



“A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF WORKSHOP REGARDING LONG TERM CARDIOVASCULAR OUTCOMES OF COVID- 19 IN TERMS OF KNOWLEDGE AMONG NURSING STUDENTS AT SELECTED COLLEGE OF NURSING, TANDA DISTRICT MANDI (H.P.)”

Authors: - Ms. Minal Kumari¹, Mr. (Professor) · Ms. Kamla Devi², Ms. Kritika Sharma³, Ms. Madhvi Sharma⁴, Ms. Narvada Devi⁵

¹Assistant Professor, Dept. of Child Health Nursing, Abhilashi College of Nursing, Mandi, Himachal Pradesh 175008.

^{2,3,4,5} Students of P.B.B.Sc. 2nd year, Dept. of Nursing, Abhilashi College of Nursing, Mandi, Himachal Pradesh 175008

ABSTRACT

Cardiovascular disease (CVD) patients are more susceptible to severe COVID-19. COVID-19 can cause CVD, including myocardial injury, arrhythmias, acute coronary syndrome and venous thromboembolism. COVID-19 infection also affects the inner surfaces of veins and arteries, which can cause blood vessel inflammation, damage to very small vessels and blood clots, all of which can compromise blood flow to the heart or other parts of the body. Several medications used for the treatment of COVID-19 have uncertain safety and efficacy profiles. **Aims and objectives:** The study aim to assess the effectiveness of workshop regarding Long Term Cardiovascular Outcomes of COVID- 19, among nursing students, to assess the knowledge regarding Long Term Cardiovascular Outcomes of COVID-19 among nursing students and to determine the relationship between knowledge regarding Long Term Cardiovascular Outcomes of COVID-19 with their selected demographic variables. **Methodology:** Pre -experimental pre-test and post-test research design was used to collect data from nursing students. Total 140 nursing students were enrolled into the study by using random sampling technique. The structured knowledge questionnaire used to assess the knowledge regarding long term cardiovascular outcomes of COVID-19 before and after workshop.

Result: The mean percent knowledge was 77.81% and has a difference observed was 40.48% after workshop. It was found there is no significance association between knowledge regarding Long Term Cardiovascular Outcomes of COVID-19 with their selected socio demographic variables. **Conclusion:** It was concluded that workshop regarding Long Term Cardiovascular Outcomes of COVID-19 increasing the knowledge of nursing students. This knowledge will help them to improve the practice of providing care to the cardiac patients.

Key words: CVD & COVID-19, Workshop, knowledge, Nursing students.

INTRODUCTION

CVD is Heart Diseases is class of diseases that involve the heart and blood vessels. CVD includes dysfunctional conditions of the heart, arteries and vein that supply oxygen to vital life. Cardiovascular disease is as any serious, abnormal condition of heart or blood vessels coteries, veins. Cardiovascular disease include coronary heart disease, stroke, peripheral vascular disease, congenital heart disease, endocarditic and many conditions.^[1]

In CVD mortality is high. The 1995 state age adjusted rate of death due to heart disease was 328.2 deaths per 100000 population 17% higher than the national rates of 281.2 per 100000. Tobacco use, high blood cholesterol, high blood pressure and sedentary life style are modifiable risk behavior that have been linked to cardiovascular disease. Hypertension is another risk factor for heart disease and is the single most important risk factor for stroke

Cardiovascular diseases are the leading cause of death worldwide except Africa together CVD resulted in 17. Million death (32.1%) in 2015, up from 12.3 million (25.8%) in 1990 deaths at a given age from CVD are more common

India has one of highest burdens of CVD worldwide. The annual number of deaths from CVD in India is projected to risk from 2.26 million (1990) to 4.77 million (2020).^[2]

According to Global Heart Journal Select that:-WHO declared CVD disease as pandemic in 2020,

In worldwide CVD is leading cause of death globally an estimated 17.9 million people died from CVD in 201 representing 32% of all global death. Current prevalence rate of 1,655 per 100,000 populations is expected to exceed 1,845 by the year 2030.

