

A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge and Practices regarding COVID-19 and its Management among Nursing Students of Selected Nursing Colleges of District Kangra (H.P)

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Abstract: *Good knowledge and appropriate practices about COVID-19 among healthcare professionals are necessary to protect themselves and for successful disease control and prevention. In this study, emphasis is on the knowledge and practices of nursing students regarding COVID-19 and its management. A quantitative research approach and pre-experimental research design were adopted to conduct the study. Sample of 60 nursing students of selected nursing colleges of District Kangra H.P. was selected by using non probability purposive sampling technique. A self-structured knowledge questionnaire and checklist was used to assess the level of knowledge and practices. Analysis of collected data was done according to the study's objectives, and data was analysed using descriptive and inferential statistics. The study shows that mean post test knowledge score was slightly higher than the mean pre-test knowledge score i.e. mean post-test was 37.05 and mean pre-test was 23.7. The mean post test practices score was slightly higher than the mean pre-test practices score i.e. mean post-test was 13.25 and mean pre-test was 9.17. It was observed that there was significant relationship between post-test knowledge and post-test practices. The result was highly significant hence it was concluded that structured teaching programme was an effective strategy in improving the knowledge and practices of nursing students regarding covid-19 and its management.*

Keywords: Effectiveness, structured teaching programme, COVID-19 and its management, Knowledge, Practices

1. Introduction

Corona virus disease 2019 (COVID-19) is defined as illness caused by a novel corona virus called severe acute respiratory syndrome corona virus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. The World Health Organization (WHO) used the term 2019 novel corona virus to refer to a corona virus that affected the lower respiratory tract of patients with pneumonia in Wuhan, China on 29 December 2019. The World Health Organization announced that the official name of the 2019 novel corona virus is (COVID-19). And the current reference name for the virus is severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). It was reported that a cluster of patients with pneumonia of unknown cause was linked to a local Hunan South China Seafood Market in Wuhan, Hubei Province, China in December 2019. It was reported to the World Health Organization (WHO) on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic in 2009.² Standard recommendations to prevent infection spread include regular hand washing, covering mouth and nose when coughing and sneezing. Avoid close contact with anyone showing symptoms of respiratory illness such as coughing and sneezing. Today's the nursing students helping

people and family members for corona related management and awareness.

2. Need for Study

The worldwide 5,370,375 confirmed cases and 344,454 deaths were registered by the World Health Organization (WHO, 26th May 2020). After the COVID outbreak in Wuhan, China, it created a massive loss of life in other countries like Italy, Iran, France and Spain. All the affected countries are situated in national lockdown, rapid test and quarantines. COVID-19 first case was registered in China. But after this pandemic was spreading worldwide and gradually it was infected in other countries. The USA is the most affected countries and the total cases were 1,706,227 and overall 99,807 persons were killed by this deadliest virus. In corona virus pandemic, world health condition was breakdown. In India, a huge amount of people was infected due to coronavirus. A study was conducted to assess the knowledge and perceptions about COVID-19 among the medical and allied health science students in India, an online cross-sectional survey a web-based cross sectional survey was conducted during February and March 2020. A 24-item survey was developed and randomly distributed among the study population. The total, 97.95% (715/730) participants completed the survey. High proportion of students were from pharmacy (45.73%) followed by medical (22.52%), physiotherapy, nursing and dental background. The results shows that majority of participants were having adequate

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knowledge while about 18% had partial knowledge about the symptoms of severe COVID-19 cases. This study concluded that the COVID-19 cases are rapidly increasing worldwide, it is essential to improve the knowledge and beliefs among general public to prevent its spread. Healthcare students with their education background and basic understanding about COVID-19 can play a significant role by making community people aware about the seriousness of this pandemic situation. Nursing students are the future health care providers. So the quality of training and teaching definitely affect the outcomes. During the COVID-19 pandemic crisis hospitals need more assistance than ever to manage the influx of COVID-19 patients and bringing additional skilled nurses into the workforce may support and enhance health system response to this disease. Many countries allowed nursing students and retired nurses to join the front lines in the fight against COVID-19.

