



A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING COVID-19 AMONG NURSING STUDENTS

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ABSTRACT

AIM: the aim of this study was to assess the knowledge regarding Covid-19 among nursing students.

METHOD: this was pre-experimental study, conducted on 42 GNM students, selected using consecutive sampling technique. The tool used was structured knowledge questionnaire.

RESULTS: Majority of respondents (61.9%) were in the age group of 18 -20 years, (26.2%) in the age group of 20-22 years, (2.4%) in the age group of 22- 24 years, (9.5%) in the age group of 24-26 years. Majority of the respondents were females i-e (90.5%) and rest were males i-e (9.5%) Majority of the students (71.4%) belong to families with income >40,000 , (16.7%) students belong to families with income of 30,000-40,000, (9.5%) students belong to families with income 10,000-20,000 and (2.4%) students belong to families with income 20,000-30,000. Majority of the students (66.7%) belong rural areas and (33.3%) belong to urban areas. Majority of the students (69%) had previous source information from internet, (26.2%) had previous source of information from media and (4.8%) from books Knowledge Data: The Mean post- test level of knowledge (32.52±3.808) was higher than Mean pre-test level of knowledge (16.64±4.394) with the mean difference of 15.880

Keywords: Covid-19; Structured teaching program; Knowledge; Effectiveness.

1. INTRODUCTION

“Covid-19 is an illness caused by severe acute respiratory syndrome Corona virus 2 (SARS-2) formerly called 2019-n COV which was first identified amid an outbreak of respiratory illness cases in Wuhan city, Hubei province China.”⁽¹⁾ It was initially reported to WHO on December 31 2019. On Jan 30 2020 WHO declared covid-19 outbreak a global health emergency. On March 11, 2020 WHO declared Covid-19 a global pandemic ⁽¹⁾ On December 31 2019 Wuhan health commissions in the Hubei province of republic of china notified the national health commission, china CDC and WHO of a cluster of 27 cases on pneumonia of unknown etiology.⁽²⁾ These patients presented with a

constellation of symptoms such as fever, dyspnea, dry cough & radiological finding showed bilateral lung glassy opacities⁽²⁾. The virus was first confirmed to have spread to Italy on 31 Jan 2020 when 2 Chinese tourists in Rome tested positive for covid-19⁽³⁾. Slowly this pandemic spread to various states and union territories including UT of J&K⁽⁴⁾. Two suspected cases with high virus load were detected & isolated on 4 march in GMC Jammu, one of them became the first confirmed positive case on 9 march 2020⁽⁴⁾. Both individuals had a travel history to Iran⁽⁴⁾. The UT of J&K has recorded its first case of Covid-19 on Wednesday, a resident of Khanyar area in Srinagar. Tested positive for Covid19, J&K administration confirmed.⁽⁵⁾ According to authorities, patient had a history of international travel and arrived on March 16⁽⁵⁾. On 7th Jan 2020 The China CDC discovered the virus called NOVEL CORONA VIRUS 2019(2019-N Cov) which was colloquially noted, as the WUHAN Corona virus. The WHO renamed it to SARS-COV 2. To destigmatize the association of the virus with any geographic location or nationality and relate it to disease symptomatology⁽²⁾. The covid-19 virus is genetically similar to the SARS Corona virus of 2002(SARS-COV-1).⁽²⁾

Initially, the worst hit districts were put under lockdown, which then extended to cities and eventually whole countries. Travel of people, along with logistics of goods and services, were (and still are) severely affected. Most nations of the world urged their citizens to stay indoors so as to avoid exposure to the virus and thus remain infection free.

