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RESEARCH ARTICLE

A STUDY TO ASSESS THE KNOWLEDGE AND KNOWLEDGE ON PRACTICE REGARDING PREVENTION OF COVID-19 AMONG BS.C (N) STUDENTS IN SELECTED NURSING COLLEGES TIRUPATI

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ABSTRACT

The aim of the study is to assess the level of knowledge and knowledge on practice regarding prevention of covid-19 among B.Sc nursing students

OBJECTIVES OF THE STUDY:

- To assess the knowledge and knowledge on practice regarding prevention of COVID-19 among B.Sc(N) students
- To determine the association between knowledge and knowledge on practice scores regarding prevention of covid-19 with their selected socio demographic variables
- To evolve and distribute a self instructional module regarding prevention of COVID-19 infection

Methodology: By using Non probability-Purposive Sampling Technique, Non experimental-Descriptive Research Design was adopted, 100 B.Sc nursing students were taken for the study and data was collected by using a self structured questionnaire and analysed by using descriptive and inferential statistics.

Results: The results revealed that out of 100 that majority 45(45%) of sample had moderate knowledge rest of 35(35%) of them had adequate knowledge and 20(20%) of the nursing students had inadequate knowledge.

Conclusion: Covid-19 is a emerging condition which made the entire world to suffer and bring frontline worriers nurses should take active part in preventing the spread of disease and should promote the awareness among the community in order to implement the researcher has taken this study.

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INTRODUCTION

Corona virus disease 2019 (COVID-19) is an emerging public health problem threatening the life of over 2.4 million people globally. Corona virus disease (COVID-19) is caused by SARS COV2 and represents the causative agent of potentially fatal disease that is of great Global Publichealth concern. Based on large number of infected people that were exposed to the wet animal market in Wuhan city, China, it is suggested this is likely the zoonotic disease origin COVID-19.

COVID-19 is transmitted from human-to-human through droplet, feco-oral and direct contact and has an incubation period of 2-14 days. Corona virus infections are emerging respiratory virus that are known to cause illness ranging from the common cold to severe acute respiratory syndrome (SARS) Since the outbreak of the disease, different governments around the world have been implementing measures to contain and prevent the transmission of COVID-19. The World Health Organization published COVID-19 guidelines and protocols, which were adopted by the ministries of health of different countries.

These protocols include information on signs and symptoms and prevention of and protective measures against COVID-19. The Centers for Disease Control and Prevention reiterated that everyone should protect themselves and others to prevent the spread of the disease; such protection includes proper hand hygiene, proper distancing, use of mask, proper etiquette when coughing and sneezing, and isolation and decontamination of surfaces. The success of the measures implemented is based on the people's adherence to prevention controls, which is largely influenced by knowledge, perception, and preventive behavior against COVID-19

Need for the study: Outbreak of Novel Corona virus disease (COVID-19) is a Global Health emergency. By 30 September 2020, more than 188 countries have reported as being infected by the coronavirus, with a global number of 34 million confirmed cases, and more than one million global deaths. Currently the most affected countries worldwide are the US, India, Brazil, Russia, Colombia, Peru and Spain. The first cases of COVID-19 were reported in the towns of Thrissur, Alappuzha and Kasargod, all in the state of Kerala, among three Indian medical students who had returned from Wuhan. Lockdowns were announced in Kerala on 23 March, and in the rest of the country on 25 March. By mid-May 2020, five cities accounted for around half of all reported cases in the country, Mumbai, Delhi, Ahmedabad, Chennai and Thane. On 10 June, India's recoveries exceeded active cases for the first time. Infection rates started to drop in September, along with the number of new and active cases. Daily cases peaked mid-September with over 90,000 cases reported per-day, dropping to below 15,000 in January 2021.

A second wave beginning in March 2021 was much larger than the first, with shortages of vaccines, hospital beds, oxygen cylinders and other medicines in parts of the country. By late April, India led the world in new and active cases. On 30 April 2021, it became the first country to report over 400,000 new cases in a 24-hour period. Health experts believe that India's figures have been underreported due to several factors. The Indian express has published the total census district wise where the Chittoor district is having around 90,000 cases approximately which is released on June 10th. According to the latest bulletin, 2,765 new COVID cases were confirmed in the last 24 hours with a positivity rate of 8.67%, which was higher than the national rate of 5.87%. Tirupati Parliamentary constituency, which is spread across Chittoor and Nellore districts, recorded a big spike in the last few days.

