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## “TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING COVID-19 AND ITS PREVENTION AMONG B.SC NURSING 1ST YEAR STUDENTS OF GOVT COLLEGE OF NURSING, SRINAGAR- A PRE EXPERIMENTAL STUDY”

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**Abstract:** Coronaviruses belong to the Coronaviridae family in the Nidovirales order. Corona represents crown-like spikes on the outer surface of the virus; thus, it was named as a coronavirus. These viruses were thought to infect only animals until the world witnessed a severe acute respiratory syndrome (SARS) outbreak caused by SARS-CoV, 2002 in Guangdong, China. Recently at the end of 2019, Wuhan an emerging business hub of China experienced an outbreak of a novel coronavirus that killed more than eighteen hundred and infected over seventy thousand individuals within the first fifty days of the epidemic. This virus was reported to be a member of the  $\beta$  group of coronaviruses. The novel virus was named as Wuhan coronavirus or 2019 novel coronavirus (2019-nCov) by the Chinese researchers. The main aim of the study was to evaluate the effectiveness of STP on knowledge regarding COVID-19 and its prevention among BSc. Nursing 1st year students of Govt. Collage of Nursing Srinagar. The research approach adopted for the study was the Pre-experimental study. Simple random sampling technique was adopted to select the sample. The sample consisted of 48 nursing students who were studying at Govt. Collage of Nursing Srinagar. The tool used for data collection was structured knowledge questionnaire. Data gathered was analyzed using inferential and descriptive statistics. Major findings of the study revealed that the knowledge score of students was higher 93.8% in post-test as compared to pre-test knowledge 4.2 %.The difference between pre-test and post-test knowledge score was calculated with the paired 't' which was found statistically significant at p value<0.001. Hence, it was revealed that the mean post-test knowledge score was significantly higher than the mean pre - test knowledge score. Moreover, there was no significant association of pre-test knowledge score with selected demographic variable (p=<0.05).

**Index terms:** Structured Teaching Program, knowledge, COVID-19.

## 1.1 INTRODUCTION:

Coronaviruses belong to the Coronaviridae family in the Nidovirales order. Corona represents crown-like spikes on the outer surface of the virus; thus, it was named as a coronavirus. These viruses were thought to infect only animals until the world witnessed a severe acute respiratory syndrome (SARS) outbreak caused by SARS-CoV, 2002 in Guangdong, China. Recently at the end of 2019, Wuhan an emerging business hub of China experienced an outbreak of a novel coronavirus that killed more than eighteen hundred and infected over seventy thousand individuals within the first fifty days of the epidemic. This virus was reported to be a member of the  $\beta$  group of coronaviruses. The novel virus was named as Wuhan coronavirus or 2019 novel coronavirus (2019-nCoV) by the Chinese researchers. The International Committee on Taxonomy of Viruses (ICTV) named the virus as SARS-CoV-2 and the disease as COVID-19. WHO was informed by the Chinese government about several cases of pneumonia with unfamiliar etiology. The outbreak was initiated from the Hunan seafood market in Wuhan city of China and rapidly infected more than 50 peoples. On 12 January 2020, the National Health Commission of China released further details about the epidemic, suggested viral pneumonia. From the sequence-based analysis of isolates from the patients, the virus was identified as a novel coronavirus. The human to the human spreading of the virus occurs due to close contact with an infected person, exposed to coughing, sneezing, respiratory droplets or aerosols. These aerosols can penetrate the human body (lungs) via inhalation through the nose or mouth. As of 12th March 2020, more than 125000 confirmed cases across 118 countries and more than 4600 deaths had been reported.<sup>1</sup>