Covid-19 is RNA virus with particle size of 120-160nm⁽⁶⁾. This virus mainly infected animals including Bats⁽⁶⁾. In early studies 49-66% patients had contact history of Huanan sea food market, where various kinds of living wild animals were on sale including poultry, Bats and Marmots⁽⁷⁾. According to WHO environmental samples taken from Huanan sea food market were tested positive for COVID 19, But the specific animals associated with the virus have not been identified⁽⁷⁾. As regards base line epidemiological characteristics in China Covid-19 affected mostly people aged 30-79 years (87%), and below 19 years & above 80 years were relatively rare⁽⁸⁾. Mean age ranges from 47-56 years in largest reports men are more likely to present Covid-19 (65% of cases)-15% cases occur in smokers & 25-30% of patients present concomitant diseases with up to 40% of these being cardiovascular disease of which remarkably hypertension makes up 15-30%⁽⁸⁾. A recent meta-analysis found that hypertension, cardiovascular diseases and diabetes in patients with Covid-19 were present in 17.1, 16.4 & 9.7% respectively⁽⁸⁾. Health care workers are a group at risk with prevalence varying according to setting⁽⁸⁾. Symptoms of Covid-19 are variable but usually include fever and cough⁽³⁾. All the symptoms of Covid-19 are nonspecific which means that they are also seen in some other diseases⁽³⁾. Fever is the most common symptom of Covid-19 which may be high or low, most people with Covid-19 also have cough which could be either dry or productive cough⁽³⁾. Symptoms may appear 2-14 days after exposure⁽⁹⁾. Common signs and symptoms include fever, cough & tiredness⁽⁹⁾. Early symptoms may include shortness of breath, difficulty in breathing, muscle aches, chills, sore throat, runny nose, headache & chest pain⁽⁹⁾. The severity of Covid-19 symptoms can range from very mild to severe, some people may have only few symptoms and some may have no symptoms at all⁽⁹⁾. People who are older have a high risk of severe illness from Covid-19 & the risk increases with age⁽⁹⁾. Serious medical conditions that increase the risk include serious heart diseases, cancer, COPD, type-2 diabetes. It could be transmitted from human to human by droplets & contact⁽¹⁰⁾. Several reports have suggested that symptomatic people are the most frequent source of Covid-19 spread. It primarily spreads between people through respiratory droplets by coughing or sneezing from an infected individual⁽¹⁰⁾. Covid-19 can affect the upper respiratory tract (sinuses, nose & throat) & the lower respiratory tract (wind pipe & lungs)⁽³⁾. The lungs are the organs most affected by Covid-19 because the virus accesses host cells via the enzyme angiotensin-converting enzyme-2 (ACE-2). Which is most abundant in type 2nd alveolar cells of the lungs⁽³⁾. The virus uses a special surface glycoprotein called a spike (papilloma) to connect to ACE2 & enter the host cell⁽³⁾. The density of ACE2 in each tissue correlates with the severity of the disease in that & some have suggested decreasing ACE2 activity might be protective, though another view is that increasing ACE2 using angiotensin 2nd receptor blocker medications could be protective, as the alveolar disease progresses, respiratory failure might develop & death may follow⁽³⁾.

After the diagnosis of Covid-19 prevention and quarantine are considered as the most way to stop the fast spreading of virus. Furthermore several strategies were carried out to help patients with Covid-19 as oxygen therapy (major treatment intervention), antivirals (lopinavir, ritonavir, ribavirin, chloroquine).

Convalescent plasma can be used to help people recover from viral infection without the occurrence of severe adverse events⁽¹⁰⁾. The WHO confirmed that the rational, correct and consistent use of personal protective equipments also helps to reduce spread of pathogens. PPE effectiveness depends strongly on adequate and regular supplies, advocate staff training, appropriate hand hygiene and appropriate human behavior. In conclusion Covid-19 has become a big risk to the general population & health care workers worldwide. However scientific research is growing to develop a Covid-19 vaccine & therapeutics for controlling the deadly Covid-19. Hence health education on knowledge for disease prevention & control is also important to control & reduce the Covid-19 infection rate. Further research should be directed towards the study of Covid-19 on animal models for analyzing replication, transmission & pathogenesis in humans⁽¹⁰⁾.

2. MATERIAL AND METHODS

A Quantitative approach was adopted to determine the effectiveness of structured teaching program in terms of knowledge. The research design used for the study was pre - experimental one group pre-order test and post- test design. Variables are qualities, properties or characteristics of person, things or situation that change or vary. The present study was aimed at understanding the effectiveness of an intervention i.e. Structured Teaching Programme on knowledge of subjects regarding Covid-19. In the present study the independent variable was the structured teaching programme regarding covid-19 and the dependent variable was the knowledge of GNM 2nd year students regarding covid-19. The present study was conducted at *T.K. institute of paramedical sciences lawaypora Srinagar*. The criteria for selecting the setting were feasible to conduct the study, availability of sample and familiarity of researcher with the settings. In this study sample consists of 42 GNM 2nd year students. Simple random technique was used to select the technique. In the present, study, the data collection instrument used was structured knowledge questionnaire to assess the knowledge regarding Covid-19

3. ANALYSIS AND INTERPRETATION

Section 1: Description related to distribution of respondents as per their demographic data.

