Original Research Article

A Study to Assess the Effectiveness of Video Assisted Teaching [VAT] in Terms of Knowledge and Self-expressed Stigma Regarding COVID-19 and its Preventive Measures among Housekeeping Staff at Selected Hospital, Gurugram, Haryana: A Pre-experimental Study

Abstract

Background: The coronavirus disease 2019 (COVID-19) is a contagious disease caused by newly discovered virus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The current study is here about Covid-19 and its preventive measures as housekeeping staffs are on the front lines of fighting this global pandemic, as they are responsible for deep cleaning, disinfecting and scrubbing the surfaces and areas that are hosts of potentially dangerous germs and viruses which can widely spread and affect so many lives.

Objectives: The objectives of the study have drawn to fulfill the research reflecting on the effectiveness of Video Assisted Teaching [VAT] regarding COVID-19 and its preventive measures in terms of knowledge and self-expressed stigma among housekeeping staff at selected hospital, Gurugram, Haryana.

Materials and method: Pre-experimental design was used to assess the effectiveness of effectiveness of Video Assisted Teaching [VAT] regarding COVID-19 and its preventive measures. Convenience sampling technique was used to select 100 housekeeping staff at selected hospital, Gurugram, Haryana. A self-structured questionnaire and self-structured scale were administered to assess the knowledge and self-expressed stigma. The collected data was analyzed by using descriptive and inferential statistics in the study. Paired t-test was used to find out the effectiveness of VAT, Chi-square test was used to find out association between the pre-test score of knowledge and self-expressed stigma.

Results: By using statistical analysis, the study found Video Assisted Teaching [VAT] significant for knowledge of COVID-19 and its preventive measures among housekeeping staff at selected hospital, Gurugram, Haryana. The 't' value of overall knowledge is 58.477 and P value is 0.001. The 't' value of overall self-expressed stigma is 15.156 and p value is 0.001. There was no significant association between the pre-test knowledge and self-expressed stigma regarding COVID-19 and its preventive measures with the demographic variables.

Conclusion: Results of this study suggested that the Video Assisted Teaching [VAT] was effective and improving knowledge and self-expressed stigma COVID-19 and its preventive measures among housekeeping staff at selected hospital, Gurugram, Haryana.

Keywords: **COVID-19, Video Assisted Teaching [VAT], Knowledge, Self-expressed stigma, SARS-CoV-2.**

1. INTRODUCTION

Corona virus disease (COVID-19) is an infectious disease caused by a currently discovered corona virus, which has resulted in an existing pandemic.[1]It's a case of Severe Acute Respiratory Syndrome(SARS). Coronavirus passed from one person to another person through respiratory droplet once it has developed in people. These droplets contain viral material that can be inhaled into the respiratory system through the windpipe and lungs, causing infection.[2] A novel coronavirus, also known as 2019-nCoV, has been identified as the cause of an outbreak of respiratory illness that originated in Wuhan, China, and which has spread to several other countries around the world.[3] On 30 January 2020, the World Health Organization (WHO) declared the outbreak to be a Public Health Emergency of International Concern and recognized it as a pandemic on 11 March 2020.[4]As of 23rd April 2021 Total Coronavirus Cases worldwide: 145,105,327, Total Deaths cases due to coronavirus: 3,079,516, Recovered from coronavirus diseases: 123,127,222.[5] Total Coronavirus Cases in India:16,257,164, Deaths:186,927, Recovered:13,641,572.[6]As of 16 July 2021 Coronavirus cases 190,059,674, deaths 4,086,957 and recovered 173,305,971 worldwide. India- Total cases 31,106,065, deaths 413,640 and recovered 30,269,796.[7]Haryana -Total cases 7, 69, 504, death 9,593 and recovered 7,59,088.[8]

Some of the most prevalent symptoms of coronavirus disease are Pyrexia, Cough that is dry, Sore throat or scratchy throat, Eye infection (Conjunctivitis), Body ache, Headache, Loss of smell and taste, Chest pain, Shortness of breathing (serious signs)[9]. It normally takes 5–6 days for signs and symptoms to appear, but it can take up to 14 days.[10]Individuals over the age of 65 and those with specific medical conditions are at a higher risk of experiencing serious complications. Some of the Prevention includes, Hand hygiene often with soap and water or clean them with an alcohol-based hand rub to avoid the spread of COVID-19, Keep a two-meter gap between yourself with others, Avoid touching your face (eyes, mouth, nose, ear) with your hands without washing, Use handkerchiefs to cover your mouth and nose when coughing and sneezing.