MATERIALS AND METHODOS

Research approach: Non experimental.

Research design: Descriptive.

Setting of the study: Sri Venkateswara Institute of Medical Sciences, Tirupati.

Study sample: B.Sc. Nursing IV year students Sri Venkateswara Institute of Medical Sciences, Tirupati.

Sample size: 100 school teachers.

Sampling technique: Non probability-Purposive Sampling Technique was adopted for the present study.

CRITERIA FOR SAMPLE SELECTION: It involves selecting cases that meet some predetermined criterion. It is based on inclusive criteria and exclusive criteria. Inclusive criteria are characteristics that the prospective subjects must have if they are to be included in the study. Exclusive criteria are those that disqualify prospective subjects from inclusion in the study.

Inclusion criteria

B.Sc Nursing students who are

- Willing to participate in this study.
- Studying in 4th year
- Available at the time of data collection.

Exclusion criteria

B.Sc Nursing students who are

- Studying 1st, 2nd, and 3rd year students
- Studying in other than college of Nursing SVIMS

DEVELOPMENT AND DECRPTION OF THE TOOL: The tool acts as an instrument to collect data from the respondent of the study (Polit and Beck, 2004) and at the same time it adds to the body of general knowledge in the discipline, that enables to collect the data or to answer the researcher question or to test hypothesis and evaluate outcome of particular collection. The researcher developed the tool based on the objectives of the study.

A closed ended Structured Questionnaire is used to collect the necessary data from the samples. The same tool was developed in English. The tool consists of III sections.

Section-I: Socio-demographic data

It consists of variables such as age, gender, year of study, educational status of mother, educational status of father & mother, occupational status of father & mother, annual family income, marital status, area of residence, source of information about prevention of Covid-19.

Section-II: Structured Questionnaire on Knowledge regarding prevention of COCID-19: Structured questionnaire consists of items to assess the knowledge regarding prevention of COVID-19. All the items were multiple choice questions. A total of 32 in which some questions has one answer, some questions has more than one answer the maximum score was 48.

Score Interpretation For Section – II

SCORE	LEVEL OF KNOWLEDGE
<50% - <24 Marks	Inadequate level of knowledge
51-75 % - 24 to 36 Marks	Moderate level of knowledge
>75% - >36 Marks	Adequate level of knowledge

Section-III Check list of knowledge on practice regarding prevention of COVID-19: The section consists of items to assess the knowledge on practice regarding prevention of COVID-19. All the items have options of yes or No the total items are 15, all YES options are considered as right practice

each YES option carries 1 mark, NO option carries '0' marks, total score was 15.

CONTENT VALIDITY: Content validity refers to which the items of an instrument adequately represents the universe of the content for the content of being measured. The tool was submitted to 5 experts in Sri padmavathamma Government college of nursing, Tirupati, 2 experts in S.V.Medical College Tirupati, 1 expert from government college of nursing, Kurnool, and 1 expert from SPMC, SVIMS Tirupati. Based the suggestions given by the experts the necessary modifications of the tool were made and final draft was prepared and incorporated in pilot study.

RELIABILITY OF THE TOOL: Reliability of the tool is defined as the expert to which the important fields the same results in repeated measures. It concerns with stability internal consistency and homogeneity.

It is conducted in Save College of Nursing, Tirupati. To establish the reliability tool was admitted to 10 members who were not included in the pilot study. The reliability score was $r=0.86$ which is calculated by cronbach's alpha correlation coefficient method which means that tool was reliable.

PILOT STUDY: The pilot study is small version of traits runs done in preparation for major studies, formal permission was obtained from the college authority. Pilot study was conducted on 10 Nursing students in Chaitanya College of Nursing, Tirupati, who fulfil the inclusion criteria were selected, obtained consent from them by establishing good rapport and the sample for pilot study was based on non-probability purposive sampling technique.

Investigator administered the questionnaire to assess knowledge and knowledge on practice regarding prevention of COVID -19 and instructions were given to them to answer questionnaire frankly. After the questionnaire was answered self instructional module on prevention of COVID -19 was given to the participants statistical analysis was done by using descriptive and inferential statistics. Findings of the study revealed that the tool was feasible to conduct study.

