



GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY

Volume 22 Issue 1 Version 1.0 Year 2022

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4618 & Print ISSN: 0975-5888

A Study to Evaluate the Effectiveness of Video Assisted Teaching (Vat) on Knowledge Regarding Prevention of Corona Virus among Staff Nurses Working in Ah & RC, B G Nagara, Karnataka

By Dipankar Maiti & Dr. Balaji MS

Rajiv Gandhi University of Health Sciences

Abstract- At present scenario COVID infection creates a pandemic and cruel deadly situation through worldwide. First case of Corona virus infection reported in Wuhan City of China in December 2019. Beginning from normal fever & common cold it becomes severe with the symptoms of breathing difficulty, persistent fever, loss of taste & smell etc. It travels through air from human to human as a form of droplet infection. So, to check and increase the knowledge regarding prevention of corona virus among staff nurses working in AH & RC, B.G Nagara, Karnataka; I have done one video assisted teaching (VAT) session. Among total 60 staff nurse I have divided them into two groups as follows: 40 members in Experimental group & 20 members in Control group. The data collection done from 01-10-2021 to 11-10-2021 in AH & RC, B. G Nagara.

Keywords: MERS, SERS, CDC, N 95, RT PCR, and VAT.

GJMR-K Classification: DDC Code: 305.26 LCC Code: HQ76.14



Strictly as per the compliance and regulations of:



© 2022. Dipankar Maiti & Dr. Balaji MS. This research/review article is distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0). You must give appropriate credit to authors and reference this article if parts of the article are reproduced in any manner. Applicable licensing terms are at <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

A Study to Evaluate the Effectiveness of Video Assisted Teaching (Vat) on Knowledge Regarding Prevention of Corona Virus among Staff Nurses Working in Ah & RC, B G Nagara, Karnataka

Dipankar Maiti ^α & Dr. Balaji MS ^σ

Abstract- At present scenario COVID infection creates a pandemic and cruel deadly situation through worldwide. First case of Corona virus infection reported in Wuhan City of China in December 2019. Beginning from normal fever & common cold it becomes severe with the symptoms of breathing difficulty, persistent fever, loss of taste & smell etc. It travels through air from human to human as a form of droplet infection. So, to check and increases the knowledge regarding prevention of corona virus among staff nurses working in AH & RC, B.G Nagara, Karnataka; I have done one video assisted teaching (VAT) session. Among total 60 staff nurse I have divided them into two groups as follows: 40 members in Experimental group & 20 members in Control group. The data collection done from 01-10-2021 to 11-10-2021 in AH & RC, B. G Nagara. After data analysing found that in the pre-test level of knowledge 80% Poor, 15% Average, 5% Good knowledge in control group and 75% Poor, 20% Average, 5% Good knowledge experimental group. The above posttest reveals that the percentage distribution of level of knowledge 60% Poor, 30% Average, 10% Good knowledge in control group and Average 7.5% ,62.5% Good & 30% having very good knowledge in experimental group. The results show that gained knowledge by the effectiveness of video assisted teaching in experimental group is 44.43%.

Keywords: MERS, SERS, CDC, N 95, RT PCR, and VAT.

1. INTRODUCTION

Corona Virus is an RNA virus mainly affects birds & mammals. The name "coronavirus" is consequent from Latin corona, denoting as "crown" or "wreath". At first, Coronaviruses were discovered in the year 1960. But later in 2012 a new type of coronavirus was identified, initially called Novel Coronavirus 2012, and now officially named as MERS-CoV. Chinese four family members have been identified with coronavirus in the UAE.¹ But now a days the frequent changing variant of Corona virus affecting humans & causing mild to deadly Respiratory problems including common cold, fever, breathing difficulty, loss of smell, loss of taste,

even death in severe cases. In human more lethal varieties or strains of this virus are SERS (severe acute respiratory syndrome), MERS (Middle East respiratory syndrome), COVID-19 (Coronavirus disease 2019).² Based on the statistics dated 13 Aug 2021, 08:00 IST (GMT+5:30) in India Total active cases are 3,87,987; total cured 3,12,60,050; total deaths 4,29,669; total samples tested 48,94,70,779. The following states are in red light spotted areas due to over increasing COVID cases -Maharashtra, Delhi, Kerala, Andhra Pradesh, Karnataka.^{3,7}