Table 1: frequency and percentage distribution of respondents as per age

N=42

Age	Frequency	Percentage (%)
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18-20	26	61.9%
20-22	11	26.2%
22-24	1	2.4%
24-26	4	9.5%

Table 1: shows that highest percentage 61.9% of the respondents were in the age group of 18 – 20 years, 26.2% of respondents belong to 20 – 22 years, 2.4% of respondents belong to 22 – 24 years and 9.5% belong to 24 – 26 years of age

Table 2

Frequency and percentage distribution of respondents as per their gender

N=42

Gender	Frequency	Percentage (%)
Male	4	9.5
Female	38	90.5

Table 2 shows that 90.5% of the respondents were females and only 9.5% of the respondents were males.

Table 3

Frequency and percentage distribution of the respondents as per family annual income

(N=42)

Family income	Frequency	Percentage
10000-20000	4	9.5%
20001-30000	1	2.4%
30001-40000	7	16.7%
>40000	30	71.4%

Table 3 shows that 71.4% of the respondents belonged to > 40000 income group, 16.7% of the respondents belonged to 30001-40000 income group, 9.5% of the respondents belonged to 10000-20000 income group & 2.4% of the respondents belonged to 20001-30000 income group.

Table 4

Frequency and percentage distribution of respondents as per their residence

Residence	Frequency	Percentage
Rural	28	66.7
Urban	14	33.3

Table 4 shows that 66.7% of the respondents belonged to rural areas while as 33.3% of the respondents belonged to urban areas.

Table 5

Frequency and percentage distribution of respondents as per source of information

Source of information	Frequency	Percentage
Internet	29	69
Books	2	4.8
Media	11	26.2

Table 5: reveals that 69.0% had gained knowledge through use of internet, 26.2% of the respondents had gained knowledge through media & 4.8% of respondents had gained knowledge through books.

SECTION 2:- Description of pre-test level of knowledge regarding COVID -19 among GNM 2nd year students:

The level of knowledge was assessed by using structured knowledge questionnaire and is presented in the form of tables and figures.

Table 6

Frequency and percentage distribution of respondents as per their level of knowledge during pre-test regarding knowledge about covid-19.

N=42

Score Level (N= 42)	PRETEST (F%)
Inadequate Knowledge.(1-13)	10(23.8%)
Moderately Adequate Knowledge.(14-26)	32(76.2%)
Adequate Knowledge.(27-40)	0(0%)
Maximum Score=40 Minimum Score=0	

Table 6 shows that maximum (76.2%) of the respondents having moderately adequate knowledge (14-26) regarding covid-19, (23.8%) of the respondents were having inadequate knowledge (1-13) & (0%) of the respondents were having adequate knowledge.

SECTION 3rd: Description of post level of knowledge regarding COVID-19 among GNM 2nd year students:

Table 7

Frequency and percentage distribution of respondents as per their level of knowledge during post-test regarding covid-19.

Table No 7: Table Showing Level of Scores

Score Level (N= 42)	POSTTEST (F%)
Inadequate Knowledge.(1-13)	0(0%)
Moderately Adequate Knowledge.(14-26)	3(7.1%)
Adequate Knowledge.(27-40)	39(92.9%)
Maximum Score=40 Minimum Score=0	

Table 7 shows that maximum (92.9%) of the respondents having adequate level of knowledge regarding covid-19

SECTION 4th: comparison between pre-test & post-test level of knowledge scores among GNM 2nd year students.**Table 8: shows mean±SD, mean%, range, mean difference, significance between pre-test and post-test.**

				N= 42		
Paired T Test	Mean± S.D.	Mean %	Mean Diff.	Paired T Test	P value	Table Value at 0.05
PRE TEST KNOWLEDGE	16.64± 4.394	41.60	15.880	50.19 *Sig	<0.001	2.02
POST TEST KNOWLEDGE	32.52± 3.808	81.30				
** Significance Level 0.05 Maximum=40 Minimum=0						

Table 8 shows that there is significant difference between pretest and post -test level of knowledge regarding covid-19 among GNM 2nd year students at 0.05 level of significance. Hence null hypothesis (H_0 - there is no significant difference between pretest and post-test level of knowledge regarding covid-19 among GNM 2nd year students) is rejected and research hypothesis (H_1 – there is significant difference between pre-test and post-test level of knowledge among GNM 2nd year students) is accepted

4. DISCUSSION

OBJECTIVE 1

To identify the usage of Social Network among adolescents.

The findings of this study revealed that maximum number of subjects 90 (75.0%) were non dependent users, 25(20.8%) subjects were dependent users and 5(4.2%) subjects were non users. Mean Social Network usage score was 14.01, standard deviation was 5.216, median was 14, maximum score was 27 and mean percentage was 48.3.