The average age of death from coronary artery disease in developed world is around 80, while it is around 68 in developing world. ^[4]

1.2 NEED OF THE STUDY

The need of CVD AND Covid-19 is a pandemic of historic impact corona virus diseases 2019 has potential consequences on a cardio vascular health of million peoples who survive infections in world wide. **Acute cardiac injury is a common extra pulmonary manifestation of covid-19 with potential chronic consequences. This update provide a clinical manifestation of CVD involvement, potential direct SARS-COV-2 and indirect immune response mechanism impacting the CVD and implication of the**

management of patient and recovery from COVID-19 infection.^[5]

MEHRA AND MANDEEP, DESAI S SAPAN ETAL (2020)-Conducted a study of cardiovascular diseases, drug therapy and mortality in COVID-19 8910 patient were selected and data collected through observational method. Result revealed that 8910 patient with COVID-19 discharge status was available at the time of the analysis a total of 515 died in the hospital (5.8%) and 8395 survived to discharge.^[7]

On the basis of this data, researcher felt to do study on long term cardiovascular outcomes of COVID-19 to improve the knowledge of nursing student.

1.3 PROBLEM STATEMENT

Effectiveness of workshop regarding long term cardiovascular outcomes of COVID-19

1.4 OBJECTIVES

1.To assess the effectiveness of workshop in term of knowledge regarding long term cardiovascular outcomes of COVID-19 among nursing students.

2.To determine the association between knowledge regarding long term cardiovascular outcomes of COVID-19 among nursing students with their selected socio demographic variables.

1.5 HYPOTHESES

H1-There will be significant difference between the mean pre-test score and post-test knowledge score among nursing students after workshop.

H2-There will be significant association between knowledge regarding long term cardiovascular outcomes of COVID-19 among nursing students with their selected demographic variables.

1.6 RESEARCH APPROACH

“ Quantitative research approach” has been adopted for present study

1.7 RESEARCH DESIGN

In this study an “Pre-experimental Research Design” one group pre-test & post-test design was used .

1.8 VARIABLES

DEPENDENT VARIABLE: Knowledge of nursing students

INDEPENDENT VARIABLE: workshop

1.9 SETTING

The study was conducted in Abhilashi College of Nursing, Tanda, Mandi (H.P).

1.10 POPULATION

In the present study population consists of nursing students.

Target Population: Nursing students of selected colleges of Mandi (H.P)

Accessible Populations: Nursing students of who were easily available at the time of study in selected colleges of Distt. Mandi (H.P).

1.11 SAMPLE AND SAMPLING TECHNIQUE

In the present study sampling technique total enumerative sampling technique was used.

1.12 INCLUSION CRITERIA: the study includes those nursing students who were:

1. present at the time of data collection.

1.13 EXCLUSION CRITERIA: the study excludes those nursing students who were

1. Severe sick at the time of workshop
2. Not interested to take part in workshop
3. Already attended CVD based workshop.

1.14 SAMPLE SIZE:- 140 nursing students

1.15 Tools and techniques:- used in the study :

- a) Socio Demographic variables- Self report and paper –pencil method.
- b) Structured knowledge questionnaires- Self report and paper –pencil method.

1.16 DESCRIPTION OF TOOL

Data collection tools were divided into two sections in order to obtain data Each correct answer was awarded a score of '1' and each wrong answer was awarded '0' score. Thus maximum score was '15' and minimum score was '0'.

1.17 VALIDATION OF TOOL

To ensure the content validity of the tool it was given to 10 experts. There are 5 HOD, 4 Assistant Professors and 1 Nursing Tutor.

1.18 PIOLT STUDY

Pilot study was conducted in the month of 22 April, 2022 small scale workshop on earth day

1.19 RELIABILITY OF TOOL

Reliability of long term cardiovascular outcomes of COVID-19 was computed by using split half method, which was found to be 0.8.

1.20 ETHICAL CONSIDERATION

Ethical approval was taken from the institutional ethical committee of College of Nursing. After obtaining administrative approval from the Principal for final study, informed consent was taken from study participants regarding their willingness to participate in the research project.