The COVID-19 is an emerging disease, which needs to be briefly understood by all individuals. Whereas preventive aspects need to be grossly understood by all individuals. A study was conducted on knowledge, attitude, anxiety and perceived mental health care need in the Indian population during COVID-19 pandemic results in a moderate level of knowledge about the COVID-19 infection and adequate knowledge about its preventive aspects. The anxiety level is high and more than half of the population that is 80% of the people was preoccupied with the thoughts of COVID-19. There are many other issues like sleep difficulties, paranoia about acquiring COVID-19 infection and distress related social media. There is a need to intensify the awareness and address the mental health issues of people during this COVID-19 pandemic.<sup>2</sup> The source of information about COVID-19 is different for health care professionals and the public. As health care professionals are acquiring information from authenticated websites of the world health organization (WHO), Centre for Disease Control and Prevention (CDC), Indian council of medical research (ICMR). While the general public rely on television. Both health care professional and the general public are worried to get infected by this virus and taking precautionary measures against COVID-19.<sup>3</sup> A study done in Pakistani university concludes the major source of information among students is social media and half of the students had good knowledge related to COVID-19. Only 36.5% of participants had good preventive practices.<sup>4</sup> There are few myths related to corona virus, which need to be clarified. A study of Nepal reported 18% of the respondents perceived corona virus infects only older people, 11% opined that the infection is fatal with no chances of survival and 70% considered that limiting consumptions of poultry and meat would prevent the spread of COVID-19.<sup>5</sup> A cross-sectional analytical study was conducted to find out knowledge and attitude toward COVID-19 among nursing students of the School of Nursing and Midwifery, Patan Academy of Health Sciences, Lalitpur. Online Google form was used for data collection. The findings of study revealed that out of 382 nursing students, the majority knew COVID-19, with 84.54% correct responses (6,782 out of a total 8,022). A favorable attitude toward COVID-19 was found in 209 (54.7%). There was a positive correlation between student's knowledge and attitude ( $r = 0.10$ ,  $p = 0.04$ ) and no significant association between demographic variables and attitude. The study concluded that most (84.54%) of the nursing students surveyed knew COVID-19 and more than half of them had a favorable attitude toward COVID.<sup>6</sup>

The World Health Organization is performing the vital role to resolve all these myths and to provide accurate current information to the public. Therefore, the current study was done to certain whether the nursing students have knowledge related to corona virus and to provide them with the same.

**1.2 PROBLEM STATEMENT:** A Pre experimental study to evaluate the effectiveness of Structured Teaching Program on knowledge regarding COVID-19 and its prevention among B.Sc. Nursing 1st year students of Govt. College of Nursing, Srinagar.

**1.3 OBJECTIVES** 1. To assess the pre-test knowledge score of COVID-19 and its prevention among B.sc Nursing 1st year students.

2. To assess the post-test knowledge score of COVID-19 and its prevention among B.sc Nursing 1st year students.

3. To evaluate the effectiveness of Structured Teaching Program by comparing pre-test and post-test knowledge score.

4. To find out the association between pre-test knowledge score with selected demographic variables.

## II. RESEARCH METHODOLOGY

**2.1 Research Approach and Design:** An experimental approach with Pre- experimental one group pre- test and post-test design was used for this study.

**2.2 Population and Sample:** The population of main study comprised of 48 nursing students who were studying at Govt. Collage of Nursing Srinagar. Simple random sampling technique was adopted to select the sample.

**2.3 Research Tools:** In this study tool consists of two parts; Section A: Socio Demographic Data, Section B: Self-Structured questionnaire

**2.4 Data Collection Method:** Before the collection of data, formal written permission was obtained from Principal Government College of nursing Srinagar. The investigator conducted pre-test by personally handling over the Self-Structured knowledge questionnaire to the subjects Average time spent by the subjects for completing pre-test was approximately 15-20 minutes. After the pre-test, students were given planned teaching programmed and a post -test was administered with the same questionnaire to the same group after 7 days.

**2.5 Data Analysis:** Results were analyzed through descriptive and inferential statistics.

### III.RESULTS AND DISCUSSION:

The analyzed data was organized and presented in the form of tables which was organized under the following sections:

**Table No 1: Frequency Distribution of Demographic variables.**

Variables	Options	Percentage	Frequency
Age	18-20 years	50.0%	24
	20-22 years	47.9%	23
	22-24 years	2.1%	1
	24-26 years	0.0%	0
Gender	Male	47.9%	23
	Female	52.1%	25
Educational Qualification of Parents	Illiterate	14.6%	7
	Middle Class	27.1%	13
	Graduate	35.4%	17
	Higher	22.9%	11
Residence	Rural	66.7%	32
	Urban	33.3%	16
Source of information regarding covid-19	Internet	66.7%	32
	Books	0.0%	0
	Mass Media	33.3%	16
	Teachers	0.0%	0

**Table No 2: Percentage distribution of Pre-Test knowledge scores of B.Sc. Nursing 1st year students regarding COVID-19 and its prevention**

N=48

Score Level (N= 48)	Pre-Test (F & %)
INADEQUATE.(0-13)	2(4.2%)
MODERATE.(14-26)	45(93.8%)
ADEQUATE.(27-40)	1(2.1%)

Maximum Score=40 Minimum Score=0

**Table No 3: Percentage distribution of Post-Test knowledge scores of B.Sc. Nursing 1st year students regarding COVID-19 and its prevention**

N=48

Score Level (N= 48)	Post-Test (F & %)
INADEQUATE.(0-13)	0(0%)
MODERATE.(14-26)	3(6.3%)
ADEQUATE.(27-40)	45(93.8%)