The present study findings are similar to the findings of a study conducted by **Adoasi (2015)**⁶ on 200 students to assess the level of social media addiction among students of the University of Ghana. Findings revealed that 19% of the respondents were not within the social media addiction bracket, 1% of the respondents were severely addicted and **80%** of the respondents were **mildly addicted** to social media.

The present study findings are further supported by the findings of study conducted by **Alabi (2012)**⁷ to assess level of addiction to Facebook among selected undergraduate students of nigerian universities. Data was collected using the Facebook Addiction Symptoms Scale (FASS) in the form of a questionnaire. Findings of the study revealed a **low level of addiction** among university undergraduates.

The present study findings are further supported by the findings of study conducted by **Murat, Ahmet, Mehmet (2016)**⁸ to determine the level of social media addiction among young people in Turkey The study was conducted on 271 students between the ages of 14-18 years. Findings showed that low addiction level among 14-year age group increases with age up to 17 years, and the level decreases in 18-year age group.

OBJECTIVE 2

To identify the Narcissism among adolescents using Social Network.

The findings of this study revealed that maximum number of subjects 74(61.7%) had medium Narcissism, 29(24.2%) subjects had high Narcissism and 17(14.2%) had low Narcissism. Mean Narcissism score was 6.32, standard deviation was 2.936, median was 6, maximum score was 13 and mean percentage was 39.5.

The present study findings are similar to the findings of a study conducted by **Panek, Konrath(2012)**⁹ to assess the relationship between Narcissism and Social Networking site use among college students. Findings revealed that posting on twitter was associated with the **moderate narcissistic personality** while Facebook posting was associated with the exhibitionism component.

The present study findings are further supported by the findings of study conducted by **Alloway, Runac, Qureshi, and Kemp (2014)**¹⁰ to investigate the relationship among the use of a highly popular Social Networking site_Facebook, empathy, and Narcissism among adults. Findings indicated that certain aspects of Facebook use, such as the photo feature, were linked to **average Narcissism**.

OBJECTIVE 3**To correlate the usage of Social Network with Narcissism among the Adolescents.**

The findings of the present study showed that there was significant correlation between usage of Social Network and Narcissism scores ($r = 0.207$, $P = 0.023$).

The present study findings are similar to the findings of a descriptive study conducted by **Nevils, Massie (2014)¹¹** to assess the relationship between Social Network usage and Narcissism. Findings revealed that there was a **significant correlation** between Social Network usage and Narcissism such that those who used Social Networks more frequently scored higher on grandiose Narcissism.

The findings are further supported by the findings of study conducted by **Malik, Maheen(2013)¹²** to investigate the relationship between Facebook addiction, Narcissism and self-esteem among students in University of Sargodha, Punjab, Pakistan. Findings revealed that Facebook addiction was **positively correlated** with Narcissism($r=0.20$; $p<0.05$)

The findings are further supported by the findings of study conducted by **McKinney, Kelly, Duran(2012)¹³** on 233 college students to predict whether the narcissistic personality is developed because of excessive use of social media sites or not. Results showed that people use Facebook and other social media sites to inflate their ego via sharing their photos and stories in their friends' circle which means excessive use of social media is **correlated** to narcissistic personality.

OBJECTIVE-4**To determine the association of Usage of Social Network among the adolescents with their selected demographic variables (Gender, Socio-Economic Status and Residence).**

The findings of the present study revealed that there was no significant association of usage of Social Network with gender and socio economic status whereas as significant association was found with residence.

The present study findings are similar to the findings of a study conducted by **Sandeep, Marwaha (2015)¹⁴** to explore the digital scenes in India who showed that there was significant association of usage of Social Network with residence(Urban and Rural).

OBJECTIVE-5**To determine the association of Narcissism among the adolescents with their selected demographic variables (Gender, Socio-Economic Status and Residence).**

The findings of the present study revealed that there was no significant association of Narcissism among subjects with their selected demographic variables such as gender, socio economic status and residence.

The present study findings are similar to the findings of a study conducted by **Rossier, Abdoulaye, Franz (2012)¹⁵** to identify the structure and expression of normal and abnormal personality in Burkina Faso. Findings revealed that there was no significant association of Narcissism among subjects with their selected demographic variables such as gender, socio economic status and residence.

5. SUMMARY

The findings of the study are as per the objectives & hypothesis, The present study was aimed to assess the effectiveness of structured teaching program on awareness regarding COVID-19 among GNM 2ND year students of T.K institute of paramedical science in order to achieve the objectives of the study, pre-experimental 1 group pre-test post-test research design was adopted. Simple random sampling technique was used to select the sample. The data was collected from 42 subjects through structured knowledge questionnaire before & after the administration of structured teaching programme on knowledge regarding COVID-19. The data was collected during Oct.2020 & was analyzed keeping in view the objectives of the study.