PROCEDURE FOR DATA COLLECTION: The study was conducted from 3/4/2021 to 10/5/2021 during this period collected data from, B.Sc. Nursing IV year students studying in Sri Venkateswara College of Nursing, Tirupati. The investigator initially establishes rapport with the study subjects. Then the questionnaire was used to collect data from Nursing students time limit of 30 minutes was taken, by the investigator to each sample. The investigator maintained confidentiality and had no difficulty in collecting data.

DATA ANALYSIS: After completing the data from each individual student, results were tabulated. Descriptive and inferential statistics were used for analysis of level of knowledge among B.Sc nursing students.

DESCRIPTIVE STATISTICS

- Frequency and Percentage distribution used to analyze the demographic variables
- Percentage, mean distribution and S.D used to analyze the study variables that are school teachers

INFERENTIAL STATISTICS

- Pearson correlation was used for the present study

FINDINGS OF THE STUDY

Frequency and percentage distribution on level of knowledge regarding prevention of covid 19 among bsc nursing students

Knowledge regarding prevention of covid-19	Frequency	Percentage
Inadequate (<50%)	20	20%
Moderate (51-75%)	45	45%
Adequate (>75%)	35	35%
Total	100	100

The above table 3 explains that regarding level of knowledge on prevention of COVID-19 among nursing students out of 100 majority 45(45%) of sample had moderate knowledge rest of 35(35%) of them had adequate knowledge and 20(20%) of the nursing students had inadequate knowledge.

Frequency and percentage distribution of knowledge on practice regarding prevention of covid 19 among bsc nursing students

Knowledge on practice regarding prevention of Covid 19	Frequency	Percentage
Inadequate<50%	28	28%
Moderate50-75%	44	44%
Adequate>75%	28	28%
Total	100	100

It shows that the frequency and distribution of knowledge on practice regarding prevention of COVID-19 among BSc Nursing students, majority 44(44%) had moderate knowledge on preventive aspects followed by 28(28%) had adequate knowledge and 28(28%) had inadequate knowledge. Table 7: Above table 5 describes that there was a significant association between some of the socio-demographic variables and level of knowledge regarding prevention of COVID-19 among B.Sc Nursing students which are gender at $p<0.05$ level. Table 8: Above table 7 shows that there was a significant association between some of the socio-demographic variables and knowledge on practice regarding prevention of COVID-19 among B.Sc Nursing students which are gender, religion, education of mother, occupation of mother, occupation of father annual income, marital status and source of information significant at $p<0.01$ level.

DISCUSSION

The main objective of the study is to identify the level of knowledge on prevention of covid-19 among nursing students and it found to have moderate level of knowledge. The first objective of the study was "To assess the knowledge and knowledge on practice regarding prevention of COVID-19 among B.Sc (N) students" out of 100 students majority 45(45%) of sample had moderate knowledge rest of 35(35%) of them had adequate knowledge and 20(20%) of the nursing students had inadequate knowledge. The mean knowledge score was 0.54 and SD was 0.015. Regarding knowledge on practices among nursing students out of 100 students majority 44(44%) of the sample were in moderate level of knowledge followed by 28(28%) of sample were in adequate level and 28(28%) of sample were in adequate level of knowledge.

Association between socio demographic variables and level of knowledge on prevention of covid-19

(N= 100)