Objectives

- To assess the pre-test knowledge and practices scores regarding COVID-19 and its management among nursing students.
- To assess the post- test knowledge and practices scores regarding COVID-19 and its management among nursing students.
- To compare the pre-test and post-test knowledge scores regarding COVID-19 and its management among nursing students.
- To compare the pre-test and post-test practices scores regarding COVID-19 and its management among nursing students.
- To determine the relationship between knowledge and practices regarding COVID-19 and its management among nursing students.
- To find out the association of post- test knowledge scores of nursing students with their selected socio demographic variables.
- To find out the association of post- test practices scores of nursing students with their selected socio demographic variables.

Research Design: A Pre-experimental : One – group pre-test – post-test design is used because it involved the manipulation of independent variable to observe the effect on dependent variable.

Population: The population of the present study was nursing students.

Target population: The target population was GNM and B.Sc. nursing students.

Accessible population: In this study accessible population was nursing students studying in selected nursing colleges of District Kangra (H.P). Grace School Of Nursing, Kangra (H.P) and Guru Dronacharya College Of Nursing, Kangra (H.P) and fulfills the selection criteria.

Sample and Sampling Technique:

- In this study the sample was GNM and B.Sc. nursing students of selected nursing colleges of District Kangra, H.P.
- In this study sample was selected by Non probability

purposive sampling technique.

- In this study sample size constitutes 60 nursing students.

Criteria for Sample Collection:

A. Inclusion Criteria:

This study includes GNM and B.Sc. nursing students:

- Who were willing to participate in the study
- Who were present at the time of data collection

B. Exclusion Criteria:

This study excludes nursing students:

- Who were not willing to participate in the study.
- Who were not available at the time of data collection.
- Post Basic nursing and M.Sc. nursing students.

Description of Tool:

It consisted of two Parts: (**Part –I and Part-II**):

Part I: Section A (Socio demographic variables) , Section B (Self structured knowledge questionnaire)and Section C(Self structured practice checklist) and Part-II(Structured Teaching Programme).

Section A: Socio demographic variables: consist of 6 items for obtaining an information about the selected background factor such as Age (In years), Professional course, Clinical exposure, Have you attended any education programme related to COVID-19 and its management, Have you ever provided care to the COVID-19 patient in past, Previous knowledge regarding COVID-19 and its management, If Yes, source of knowledge.

Section B: Self structured knowledge questionnaire: It consists of self structured knowledge questionnaire which seeks information regarding covid-19 and its management. It consists of 40 items of multiple-choice questions where total score is 40.

Section C: Self structured practice checklist: It consists of self structured practice checklist which seeks practices of nursing students regarding covid-19 and its management. It consist of 14 statements where total score is 14.

Part- II:

Structured Teaching Programme: It consists of systematically formulated structured teaching programme to provide information regarding covid-19 and its management.

Scoring Pattern: The self-structured knowledge questionnaire consisted of 40 questions. In which right answer was documented as correct one mark and wrong were documented were as zero marks. The complete range was 0-40.

Knowledge Score	Percentage	Range
Inadequate Knowledge	≤ 33%	0-13
Moderate Knowledge	34-66 %	14-26
Adequate Knowledge	≥ 67%	27-40

Scoring Pattern: The self-structured practice checklist consisted of 14 statements. In which right answer was documented as correct one mark and wrong were documented were as zero marks. The complete range was 0-14.

Practices Score	Percentage	Range
Poor Practices	≤ 29%	0-4
Average Practices	30-64 %	5-9
Good Practices	≥ 65%	10-14

To ensure content validity of the tool regarding the relevance of item, the tool was submitted to 10 experts of different fields of nursing. Experts are requested to judge the items of tool for clarity, relevance, appropriateness, relatedness and meaningfulness for the purpose of the study and give their opinion and suggestion on the content, its coverage, organization. There were almost 100% agreement of the items in the questionnaire and checklist; however there were few suggestions to modifying some of the questions and statements, and they were incorporated in final draft.