1.21 DATA COLLECTION PROCEDURE

The students who met the inclusion criteria included in the study All nursing students of all courses were taken. Total student reported on that day were 161, but we included only 140 nursing students who were meet our inclusion criteria. For the data collection we organized the workshop on World Heart Day and the theme of World Heart Day was “**Use Heart For Every Heart**”. The topic for workshop was “**Long term Cardiovascular outcomes of COVID-19**” and according the topic we set the objectives of the workshop. After the selection of the topic, researcher divided the research work separately. Workshop started with the registration of the participants on dated 29/09/2022 at 10:00 AM. Registration started at 10:00 a.m. 10:30a.m. Registration of all the nursing students completed. Researcher I, distributed pre-test to all the participants to assess their knowledge, the time limit for the pre-test was 3 minutes.

Workshop Session

Session 1: Researcher I present her views about World Heart Day, history of World Heart Day and also told about the long term cardiovascular outcomes of COVID-19.

Session 2: Researcher II shared her ideas about the prevalence of CVD and COVID-19 across

the world wide, in India and in Himachal Pradesh and also tells about which country had the highest prevalence rate of CVD. In this session researchers tells about the cardiovascular diseases, risk factors of CVD, CVD & COVID-19, and how to use heart to beat COVID-19. And after the completion of the second session brain storming of the participants had done. Before starting the next session, break time had given to the participants poster competition with exhibition was also done in break time. **Session 3:** Researcher III presented her views on the three pillars of heart day and WorldHeart Day challenges. The researchers also gave the information about the rare and neglect Cardiovascular diseases. **Session 4:** Researcher IV share the information regarding Global collaboration on heart disorders and also provided knowledge about CVD risk factors , sleep apnea and prevention of cardiovascular diseases or modification of life styles and daily activities. Researcher asked the questions from the participants to make them attentive in the sessions. After completion of the session, to evaluate the effectiveness of our workshop teaching, Researcher took post-test of participants. The time limit for the post-test was 3 minutes. After researcher gave feedback form to all the participants to know their views regarding the workshop. And then certificates distributed by the researcher IV to the participants who gained more than 80% in post-test. At the end of the workshop we thanks to everyone to participate in our workshop.

During the data collection the researchers had to face a few problems. The problem that researcher had faced regarding the shortage of time with nursing students.

Table No: 4.1 Frequency and percentage Distribution of Socio Demographic variables

N=140

Sr. No.	Variables	Frequency	Percentage
1	Age in years		
a.	17-19 Years	41	29.30%
b.	20-22 Years	69	49.30%
c.	23-25 Years	28	20.00%
d.	>26 Years	02	1.40%
2	Educational Status		
a.	ANM	01	0.70%
b.	GNM	34	24.30%
c.	B.Sc. Nursing	80	57.10%
d.	Post Basic B.Sc. Nursing	25	17.90%
3	Religion		
a.	Hindu	121	86.40%
b.	Muslim	-	-
c.	Sikh	02	1.40%
d.	Christian	09	6.40%
e.	Other	08	5.70%
4	Source of Information regarding		

CVD			
a.	Book	121	86.40%
b.	Internet	-	-
c.	Newspaper	02	1.40%
d.	Teacher	09	6.40%
e.	Others	08	5.70%

The data present in the table 4.1 showed frequency and percentage of nursing students in terms of selected socio demographic variables, out of 140 nursing students (49.3%) in age group of 20-22 years, (57.1%) were B.Sc. nursing students, religion (86.4%) were belongs to Hindu religion, (86.40%) nursing students source of knowledge were books,

Table No: 4.2 Frequency and percentage distribution of comparison of pre and post-test knowledge score

Sr. No.	SCORE LEVEL	PRE-TEST f(%)	POST-TEST f(%)
1.	BELOW AVERAGE(0-8)	133(95%)	-
2.	AVERAGE(9-11)	6(4.3%)	59(42.1%)
3.	VERY GOOD(12-15)	1(0.7%)	81(57.9%)

The data presented in table 4.2 shows, very good knowledge level and in post-test 81(57.9%).