Experts believe that COVID infection mainly spreads through person to person through respiratory system by inhalation. Droplets or aerosols, Airborne transmission, Surface transmission, Faecal-oral- these are some routes of Corona Virus transmission.⁴ The CDC endorses that by covering the mouth and nose with a tissue while coughing or sneezing by using inner part of the elbow is more convenient if no tissue is available around.⁹ They suggest to do frequent hand washing too at least for 20 seconds if time is not adequate.¹⁰ Using frequent hand sanitizer containing at least 60% alcohol also helps a lot to prevent spreading of COVID infection, but only when soap and water are not hardly available.²

COVID-19 reported symptoms include fever, pneumonia, haemoptysis cough, fatigue, headache, diarrhoea and dyspnoea. Preventive measures such as wearing masks, using hand hygiene practices, avoidance of public contact, case detection by doing more rapid & RT-PCR tests, contact tracing, and quarantines have been discussed as ways to reduce transmission.⁸ As per latest studies no specific antiviral treatment has proven effective; hence, infected people primarily rely on symptomatic treatment and supportive care.⁵

A study was conducted in USA on November 4,2020 entitled as Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic. They have also mentioned to get updated about modes of transmission, clinical management, air or ground medical transport, or laboratory settings,

Corresponding Author α: Final Year B.Sc. Nursing, Adichunchanagiri College of Nursing, Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India. e-mail: dipankarmaiti2015@gmail.com

Author σ: Assistant Professor, Department of Medical Surgical Nursing, Adichunchanagiri College of Nursing, Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India. e-mail: bforusurroor@gmail.com

current mode of testing & vaccination from the health care setting or physician.⁶

II. OBJECTIVES OF THE STUDY

- 1) To identify the knowledge of staff nurses giving care to COVID patients in experimental and control group regarding COVID prevention.
- 2) To determine the knowledge of staff nurses giving care to COVID patients in experimental and control group regarding COVID prevention after the administration of Video Assisted Teaching (VAT).
- 3) To evaluate the effectiveness of Video Assisted Teaching (VAT) by comparing post-test knowledge scores regarding COVID prevention between experimental and control group among staff nurses giving care to COVID patients.
- 4) To associate the pre-test knowledge scores with selected socio-demographic variables regarding COVID prevention among the staff nurses of COVID patients in experimental and control group.

III. METHODOLOGY

Methodology of research organizes all the components of study in a way that is most likely to lead to valid answers to the problems to have been posed.

GROUP	PRETEST	INTERVENTION	POST TEST
Staff Nurses giving care to the COVID patients	Knowledge regarding COVID Prevention	Video Assisted Teaching (VAT)	Knowledge regarding COVID Prevention
	O ₁	X	O ₂

Key

O₁ = Assessment of pre-test scores

X = Video Assisted Teaching (VAT)

O₂ = Assessment of post-test scores

c) Variables under study

A notion which can take on different qualitative standards is called a variable.

d) Independent Variable

An independent variable is that stances alive and is not dependent on any additional.

In the study independent variable refers to the Video Assisted Teaching (VAT) on COVID Prevention.

e) Dependent Variable

A dependent variable is the variable the researcher involved in understanding, explaining or forecasting.

Knowledge of staff nurses about COVID prevention is the dependent variable in this study.

f) Population

The entire set of individuals or objects with some common features.

In the present study the population comprised of staff nurses of COVID patients.

a) Research approach

The selection of the research is a basic procedure for the conduction of research study. In view of the nature of the problem selected for the study and objectives to be accomplished, evaluative research approach was adopted.

b) Research design

The form research design denotes to a plan of a scientific study. Research design combines the most important methodology decisions that researches makes in leading a research study. It depicts the complete plan for organization of scientific examination. It helps the researches in choice of subjects, manipulation of the independent variable, observation of a type of statistical investigation to be used to interpret the data.

The research design selected for the present study was pre-test and post-test with nonequivalent control group design.

g) Sample and sample size

Sample: Sample is a subgroup of a population designated to participate in a research study. It is a position of the population which signifies the entire population.