Reliability of tool was computed by applying Split-half methods with Karlpearson's Correlation Coefficient formula. The reliability of the self structured knowledge questionnaire was 0.82 and self structured practice checklist was 0.85. So the tool was reliable. After obtaining formal administrative approval from the principal of grace college of nursing and guru Dronacharya college of nursing in district Kangra (H.P). Final study was conducted in month of august 2022. The aim of study was to evaluate the effectiveness of structured teaching programme on knowledge and practices of nursing students regarding covid-19 and its management. After obtaining permission from concerned authorities, the investigator develops rapport and take consent from nursing students. Total 60 sample were selected by non-probability purposive sampling technique. After getting consent from the sample who met the inclusion criteria.

- 1) **Pre-test:** On 1st day pre-test was administered to nursing students in the form of self-structured knowledge questionnaire and self structured practice checklist.
- 2) Provide self structured teaching programme to the study samples.
- 3) **Post-test:** Post-test was conducted on the 7th day of pre-test with the same set of self-structured knowledge questionnaire and self structured practice checklist.

The data were compiled and analysis was done by using descriptive and inferential statistics.

3. Results

Section I: Distribution of Socio Demographic Variables

Table 1: Frequency (f) and percentage (%) distribution of nursing students with their selected socio demographic variables

S.No.	Demographic Variables	Frequency	Percentage
1	Age (yrs)		
	a) 17-18 Years	2	3.30%
	b) 19-20 Years	41	68.30%
	c) 21-22 Years	14	23.30%
2	d) 23 Years and above	3	5.00%
	Professional Course		
3	a) GNM	30	50.00%
	b) B.Sc. Nursing	30	50.00%
4	Clinical Exposure		
	a) Yes	54	90.00%
	b) No	6	10.00%
5	Attended Education programme		
	a) Yes	32	53.30%
	b) No	28	46.70%
6	Provided Care to Patient		
	a) Yes	19	31.70%
	b) No	41	68.30%
7	Previous Knowledge		
	a) Yes	56	93.30%
	b) No	4	6.70%

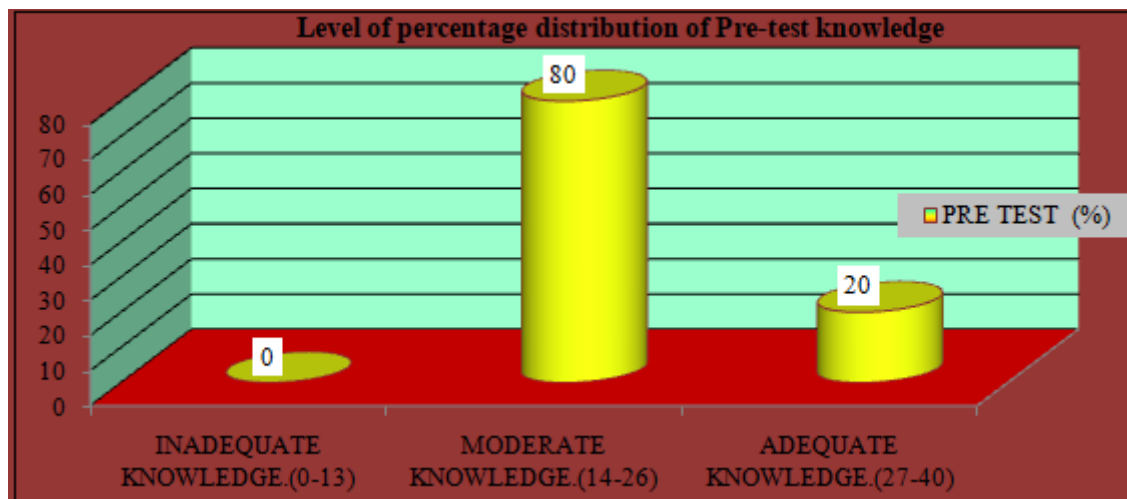
If Yes, Source of Knowledge		
a) Mass media	45	75.00%
b) Peer Group	3	5.00%
c) Family	5	8.30%
d) Hospital Staff	3	5.00%

Section II: (a) Pre-Test knowledge scores regarding COVID-19 and its management among nursing students.

