punjab. Before the data collection formal permission from the concerned authorities and written consent was obtained from the participants.

Criterion Measure

Knowledge Questionnaire

Level of Knowledge	Percentage (%)	Score
Execellent	>80	> 24
Good	66 – 80	20 – 24
Average	50 - 65	15 – 19
Below average	< 50	< 15

Maximum score = 30
Minimum score = 0

Attitude score

Levels	Percentage (%)	Score
Positive attitude	≥60	72 – 110
Negative attitude	< 60	22 - 71

Maximum score = 110
Minimum score = 22

RESULTS

Descriptive and inferential statistics were used to analyze the data accordance with the objective

Frequency and Percentage Distribution of Student Nurses according to Level of Knowledge regarding COVID-19

N=230

		Student Nurses	
Levels of Knowledge	Score	n	%
Excellent	>24(>80%)	47	20.43%
Good	20-24 (66%-80%)	164	71.30 %
Average	15-19(50%-65%)	17	07.39%
Below average	<15(<50%)	2	0.87%

Maximum score = 30
Minimum score =0

The relationship between knowledge score of Student Nurses Regarding Covid-19 with selected variables

Variable	Category	Frequency	Mean ± SD of knowledge score	F test/ t test statistic	P value
Age (In Years)	17-19	44 (19.1)	22.25 ± 1.86	4.984	0.002 (significant)
	19.1-21	90 (39.1)	22.67 ± 2.13		
	21.1-23	90 (39.1)	23.03 ± 2.46		
	>23	6 (2.6)	19.50 ± 4.85		
Gender	Female	183 (79.6)	22.84 ± 2.20	2.401	0.017 (significant)
	Male	47 (20.4)	21.91 ± 2.85		
Training Course	B.Sc Nursing	190 (82.6)	22.94 ±2.20	4.172	0.000 (significant)
	GNM	40 (17.4)	21.27 ± 2.67		
Year of Study	1st	56 (24.3)	22.25 ± 1.76	1.156	0.327
	2nd	68 (29.6)	22.54 ± 2.71		
	3rd	56 (24.3)	22.80 ± 2.36		
	4th/Intern	50 (21.7)	23.06 ± 2.46		
Residential area	Rural	66 (28.7)	22.50 ± 2.82	0.599	0.550
	Urban	164 (71.3)	22.71 ± 2.17		
Source of knowledge	Family & friends	6 (2.6)	22.50 ± 1.52	0.093	0.911
	Health care workers	34 (14.8)	22.50 ± 2.51		
	Internet Search, T.V News Channels, News Papers etc	190 (82.6)	22.68 ± 2.37		
Exposure with COVID -19 patient	Yes	14 (6.1)	22.57 ± 1.74	0.124	0.901
	No	216 (93.9)	22.65 ± 2.41		
Is any family member or neighbour had COVID-19	Yes	39 (17.0)	23.10 ± 2.16	1.317	0.189
	No	191 (83.0)	22.55 ± 2.40		

It can be concluded that 71.30% student nurses had good level of knowledge, followed by 20.43% had excellent, 07.39% had average and 0.87 % student nurses had below average level of knowledge regarding COVID-19.

Frequency and Percentage Distribution of Student Nurses regarding COVID-19 according to Level of Attitude

N=230

		Student Nurses	
Levels of Attitude	Attitude Score	n	%
Positive	≥66 (≥60%)	209	90.87
Negative	<66(<60%)	21	9.13

Maximum score = 110
Minimum score =22

It inferred that 90.87% student nurses had positive attitude and only 09.13% student nurses had negative attitude towards COVID-19.

	Knowledge & Attitude		
Relationship between	Mean	SD	'r'
Knowledge	22.65	2.37	
&			0.119
Attitude	93.15	10.90	

Maximum Knowledge score = 30
Minimum Knowledge score = 00
Maximum Attitude score = 110
Maximum Attitude score = 22

It depicts that student nurses mean knowledge score and mean attitude score was 22.65 and 93.15 respectively. The coefficient of correlation (r) between knowledge and attitude score was 0.119 which shows a weak positive correlation. Therefore, it may be inferred that as knowledge increases then attitude of student nurse become positive towards COVID-19. It can be concluded that Age, Gender and Training course had significant impact on the knowledge score of student nurses towards Covid-19. It can be concluded that only one variable i.e., Is any family member or neighbour had Covid-19 had significant impact on the attitude score of student nurses towards Covid-19.

Implications: The findings of research study provide a basis which could be utilize by the authorities, finding shows as the knowledge increases the attitude of student nurses becomes positive.

The relationship of attitude score of Student Nurses Regarding Covid-19 with selected variables

Variable	Category	Frequency (%)	Mean ± SD of attitude score	F test/t test statistic	P value
Age (In Years)	17-19	44 (19.1)	91.93 ± 10.98	0.712	0.546
	19.1-21	90 (39.1)	94.25 ± 10.29		
	21.1-23	90 (39.1)	92.88 ± 11.38		
	>23	6 (2.6)	89.67 ± 12.78		
Gender	Female	183 (79.6)	92.69 ± 11.03	1.245	0.215
	Male	47 (20.4)	94.91 ± 10.29		
Training Course	B.Sc Nursing	190 (82.6)	93.01 ± 10.80	0.413	0.680
	GNM	40 (17.4)	93.80 ± 11.45		
Year of Study	1st	56 (24.3)	93.66 ± 8.86	0.287	0.835
	2nd	68 (29.6)	93.85 ± 11.51		
	3rd	56 (24.3)	92.50 ± 12.18		
	4th/Intern	50 (21.7)	92.36 ± 10.81		
Residential area	Rural	66 (28.7)	92.03 ± 12.45	0.990	0.323
	Urban	164 (71.3)	93.60 ± 10.21		
Source of attitude	Family & friends	6 (2.6)	91.83 ± 14.29	0.284	0.753
	Health care workers	34 (14.8)	94.38 ± 10.02		
	Internet Search, T.V News Channels, News Papers etc	190 (82.6)	92.97 ± 10.98		
Exposure with COVID -19 patient	Yes	14 (6.1)	89.64 ± 15.35	1.245	0.214
	No	216 (93.9)	93.38 ± 10.55		
Is any family member or neighbour had COVID-19	Yes	39 (17.0)	96.36 ± 8.12	2.030	0.043 (significant)
	No	191 (83.0)	• 11.29		

Recommendations: In view of the results obtained from the study, it is recommended that furthermore researches can be undertaken on a larger sample for making broad generalization.

Conclusion

Nurses need to have positive attitude towards their profession and research finding shows as knowledge increases the student nurses attitude change.

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