In this study samples were staff nurses giving care to the COVID patients in the AH & RC.

Sample size: 60 staff nurses were selected.

h) Sampling technique

Sampling refers to the course of selecting the portion of population to signify the whole population. Non-probability convenient sampling technique was espoused for the present study.

i) Selection and development of tool

The tool selected in research must be the vehicle that acquires the best data for drawing conclusions to the study. The tool act as an instrument to assess and gather the data from the respondents of the study.

Keeping in mind a self-administered questionnaire was selected and developed. The main purpose behind developing this tool was need of the hour to educate the staff nurses of COVID patients. The tool was developed based on,

- Past clinical knowledge of the student investigator.

- Related review of literature (Books, Journals, Periodicals, and articles published and unpublished research studies) was reviewed and used to develop the tool.
- Based on the concept of the study.
- Based on the opinions of the subject experts.

Based on the purposes of the study, the blue print was arranged under 3 main areas namely information, conception and application. The arranged items were imperilled to content validation, pre-testing and estimation of reliability.

IV. RESULTS

a) Presentation of Data

The analysed data has been organized and presented in the following sections: Section 1: Description of socio demographic variables of the caregivers in the experimental and control group.

The analysed data has been organized and presented in the following sections.

Section A: Description of socio-demographic variable of the COVID patient admitted in AH & RC.

Section B: Analyses and interpretation of pre-test and post-test level of knowledge of experimental group.

b) Data Collection and Analysis

Prior permission was obtained from the hospitals (Adichunchanagiri Hospital & Research Centre), B. G Nagara to conduct the study. The data was collected by the investigator from 01-10-2021 to 11-10-2021 in Adichunchanagiri Hospital & Research Centre, B. G Nagara. Pre-test was conducted on 01-10-2021 by distributing the questionnaire to the staff nurses of COVID patients; the time was taken for the completion of the pre-test was approximately 60 minutes. Soon after the pre-test the VAT was given to the participants. On 10th day 11-10-2021, the post-test was conducted by using the same tool, to determine the effectiveness of the VAT. The data obtained was analysed by using descriptive and inferential statistics in terms of occurrence, percentage, mean, standard deviation, paired 't' test and Chi-square test.

Pre-Test knowledge distribution

Table 1: Frequency and percentage distribution of pre-test level of knowledge of staff nurses in control and experimental group. n=60

Level of knowledge	Pre-test			
	Control group (n=20)		Experimental Group (n=40)	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	16	80	30	75
Average	3	15	8	20
Good	1	5	2	5
Very Good	0	0	0	0

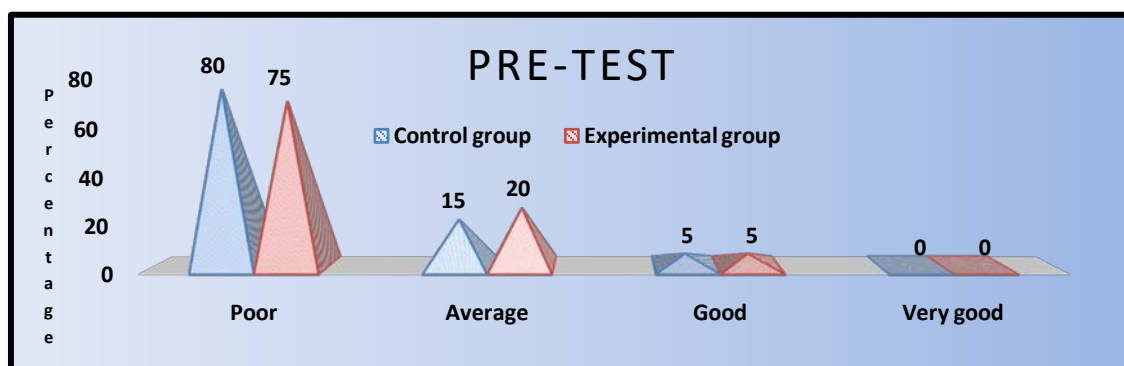


Fig. 1: Clustered pyramid diagram representing percentage distribution of pre-test level of knowledge of staff nurses in control and experimental group.