Table 2: Frequency and percentage distribution of pre-test knowledge scores regarding COVID-19 and its management among nursing students, (N=60)

Level of Knowledge	Score	f	(%)
Inadequate	0-13	0	0%
Moderate	14-26	48	80%
Adequate	27-40	12	20%

Maximum Score=40, Minimum Score=0

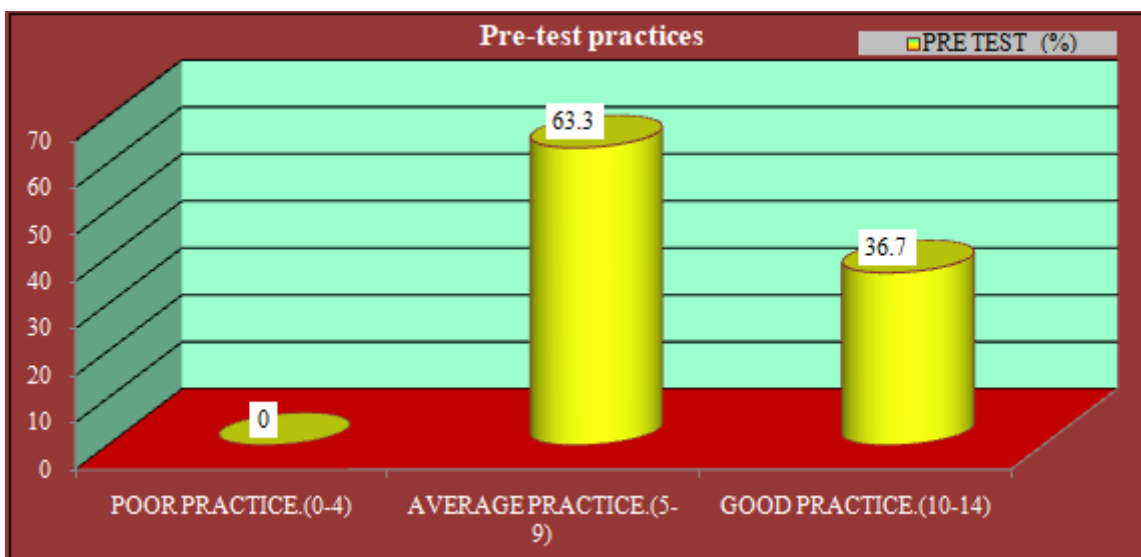


Section II: (b) Pre-test practices score regarding COVID-19 and its management among nursing students.

Table 3: Frequency and percentage distribution of pre-test practices score regarding COVID-19 and its management among nursing students (N= 60)

Level of Practices	Score	f	(%)
Poor	0-4	0	0%
Average	5-9	38	63.3%
Good	10-14	22	36.7%