OBJECTIVES

- 1) To assess the pre-interventional knowledge regarding COVID-19 among GNM 2nd year students.
- 2) To assess the post-interventional knowledge regarding COVID -19 among GNM 2nd year nursing students.
- 3) To compare pre-interventional & post interventional knowledge regarding COVID-19 among GNM 2nd year students

HYPOTHESES

Ho: - there is no significant difference between pre-interventional level of knowledge and Post interventional level of knowledge regarding COVID- 19 among GNM 2nd year students of T.K institute of paramedical sciences.

H1:-there is significant difference between pre-interventional & post-interventional level of knowledge regarding COVID-19 among GNM 2nd year students of T.K institute of paramedical sciences.

TOOL OF THE STUDY

Structured knowledge questionnaire were used, it consists of 2 parts

SECTION 1ST: Gives information about respondents i.e. age, gender, family annual income, Residence,& source of information regarding COVID-19.

SECTION 2ND:- Structured knowledge questionnaire

Contains different questions about: Introduction, definition, etiology, epidemiology, clinical manifestations, transmission, diagnosis, treatment & prevention.

FINDINGS OF THE STUDY

Demographic data:

- Majority of the respondents (61.9%) were in age group of 18-20 years , (26.2%) were in age group of 20-22 years, (2.4%) were in age group of 22 – 24 years & (9.5%) were in the age group of 24-26 years.
- Majority of the respondents 9.5% were females and 9.5% were males.
- Majority of the respondents 71.4% belongs to family annual income of > 40,000, 16.4% belongs to the family income of 30001 – 40000 , 2.4% belongs to family income of 20001-30000, & 9.5% belongs to 10000- 20000.
- Majority of the respondents 66.7% belonged to rural areas & 33.3% belonged to urban areas.
- Majority of the respondents 69.0% source of information were from internet, 26.6% source of information were from Media & 4.8% source of information were from books.

KNOWLEDGE DATA

- The mean Post-test level of knowledge is (32.52±3.808) was higher than mean Pre-test level of knowledge (16.64±4.394) with mean difference of 15.880.

6. CONCLUSION

Nurses have an important role in creating awareness and knowledge regarding covid-19 in both clinical and community areas. In the present study the mean post test level of knowledge was higher than mean pretest level of knowledge. So it shows the effectiveness of structured teaching programme. There was significant difference between pre-test and post-test level of knowledge.

RECOMMENDATIONS

- A similar study can be conducted on large sample of other academic students to generalize the results.
- A similar study can be conducted on staff nurses of different hospitals of Kashmir to generalize the results
- A SIM(self-instruction module) can be developed rather than structured teaching programme
- More emphasis should be given on practical skills among GNM students.
- Staff development programmes based on procedures should be organized.
- A comparative study can be conducted on the staff nurses working in state hospitals & district hospitals.
- A similar study can be conducted with the help of video assisted devices.

7. NURSING IMPLICATIONS

The findings of the study have implications in four areas

- **Nursing Education:** The present study emphasizes enhancement in the knowledge of student nurses regarding awareness about Covid-19. In order to achieve this, Student nurses in different areas should be educated about Covid-19.Nursing schools, colleges and teachers should come forward and encourage the students to provide information regarding the knowledge of Covid-19.
- **Nursing Administration:** Since the literature revealed inadequacy on knowledge of nursing personels regarding Covid-19 infection. Continuous education programs, orientation and short term preventive measures should be implemented to influence the knowledge of students. Administration should encourage the students to participate in the workshops, conferences, seminars regarding knowledge of Covid-19 infection. Guidelines related to prevention of Covid-19 should be displayed in all the units of the hospital. Hence it is the responsibility of the nurse leader to organize or make arrangements in the hospital. Arrangements for supervision and evaluation of knowledge of students on regular basis are essential for nursing administration.

- **Nursing Service:** Nurses are the key persons of the health team, who play a major role in the health promotion and maintenance. Nursing is the practicing profession, so the researcher generally integrates findings into practice. The students needs to be involved in identifying the patients who are in need of knowledge regarding Covid-19. Health information and knowledge on prevention of Covid-19 can be imparted through various methods like mass media, planned teaching programme.
- **Nursing Research:** The essence of research is to build a body of knowledge in nursing as it is an evolving profession. The findings of present study serve as the basis of the professionals and the students to conduct further studies the generalization of the study can be made by the replication of the study. All nursing institutes must join hands to provide scientifically listed material of programme to evolve a time bond plan for the best knowledge regarding Covid-19.

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