Post-Test knowledge distribution

Table 2: Frequency and percentage distribution of post-test level of knowledge of staff nurses in control and experimental group
n=60

Level of knowledge	Post-test			
	Control group (n=20)		Experimental Group (n=40)	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	12	60	0	0
Average	6	30	3	7.5
Good	2	10	25	62.5
Very Good	0	0	12	30

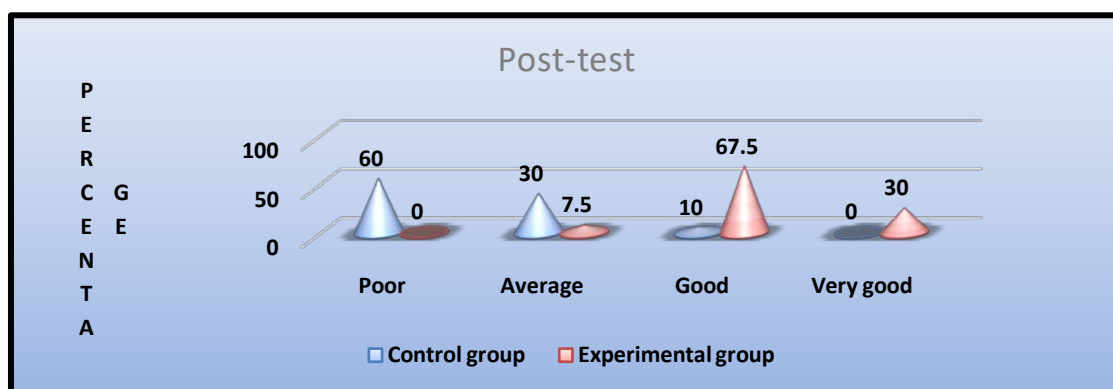


Fig. 2: Clustered cone diagram representing percentage distribution of post-test level of knowledge of staff nurses in control and experimental group

Area-wise Pre-Test & Post-test knowledge distribution

Table 3: Area-wise pre-test and post-test knowledge score between control and experimental group.
n=60

Area	Max. possible score	Pretest				Post test			
		Control Group		Experimental group		Control group		Experimental group	
		Mean±SD	Mean%	Mean±SD	Mean%	Mean±SD	Mean%	Mean±SD	Mean%
Anatomy and physiology	6	3.4±1.4	56.66	3.9±1.5	65	4.1±1.5	68.33	4.94±1	82.33
Corona Virus Infection	15	7.5±3.3	50	6.96±2.76	46.4	10.65±2.64	71	12.75±2.22	85
COVID Prevention	14	3.45±1.4	26.53	4.2±1.69	32.30	4.025±1.78	30.96	8.71±1.48	67