Maximum Score=14, Minimum Score=0

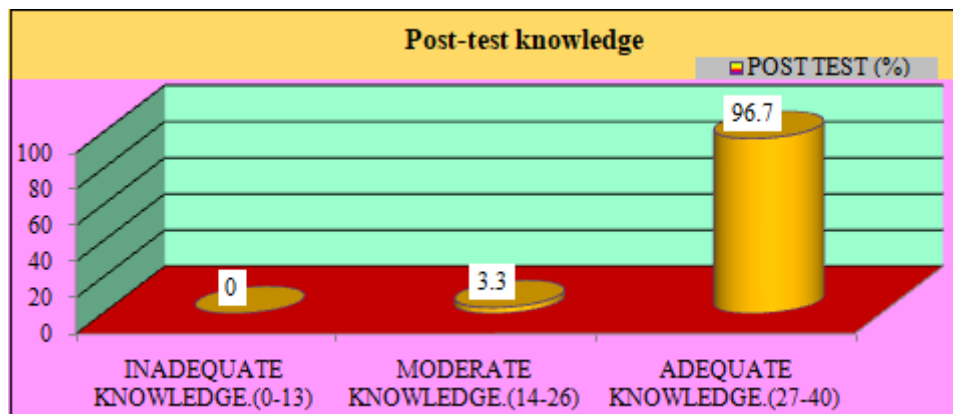


Section III: (a) Post-test knowledge scores regarding COVID-19 and its management among nursing students.

Table 4: Frequency and percentage distribution of post-test knowledge scores regarding COVID-19 and its management among nursing students (N=60)

Level of Knowledge	Score	f	(%)
Inadequate	0-13	0	0%
Moderate	14-26	2	3.3%
Adequate	27-40	58	96.7%

Maximum Score=40 Minimum Score=0

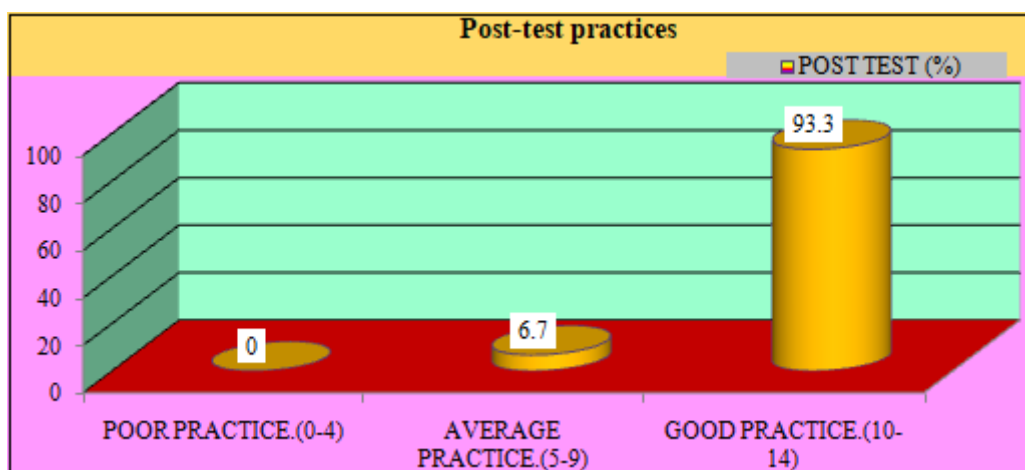


Section III: (b) Post-test practice scores regarding COVID-19 and its management among nursing students.

Table 5: Frequency and percentage distribution of post-test practices score regarding COVID-19 and its management among nursing students, (N= 60)

Level of Practices	Score	f	(%)
Poor	0-4	0	0%
Average	5-9	5	6.7%
Good	10-14	56	93.3%