Maximum Score=40 Minimum Score=0

**Table 4: Effectiveness of Structured Teaching Program on knowledge regarding COVID-19 and its prevention among B.Sc. Nursing 1st year students by comparing pretest and post test**

N=48

Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	Paired T Test	P value	Table Value at 0.05
PRETEST KNOWLEDGE	19.98±3.954	49.90	10-27	17.100	22.34 *Sig	<0.001	2.01
POSTTEST KNOWLEDGE	37.08±3.086	92.70	26-39				

\*\* Significance Level 0.05 Maximum=40 Minimum=0

**Table 5: Association of demographic variables with pre-test knowledge score**

ASSOCIATION WITH PRE SCORES									
Variables	Opts	ADEQUATE	MODERATE	INADEQUATE	Chi Test	P Value	df	Table Value	Result
Age	18-20 years	1	22	1	1.068	0.899	4	9.488	Not Significant
	20-22 years	0	22	1					
	22-24 years	0	1	0					
	24-26 years	0	0	0					
Gender	Male	1	21	1	1.119	0.572	2	5.991	Not Significant
	Female	0	24	1					
Educational Qualification of Parents	Illiterate	1	6	0	7.563	0.272	6	12.592	Not Significant
	Middle Class	0	13	0					
	Graduate	0	16	1					

	Higher	0	10	1					
Residence	Rural	1	30	1	0.750	0.687	2	5.991	Not Significant
	Urban	0	15	1					
Source of information regarding COVID-19	Internet	1	30	1	0.750	0.687	2	5.991	Not Significant
	Books	0	0	0					
	Mass Media	0	15	1					
	Teachers	0	0	0					

The above tables indicate that the knowledge score of students was higher 93.8% in post-test as compared to pre-test knowledge 4.2%. The difference between pre-test and post-test knowledge score was calculated with the paired 't' which was found statistically significant at  $p < 0.001$ . Hence it was revealed that the mean post-test knowledge score was significantly higher than the mean pre-test knowledge score of. Moreover, there was no significant association of pre-test knowledge score with selected demographic variable ( $p < 0.05$ ).

#### IV: CONCLUSION:

Education programmes should be included in the curriculum of nursing students which will provide an awareness regarding first aid management of selected emergencies in schools.

#### V: IMPLICATIONS OF THE STUDY:

##### Nursing Practice:

The nurses can play an important role on imparting preventive health care. Health education conducted by the nursing personnel in the college helps in imparting knowledge regarding covid19 among nursing students. Staff Nurses can also educate the nursing students who visit the outpatient department or inpatient department. This education will help the nursing students to understand in-depth about preventive measures. Thereby they can adopt healthy lifestyle practices, which help to prevent the disease.

##### Implications for Nursing Education:

Nursing education should prepare effective future nurses. Active participation of student nurses in conducting educational programmes to provide information regarding covid-19. The nursing curriculum focuses more on the preventive aspect, the nurse must therefore, be prepared to identify the areas of knowledge deficit through the assessment of learning needs of nursing students. Health information can be impaired through various methods like lecture, incidental teaching and mass media. Several educational strategies can be used to disseminate the health information like lecture, demonstration, flip chart, flash cards and hand out etc, which would make it interesting and helps to gain adequate knowledge. Nurses have to involve themselves in the areas of health practices which help to lead a healthy life.

##### Nursing Administration:

Nurse administrators are responsible to identify the nature of the problem and organize programme related to health promotion to the target people. The study assists the nursing administrative authorities to initiate and carry out health education programme in health care settings. Nurse administrator can also take the initiative in imparting health information through different effective methods. They have to support and encourage the nursing students to participate in health promotion activities. Individual and group teaching can be arranged for students.



## Nursing Research:

Nurses being the major focus in the health care delivery system must take the initiative in conducting research on significant healthcare problem among the vulnerable groups in community. These researches will help to prevent mortality and morbidity caused by any preventable illness. Nurse researcher can conduct studies to determine the effectiveness of education. Most researchers can be done on prevention of innovative methods of teaching preparation of effective teaching materials, focusing on interest, quality and cost effectiveness.

## VI: RECOMMENDATIONS

The similar study can be replicated with larger sample with different demographic characteristics.

- The similar study can be done in different settings.
- The comparative study can be conducted to determine the knowledge of different age groups. The comparative study can be conducted to assess the knowledge of urban and rural Nursing students.
- The similar study can be conducted by using experimental group and control group.
- The similar study can be conducted by using different teaching modalities.

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