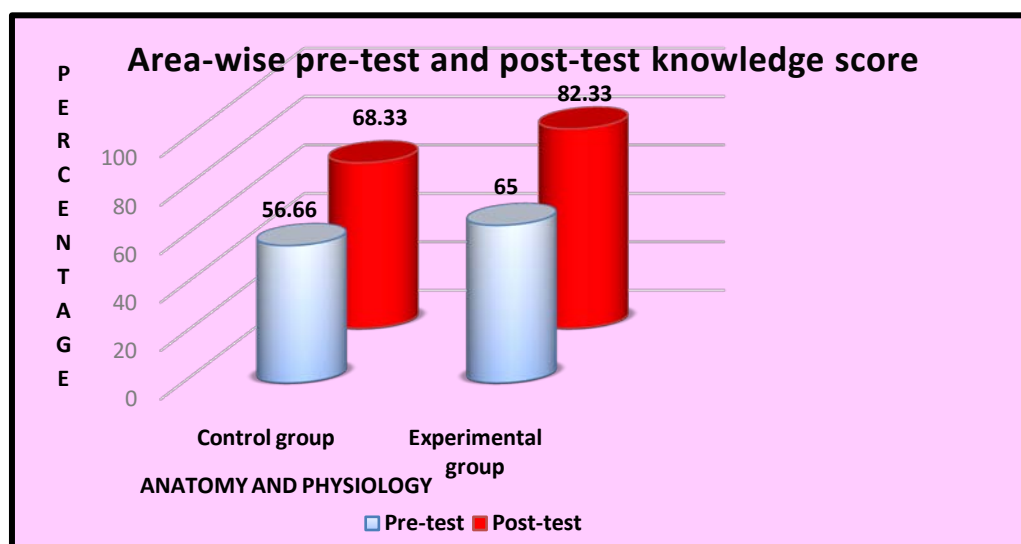


Fig. 3: 3-D cylinder diagram showing area-wise anatomy and physiology mean percentage of pre-test and post-test knowledge score between control and experimental group.

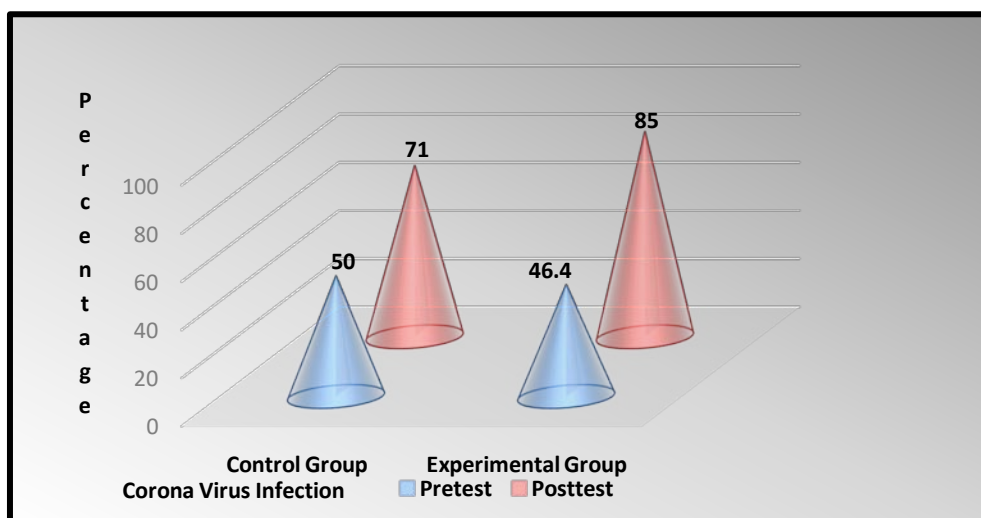


Fig. 4: 3-D cone diagram showing area-wise Corona Virus Infection percentage of pre-test and post-test knowledge scores between control and experimental group.

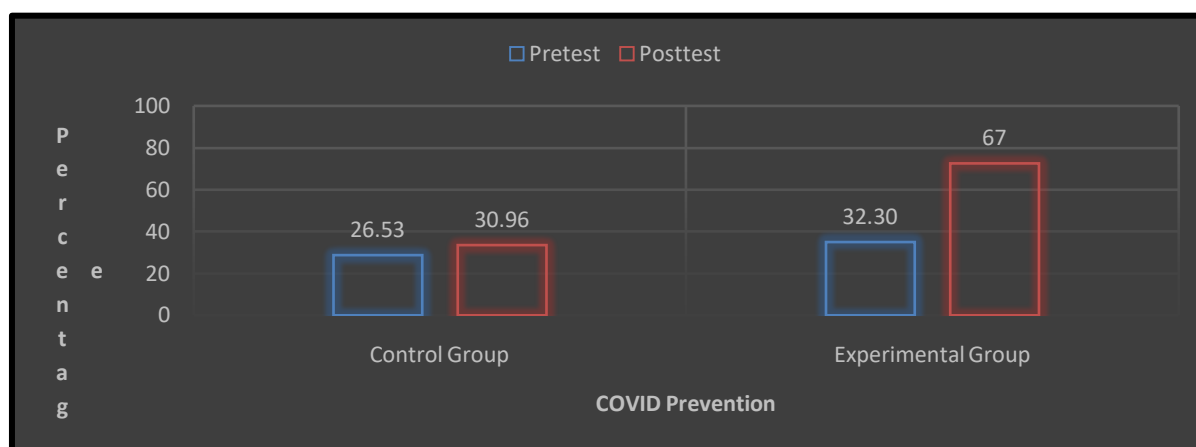


Fig. 5: Clustered column diagram showing area-wise COVID prevention mean percentage of pre-test and post-test knowledge scores between control and experimental group.