S.No	Demographic Variables	Knowledge on practice regarding prevention of Covid 19						Chi-Square
		Inadequate <50%		Moderate 51-75 %		Adequate > 75 %		
1.	Gender							
	Male	5	25%	17	38	4	14	$\chi^2=7.117P=0.02^*$ DF=2
	Female	15	75%	28	62	31	86	
	Total	20	100	45	100	35	100	
2.	Religion							
	Hindu	9	45	14	31	12	34	$\chi^2=3.10P=0.53DF=4$
	Muslim	4	20	10	22	4	12	
	Christian	7	35	21	47	19	54	
	Others	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
3.	Education status of mother							
	Illiterate	12	60	30	67	19	54	$\chi^2=6.00P=0.198DF=4$
	Primary education	8	40	9	20	13	37	
	Secondary education	0	0	6	13	3	9	
	Graduate	0	0	0	0	0	0	
	PG & above	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
4.	Education status of Father							
	Illiterate	12	60	31	69	24	66	$\chi^2=1.49P=0.828DF=4$
	Primary education	6	30	9	20	9	26	
	Secondary education	2	10	5	11	2	8	
	Graduate	0	0	0	0	0	0	
	PG & above	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
5.	Occupational of Mother							
	Unemployed /Home maker	11	55	21	47	16	46	$\chi^2=0.49P=0.77DF=2$
	Coolie	9	45	24	53	19	54	
	Private employee	0	0	0	0	0	0	
	Govt. Employee	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
	Occupational of father							
	Unemployed	0	0	0	0	0	0	$\chi^2=1.932P=0.74 DF=4$
	Coolie	6	30	18	40	10	29	
	Private employee	8	40	12	27	12	34	
	Govt. Employee	6	30	15	33	13	37	
	Others	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
7.	Annual family income							
	< Rs.20,000/-	0	0	0	0	0	0	$\chi^2=0.428P=0.807DF=2$
	Rs. 20,000/- to Rs.40,000/-	11	55	21	47	18	51	
	Rs.40,000/- to Rs.60,000/-	9	45	24	53	17	49	
	> Rs.60,000/- and above	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
8.	Marital status							
	Unmarried	16	80	42	93	34	97	$\chi^2=5.27P=0.071DF=2$
	Married	4	20	3	7	1	3	
	Divorced	0	0	0	0	0	0	
	Widow/separate	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
9.	Residence							
	Rural	14	70	27	60	23	66	$\chi^2=1.73P=0.42DF=2$
	Urban	6	30	18	40	12	34	
	Urban slum	0	0	0	0	0	0	
	Total	20	100	45	100	35	100	
10.	Source of information							
	Print & electronic media	6	30	12	27	12	34	$\chi^2=5.23 P=0.5145$ DF=6
	Family members	7	35	7	16	5	14	
	Friends & Relatives	5	25	18	40	12	34	
	Institutions	2	10	8	18	6	2	
	Total	20	100	45	100	35	100	

*significant at 0.05 level. **significant at 0.01 level.

Association between socio demographic variables and knowledge on practice regarding prevention of covid 19 among bsc nursing students

S.No	Demographic Variables	practice regarding prevention of Covid 19						Chi-Square
		Inadequate		Moderate		Adequate		
		<50%		51-75 %		> 75 %		
1	Gender							$\chi^2=11.5^{**}$ P=0.0007 DF=1
	Male	9	32	10	23	7	25	
	Female	19	68	34	77	21	75	
	Total	28	100	44	100	28	100	
2	Religion							$\chi^2= 11.2^{**}$ P= 0.0037 DF= 2
	Hindu	11	39	16	36	8	29	
	Muslim	5	18	7	16	6	21	
	Christian	12	43	21	48	14	50	
	Others	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
3	Education status of mother							$\chi^2= 14.6^{**}$ P=0.0007 DF=2
	Illiterate	21	75	26	59	8	29	
	Primary education	7	25	14	32	12	43	
	Secondary education	0	0	4	9	8	18	
	Graduate	0	0	0	0	0	0	
	PG & above	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
4	Education status of Father							$\chi^2=12.48^{**}$ P=0.0019 DF=2
	Illiterate	0	0	0	0	0	0	
	Primary education	8	29	18	41	8	29	
	Secondary education	8	29	12	27	12	42	
	Graduate	12	42	14	32	8	29	
	PG & above	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
5	Occupational of Mother							$\chi^2= 12.7^{**}$ P= 0.0004 DF= 1
	Unemployed /Home maker	17	61	20	45	0	0	
	Coolie	11	39	24	55	17	61	
	Private employee	0	0	0	0	11	39	
	Govt. Employee	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
6	Occupation of father							$\chi^2=12.48^{**}$ P=0.0019 DF=2
	Unemployed	0	0	0	0	0	0	
	Coolie	8	29	18	41	8	29	
	Private employee	8	29	12	27	12	42	
	Govt. Employee	12	42	14	32	8	29	
	Others	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
7	Annual family income							$\chi^2= 11.2^{**}$ P= 0.0008 DF=1
	< Rs.20,000/-	0	0	0	0	0	0	
	Rs. 20,000/- to Rs.40,000/-	15	54	20	45	15	54	
	Rs.40,000/- to Rs.60,000/-	13	46	24	55	13	46	
	> Rs.60,000/- and above	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
8	Marital status							$\chi^2= 12.82^{**}$ P=0.0003 DF=1
	Unmarried	24	86	42	95	26	93	
	Married	4	14	2	5	2	7	
	Divorced	0	0	0	0	0	0	
	Widow/separate	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
9	Residence							$\chi^2=0.97$ P=0.32 DF=1
	Rural	22	79	35	80	22	79	
	Urban	6	21	9	20	6	21	
	Urban slum	0	0	0	0	0	0	
	Total	28	100	44	100	28	100	
10	Source of information							$\chi^2= 13.2^{**}$ P=0.004 DF=3
	Print & electronic media	7	25	14	32	9	32	
	Family members	3	11	9	20	7	25	
	Friends & Relatives	12	43	14	32	9	32	
	Institutions	6	21	7	18	3	11	
	Total	28	100	44	100	28	100	