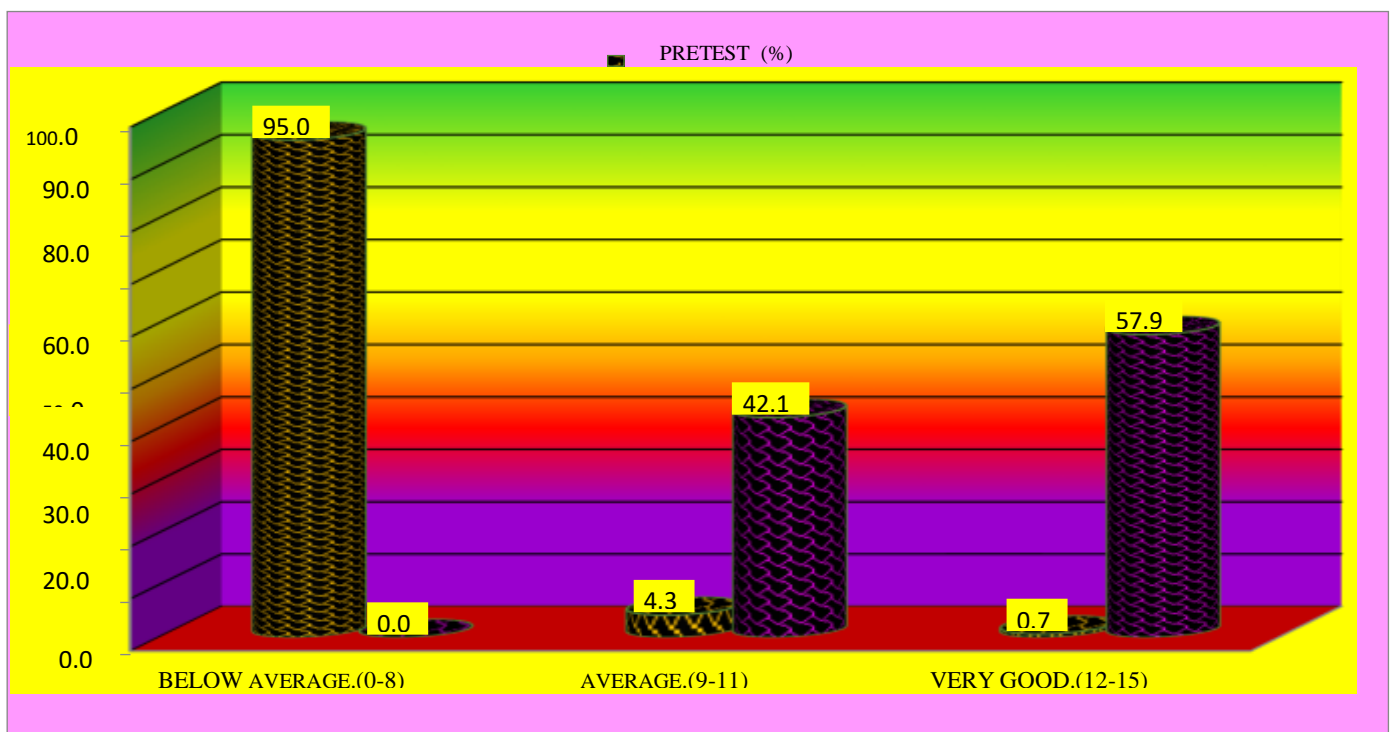


Figure No: 4.1 Frequency and percentage distribution of pre-test and post-test knowledge score

Table No: 4.3 Mean, SD, Range, Mean%, Range, Mean difference of Pre-test and Post-test knowledge score

N=140						
Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	t Test	P value
PRE-TEST KNOWLEDGE	5.6±1.974	37.30	2-12	6.070	27.81	<0.001*
POST-TEST KNOWLEDGE	11.67±1.879	77.80	9-15			

**** Significance Level 0.05 Maximum=15 Minimum=0 NS= Non Significant**

Table Value 27.81

Further findings revealed that computed ‘t’ value in post-test was significantly higher than pre-test. Thus it can be inferred that the workshop is more effective to enhance the knowledge of nursing students regarding long term cardiovascular outcomes of COVID-19. and researcher hypothesis H₂ was accepted.