Maximum Score=14 Minimum Score=0

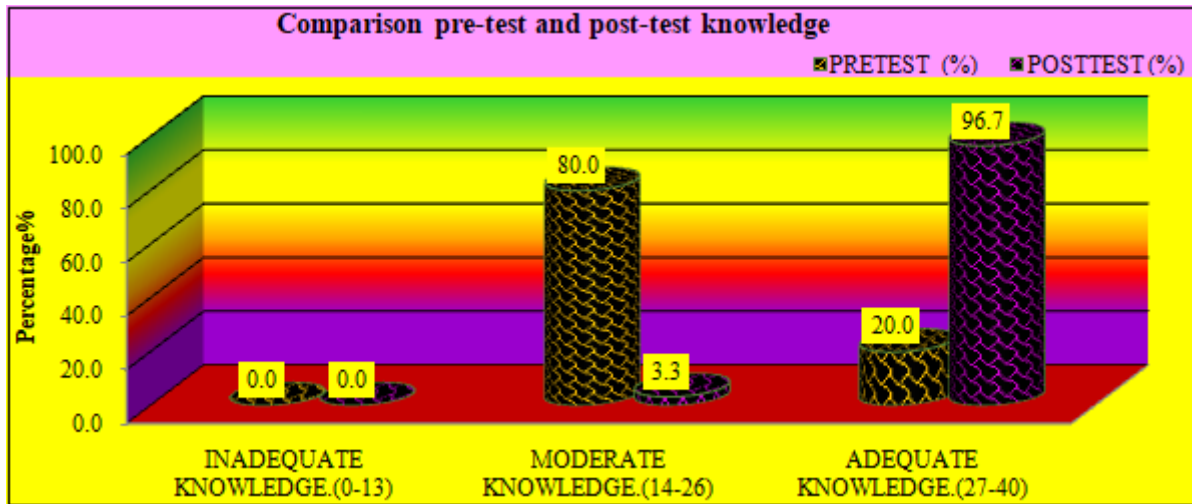


Section IV: (a) Comparison between the pre-test and post-test knowledge scores regarding COVID-19 and its management among nursing students.

Table 6: Comparison between pre-test and post-test knowledge scores regarding COVID-19 and its management among nursing students (N= 60)

Level of Knowledge	Score	Pre test f (%)	Post test f (%)
Inadequate	0-13	0 (0%)	0 (0%)
Moderate	14-26	48 (80%)	2 (3.3%)
Adequate	27-40	12 (20%)	58 (96.7%)

Maximum score=40 Minimum score=0

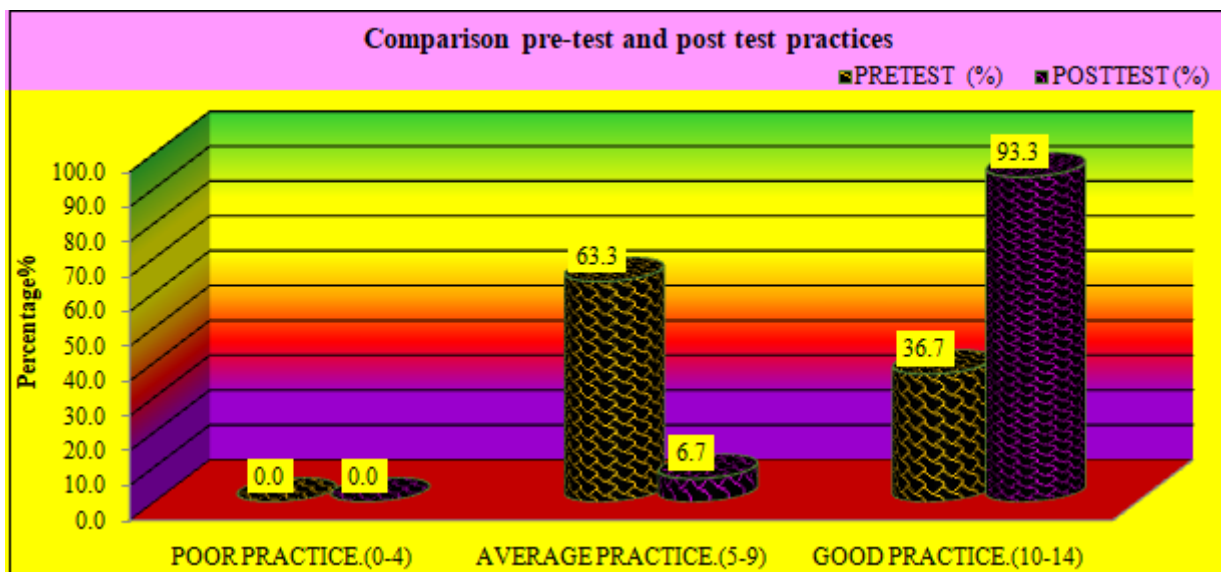


Section IV: (b) Comparison between the pre-test and post-test practices score regarding COVID-19 and its management among nursing students.