*significant at 0.05 level. **significant at 0.01 level.

The second objective of the study was to determine the association between knowledge and knowledge on practice regarding prevention of covid-19 with their selected socio demographic variables. There was a significant association between some of the socio demographic variables and level of knowledge regarding covid-19 among nursing students which is gender significant at $p < 0.05$ level. There was association between level of knowledge on practices regarding covid-19 and some of socio demographic variables among B.Sc nursing students which were gender, religion, educational status of mother and father, occupational status of mother and father, annual family income, marital status and source of information significant at $p < 0.01$ level. The above objective was supported by a study conducted by Akshaya sricon bagavatulla et.al in 2020 at UAE university, AL Ain UAE. The main objective of the study was survey of knowledge and perception of health care workers. Total 453 participants were surveyed study results shown that regarding covid-19 most of the participants 61% obtained social media information and significant proportions of sample i.e 61(61%) had poor knowledge of its transmission and 63.06(63.06%) showed positive perception of covid-19 prevention. Factors such as age and profession work associated with poor knowledge and poor perception of covid-19.

Conclusion

In this study knowledge among B.Sc Nursing students 45(45%) had moderate knowledge, 35(35%) had adequate knowledge and 20(20%) had inadequate knowledge and related to knowledge on practice among B.Sc (N) students 44(44%) had moderate knowledge followed by 28(28%) had adequate knowledge and 28(28%) had inadequate knowledge regarding prevention of COVID-19. These findings suggested that extensive health education programs were needed to bring awareness among B.Sc (N) students, nurses need to be encouraged to gain knowledge and knowledge on practices among B.Sc (N) students regarding prevention of COVID-19 organizing health education campaigns in nursing colleges as well as in the community to bring down the mortality and morbidity to make healthy nation.

Implications: The implications drawn from the present study is of vital concerned to health teams including practice, nursing education, nursing administration and nursing research.

Nursing Practices

- In community small teaching sessions can be conducted regarding prevention of COVID-19 to adopt hygiene regarding prevention of covid-19 to adopt hygiene practices by the students to bring down the incidence and prevalence of covid-19.
- Planned health education programmes are to be scheduled in the colleges on fixed days for all B.Sc Nursing students

Nursing Education

- The Community Health Nursing curriculum needs to be strengthened to enable nursing students with knowledge, knowledge on practices regarding prevention of COVID-19
- The community health nurse educators should plan and conduct in-service and continuing education program

among nurses on knowledge and practices regarding prevention of COVID-19.

Nursing Administration

- Conduct regular screening camps, regarding prevention of COVID-19 in the schools, colleges, work places in the initiate health programmes in order to prevent COVID-19
- Administration policies should allow for conducting training, workshop for nurses regarding prevention of COVID-19 to apply knowledge, lifestyle changes into practices

Nursing research

- The nurses and nursing students should be encouraged to do research in the field of interest like risk factors, transmission of COVID-19, life style changes among public in the community
- Utilization of research findings in clinical practice has to be encouraged

Limitations

Study is limited to

- B.Sc Nursing students
- Confined to college of Nursing, Sri Venkateswara Institute of Medical sciences, Tirupati
- B.Sc(N) students studying 4th year

Recommendation

- A similar study can be conducted to compare the nursing students of I,II,III, and IV years
- A comparative study can be conducted to assess the knowledge and knowledge on practices among male and female nursing students
- A study can be conducted to assess the effectiveness of structured teaching program on knowledge and knowledge on practices among B.Sc Nursing students regarding prevention of COVID-19

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