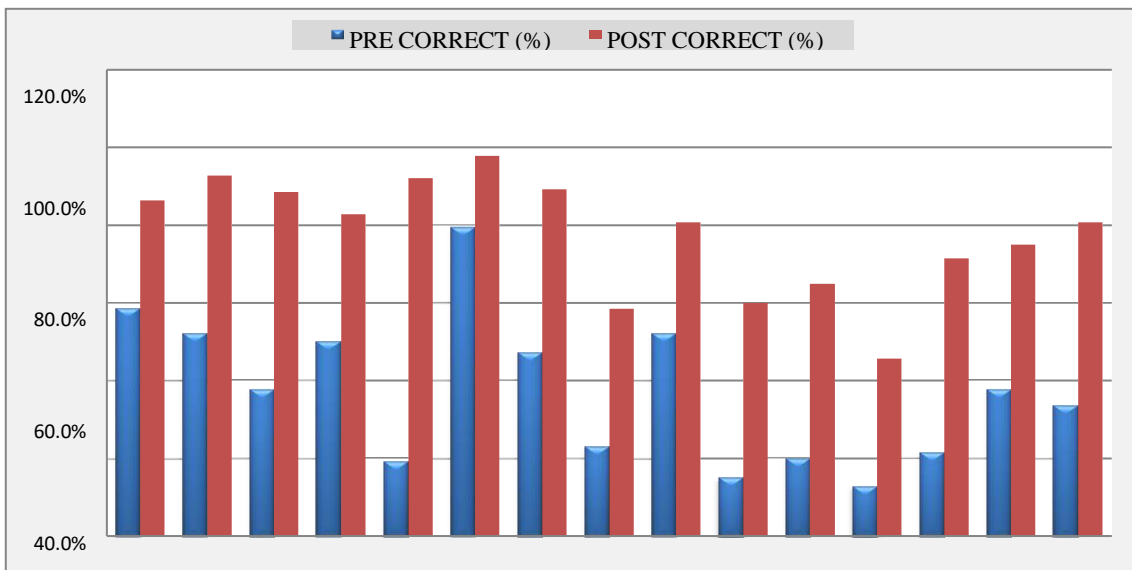


Figure No: 4.2 Histogram graph shows the area wise pre-test and post-test knowledge score percentage

Table No: 4.4 Association of post-test knowledge scores with selected Socio Demographic Variables.

N=140

Sr. No.	Socio Demographic Variables	VERY GOOD	AVERAGE	BELOW AVERAGE	Chi Test	Df	Table Value	P Value
1	Age in years				1.94	03	7.815	0.58 ^{NS}
a.	17-19 Years	21	20	-				
b.	20-22 Years	40	29	-				
c.	23-25 Years	19	09	-				
d.	>26 Years	01	01	-				
2	Educational Status				6.34	03	7.815	0.09 ^{NS}
a.	ANM	01	-	-				
b.	GNM	21	13	-				
c.	B.Sc. Nursing	40	40	-				
d.	PostBasicB.Sc.Nursing	19	06	-				
3	Religion				1.44	04	7.815	0.69 ^{NS}
a.	Hindu	68	53	-				
b.	Muslim	-	-	-				
c.	Sikh	01	01	-				
d.	Christian	06	03	-				
e.	Other	06	02	-				
6	Source of Information				1.44	04	7.81	0.69
a.	Book		68	53	-			
b.	Internet		-	-	-			
c.	Newspaper		01	01	-			
d.	Teacher		06	03	-			
e.	Others		06	02	-			

There is no significance association between the level of scores and other demographic variables. The calculated chi-square values were less than the table value at the 0.05 level of significance.

Objective 1: To assess the knowledge of nursing students regarding long term cardiovascular outcomes of COVID-19.

The findings showed that after assessing the knowledge of nursing students, out of 140 nursing students, (95%) nursing students knowledge level were below average, (4.3%) were average, and (0.7%) were very good knowledge level.

Our study was similar to **MUDGAL KUMAR SHIV (2018)**-Conducted a study to assess learning need of nursing student and effectiveness of workshop on knowledge regarding extended and expanded role of nurse in selected nursing institution of Udaipur sample size were 120 and sampling technique size used was non-probability convenience used for data collection structured knowledge questionnaire result revealed that male (89.16%) and belonged to Hindu religion (69.16%) majority of nursing student had not attended the related workshop previously (95.33%) and a little less than half (45%) student had family member already in the nursing profession. The study result concluded that workshop was an effective method to create and enhancing the knowledge on extended and expanded role of nurse.^[11]

Competing Interests

The authors declare that there is no conflict of interest in this study.

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All funds in this study were covered by the personal fund of the authors.

CONFLICT OF INTREST

Nil

ETHICS COMMITTEE

Ethical clearance taken from institutional ethical committee.

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