Effectiveness of Video Assisted Teaching (VAT)

Table 4: Effectiveness of Video Assisted Teaching (VAT) on COVID prevention n=60

Group	% of Pretest knowledge score	% of Post test knowledge score	% of Gain in knowledge
Control Group	35	37.42	2.42
Experimental group	35.86	80.29	44.43

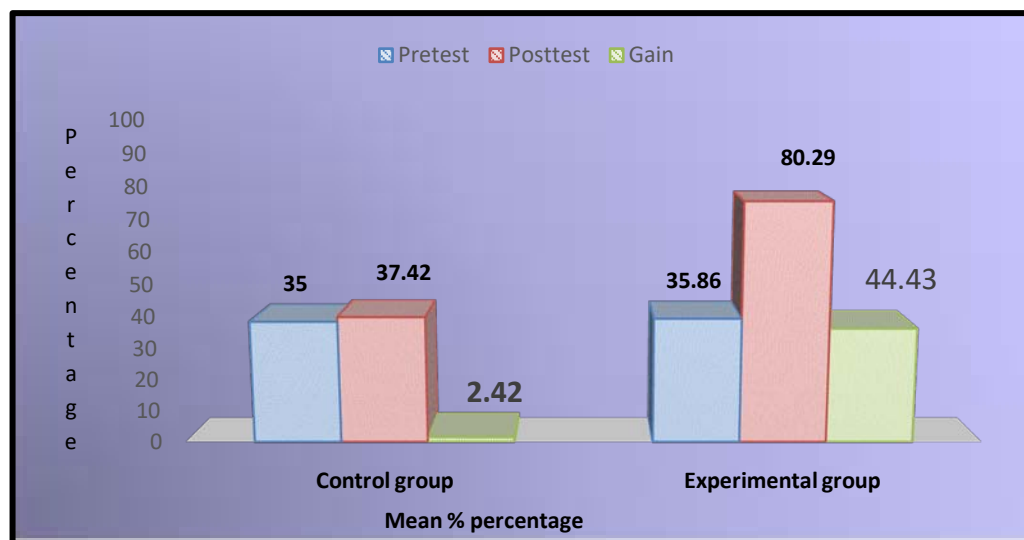


Fig. 20: 3-D clustered column diagram representing effectiveness of video assisted teaching in experimental group.

Inclusion criteria

- Staff Nurses of COVID patient, willing to participate in the study.
- Staff Nurses of patient infected with COVID who understand Kannada and English.

Exclusion criteria

- Staff Nurses of COVID patients having visual and hearing defects.
- Staff Nurses of COVID patients who are absent at the time of the study.

V. DISCUSSION

Based on the objectives of the study, the findings of the pre-test knowledge score of staff nurses of COVID patients regarding COVID prevention shows that they were able to answer the questions up to some extent. In pre-test, staff nurses were having average 35% of knowledge in control group and 37.42% in experimental group in overall aspects. Staff Nurse's pre-test level of knowledge on COVID prevention shows 80% Poor, 15% Average, 5% Good in control group whereas 75% Poor, 20% Average and 5% Good in experimental group. Considering the aspects of COVID prevention, they are having below average knowledge.

Based on knowledge of staff nurses of COVID patients regarding COVID prevention above part of the study, findings of the post-test knowledge score of the

staff nurses of COVID patients regarding COVID prevention shows that, staff nurses got 80.29% of overall score in experimental group after VAT. Post-test level of knowledge on COVID prevention says that 7.5% of them were having Average knowledge, 62.5% of staff nurses gained Good knowledge and 30% of them had Very good knowledge in experimental group and 60% Poor, 30% Average, and 10% Good knowledge in control group. Considering the post-test scores, staff nurses have shown adequate knowledge on all aspects in experimental group.