Table 7: Comparison between pre-test and post-test practices score regarding COVID-19 and its management among nursing students, (N= 60)

Level of Practices	Score	Pre test f (%)	Post test f (%)
Poor	0-4	0 (0%)	0 (0%)
Average	5-9	38 (63.3%)	4 (6.7%)
Good	10-14	22 (36.7%)	56 (93.3%)

Maximum score=14 Minimum score=0



Section V: Relationship between knowledge and practices regarding COVID-19 and its management among nursing students.

Table 8: Correlation between knowledge and practices regarding COVID-19 and its management among nursing students

Scores	Spearman correlation Coefficient	P value
Post-test Knowledge Scores	0.770	<0.001
Post-test Practice Scores		

S-significant (p< 0.05)

NS-Not significant (>0.05)

Section VI (a): Association of post- test knowledge scores of nursing students with their selected socio demographic variables.

Table 9: Chi square showing association of post-test knowledge scores among nursing students with their selected socio-demographic variables, N=60

Socio-demographic Variables	Adequate Knowledge	Moderate Knowledge	Inadequate Knowledge	df	χ^2	P Value
1. Age (in Years)						
17-18	02	00	00	03	0.905 ^{NS}	0.824
19-20	40	01	00			
21-22	13	01	00			
23 and above	03	00	00			
2. Professional Course						
GNM	28	02	00	01	2.069 ^{NS}	0.150
B.Sc. Nursing	30	00	00			
3. Clinical Exposure						
Yes	52	02	00	01	0.230 ^{NS}	0.632
No	06	00	00			
4. Attended Education Programme						
Yes	31	01	00	01	0.009 ^{NS}	0.923
No	27	01	00			
5. Provided Care to Patient						
Yes	19	01	00	01	0.959 ^{NS}	0.327
No	39	02	00			
6. Previous Knowledge						
Yes	54	02	00	01	0.148 ^{NS}	0.701
No	04	00	00			
If yes, source of knowledge						
Mass media	43	02	00	02	0.507 ^{NS}	0.917
Peer Group	03	00	00			
Family	05	00	00			
Hospital Staff	03	00	00			

*S=Significant

NS=Not Significant

Section VI (b): Association of post- test practices score of nursing students with their selected socio demographic variables**Table 10:** Chi square showing association between post-test practices scores among nursing students with their selected socio-demographic variables.

Socio-demographic Variables	Good Practices	Average Practices	Poor Practices	df	χ^2	P Value
1. Age (in Years)						
17-18	02	00	00	03	0.390 ^{NS}	0.942
19-20	38	03	00			
21-22	13	01	00			
23 and above	03	00	00			
2. Professional Course						
GNM	26	04	00	01	4.286*	0.038
B.Sc.Nursing	30	00	00			
3. Clinical Exposure						
Yes	50	04	00	01	0.476 ^{NS}	0.490
No	06	00	00			
4. Attended Education Programme						
Yes	29	03	00	01	0.808 ^{NS}	0.369
No	27	01	00			
5. Provided Care to Patient						
a) Yes	19	00	00	01	1.986 ^{NS}	0.159
b) No	37	04	00			
6. Previous Knowledge						
Yes	52	04	00	01	0.306 ^{NS}	0.580
No	04	00	00			
If yes, source of Knowledge						
Mass media	41	04	00	03	1.053 ^{NS}	0.788
Peer Group	03	00	00			
Family	05	00	00			
Hospital Staff	03	00	00			

*S=Significant

NS=Not Significant

4. Discussion

The purpose of the study was to assess the effectiveness of structured teaching programme on knowledge and practices

regarding COVID-19 and its management among nursing students in selected nursing colleges of District Kangra (H.P). This chapter relates the findings of the present study in accordance with the studies done earlier.