Based on the effectiveness of Video Assisted Teaching (VAT) regarding COVID prevention between the experimental & control group, the findings show significant increase in the post-test knowledge score after the administration of VAT. The post-test knowledge score in control group was 35.86% and the post-test knowledge score in experimental group was 80.29%. The difference between pre-test and post-test score was 44.43% in experimental group. In pre-test 35.86% of staff nurses were having inadequate knowledge in experimental group. After the administration of VAT, 80.29% staff nurses gained adequate knowledge in post-test. The result shows effectiveness of VAT on COVID prevention in experimental group.

VI. CONCLUSION

In conclusion the below mentioned initiation should be taken

1. Motivate the COVID infected patients and their family members to keep them updated with necessary knowledge with regarding aspects of COVID prevention & reoccurrence.
2. A suitable environment for learning could be maintained through regular clinical teaching and practice sessions on COVID prevention.
3. Regular different therapies should be demonstrated for gaining skill in COVID prevention.
4. A suitable counseling program should be conducted to the patient and staff nurses to strengthen psychologically.
5. The study suggests that respected government need to open more COVID care centers (CCC) in all areas to give more quality & significant care.

List of Abbreviation

CEST:- Central European Summer Time

MERS:- Middle East Respiratory Syndrome

N 95:- Non-Oil 95% efficiency

RT-PCR:- Reverse Transcription-polymerase Chain reaction

SERS:- Severe Acute Respiratory Syndrome

VAT:- Video Assisted Teaching

WHO:- World Health Organization

CDC:- Centres for Disease Control

Ethical Clearance: Ethical clearance has been obtained from the concerned authority and participants.

Source of Funding: The financial support relevant to this research study was provided by the honorable Rajiv Gandhi University of Health Sciences.

Conflict of Interest: Have no conflict of interest relevant to this research study.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Balaji M S, "A Review Article on Corona Virus 2019-nCoV (COVID-19)", International Journal of Nursing education, volume 12, Number 2, 2020. <https://doi.org/10.37506/ijone.v12i2.3924>
2. Woo P, Huang Y, Lau S, Yuen K. Coronavirus genomics and bioinformatics analysis. *Viruses*. 2020; 2(8): 1804–20.
3. COVID19 STATEWISE STATUS | MyGov.in [Internet]. [cited 2021 Aug 13]. Available from: <https://www.mygov.in/corona-data/covid19statewise-status/>
4. How Coronavirus Is Transmitted: Here Are All the Ways It Can Spread [Internet]. [cited 2021 Aug 13]. Available from: <https://www.webmd.com/lung/coronavirus-transmission-overview#2>
5. Adhikari SP, Meng S, Wu Y-J, Mao Y-P, Ye R-X, Wang Q-Z, et al. Epidemiology, causes, clinical

manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. *Infect Dis Poverty* 2020 91 [Internet]. 2020 Mar 17 [cited 2021 Aug 13]; 9(1): 1–12. Available from: <https://idpjournal.biomedcentral.com/articles/10.1186/s40249-020-00646-x>

6. Prevention C for DC and. Interim Infection Prevention and Control Recommendations for Healthcare Personnel during the Coronavirus Disease 2019 (COVID-19) Pandemic. 2020;
7. Coronavirus Disease (COVID-19): What Is It, Symptoms, Causes & Prevention [Internet]. [cited 2021 Aug 14]. Available from: <https://my.clevelandclinic.org/health/diseases/21214-coronavirus-covid-19>
8. Behera P, Patro BK, Singh AK, Chandanshive PD, R. RS, Pradhan SK, et al. Role of ivermectin in the prevention of SARS-CoV-2 infection among healthcare workers in India: A matched case-control study. *PLoS One* [Internet]. 2021 Feb 1 [cited 2021 Aug 13]; 16(2): e0247163. Available from: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247163> www. ninds.nih.gov
9. Coronavirus Disease (COVID-19): What Is It, Symptoms, Causes & Prevention [Internet]. [cited 2021 Aug 14]. Available from: <https://my.clevelandclinic.org/health/diseases/21214-coronavirus-covid-19>
10. Prevention C for DC and. Interim Infection Prevention and Control Recommendations for Healthcare Personnel during the Coronavirus Disease 2019 (COVID-19) Pandemic. 2020