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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 best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. Today's nursing students help people and family members for corona-related awareness. Students have better knowledge about corona pandemic disorder. Reported by (Kulthe Vikrant 2020).

Analysis of the present study indicated a significant effect of structured teaching programme on knowledge and practices regarding COVID-19 and its management among nursing students. The result of the present study showed that structured teaching programme help in increasing the mean post-test knowledge score was slightly higher than the mean pre-test knowledge score i.e. mean post-test was (37.05) and mean pre-test was (23.70). In the practice mean post-test score was higher than the mean pre-test practice score i.e. the mean post-test was (13.25) and mean pre-test was (9.17). These findings were consistent with the finding of Ahmed Ayed Manal Mohamed that a structured teaching program is effective in improving knowledge, attitude and practices among secondary school students regarding COVID-19.

5. Conclusion

The results from this study reveal that implementation of structured teaching programme to assess the knowledge and practices regarding COVID-19 and its management was adequate. As nursing students were easily attracted and show interest towards structured teaching programme. And the chi square value had significant association of practice score only in selected demographic variable i.e., professional course of nursing students so it is considered that professional course of nursing students also helpful in improving practices of nursing students regarding COVID-19 and its management but the chi square value had not significant association of knowledge scores regarding COVID-19 and its management among nursing students with selected demographic variables so it is concluded that selected demographic variables had no effect on nursing students knowledge regarding COVID-19 and its management among nursing students. We hypothesized that providing educational programme with the help of structured teaching programme may improve the knowledge and practices regarding COVID-19 and its management among nursing students. This hypothesis was supported by the findings of the current study as scores of knowledge and practices improved significantly after interventional educational programme. Hence it was concluded that the structured teaching programme is an effective strategy for improving nursing students knowledge and practices regarding COVID-19 and its management. In the light of the above findings and personal experience of the investigator the following recommendations are offered.

- The study can be replicated on the large sample to validate and generalize its findings.
- A study can be conducted to assess the attitude of the nursing students regarding covid-19.

- Health education to the nursing students regarding covid-19 and its management should be provided.
- A cross-sectional study can be conducted on knowledge practice and attitude of the people regarding covid-19 and its management.
- A similar study can be conducted on different population in different setting.

References

- [1] David J Cennimo, MD, et al. Coronavirus Disease 2019 (COVID-19); Medscape. [2021 Jun 29]; Available from: <https://emedicine.medscape.com/article/2500114-overview>.
- [2] Painuli D et al Elsevier Public Health Emergency covid-19. PMC8138040. Published online 2021 May 21. doi: 10.1016/B9780128245361.000277; Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8138040/>.
- [3] Sasmita Poudel Adhikari, Sha Meng, et al. Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. [2020 March 17];(29); Available from: <https://idpjournal.biomedcentral.com/articles/10.1186/s40249-020-00646-x>.
- [4] Niuniu Sun, Luoqun Wei, et al. A qualitative study on the psychological experience of caregivers of COVID-19 patients. Elsevier Public Health Emergency Collection; [2020 Apr 8]; Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7141468/>.
- [5] Koichi Yuki, Miho Fujiogi, et al. COVID-19 pathophysiology: A review Clin Immunol. 2020 Jun; 215: 108427. Published online 2020 Apr 20. doi: 10.1016/j.clim.2020.108427; Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7169933/>.
- [6] Patient Care & Health Information Diseases & Conditions Coronavirus disease 2019 (COVID-19) "MayoClinic.org," "Mayo Clinic Healthy Living 1998-2021 Mayo Foundation for Medical Education and Research (MFMER). [2021 Aug. 04]; Available from: <https://www.mayoclinic.org/diseases-conditions/coronavirus/symptoms-causes/syc-20479963>.

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