The front-line personnel in the fight against the global epidemic are housekeeping staff. Due to a lack of understanding and information about COVID-19 disease among the general public, they have wrong perception towards healthcare staff. Here in this study, it will examine knowledge and self-expressed stigma regarding COVID-19 and its prevention among housekeeping staff. The study's major goal is to increase housekeeping staff's understanding and awareness of COVID-19 and its prevention methods.

1.1 Conceptual Framework

Conceptual frame work used for this study is based on **Ludwig von Bertalanffy's General System Theory.**

1.2 Research Hypothesis

The hypotheses will be tested at a significance level of ≤ 0.05:

- H1- There will be significant difference in mean pre-test knowledge and self-expressed stigma score regarding COVID-19 and its preventive measures among housekeeping staff at selected hospital, Gurugram, Haryana.
- H2- There will be significant difference in mean post-test knowledge and self-expressed stigma score regarding COVID-19 and its preventive measures among housekeeping staff at selected hospital, Gurugram, Haryana.
- H3- There will be significant association of pre-test knowledge score regarding COVID-19 and its preventive measures with selected demographic variables.
- H4- There will be significant association of post-test self-expressed stigma score regarding COVID-19 and its preventive measures with selected demographic variables.

2. RESEARCH METHODOLOGY

Research approach- Quantitative Approach.

Pre- testing is done in this paper by means of a self-structured questionnaire and Self-structured Likert scale.

O^1= Measure the pre-test level of knowledge and stigma among the housekeeping staff of selected hospital by using self-structured questionnaire and Self-structured Likert scale.

X= Video Assisted Teaching which includes COVID-19 disease causes, sign and symptoms, treatment, preventive measures- hand hygiene, gloving, mask, donning and doffing of PPE was provided to the housekeeping staff by using computer screen.

O^2= Assessed the post assessment level of knowledge and stigma among the housekeeping staff of selected hospital by using self-structured questionnaire and Self-structured Likert scale.

2.1 Variables

2.1.1 Demographic variables

In this study, age, gender, marital status, religion, educational level, type of family, income, residence, knowledge about covid-19, and source of information regarding COVID-19 and its preventive measures.

2.1.2 Independent variable

In this study the Video-Assisted Teaching [VAT] regarding COVID-19 and its preventive measures among housekeeping staff at selected hospital.

2.1.3 Dependent variable

In this study the dependent variables are Knowledge and Self-expressed stigma regarding COVID-19 and its preventive measures.

2.2 Research Setting

Medanta The Medicity, Sector 38, Gurugram, Haryana.

2.2.1 Sample

Housekeeping staff working in the selected hospital, who fulfilled the inclusion criteria.

2.2.2 Sample Size

Total 100 housekeeping staff of selected hospital.

2.2.3 Sampling technique

The samples are selected using convenient sampling technique.

2.3 Criteria for selection of sample

2.3.1 Inclusion criteria:

- Housekeeping staff who are present/available at the time of data collection.
- Housekeeping staff those who want to participate in the study.

2.3.2 Exclusion criteria:

- Housekeeping staff who are unwilling to participate in the study.
- Adult Housekeeping staff who are sick at the time of the study.

2.4 Data collection procedure

The approval to perform the research in Medanta hospital was acquired in writing from the head of department, Housekeeping Medanta hospital. The research samples for this study were chosen from among the housekeeping staff that met the study's inclusion requirements. The housekeeping staff provided their informed permission. The researcher presented herself to the selected housekeeping staff, promising to keep their information secret, and explained the study's aim, necessity, and method. The housekeeping staff provided the demographic information. The pre-test was immediately followed by the Video Assisted Teaching Programme. The study's post-test was conducted one week following the pre-test, using the same instruments as the pre-test. The information was gathered, recorded, and evaluated.

Chart 1. Research design- Pre-experiemntal with non-equivalent pre-test post-test design.

Group	**Pre-test**	**Treatment**	**Post-test**
Study Group	01	X	02

Chart 2. Development and description of the tool

Tool	**Purpose**	**Explanation/ Technique**	**Items**	**Scoring Interpretation**
Demographic variables	**Section A:** To collect the demographic characteristics of the sample	The tool includes age, gender, marital status, religion, educational level, type of family, income, residence, knowledge about covid-19, and source of information regarding COVID-19 and its preventive measures	10	NA
Self-Structured knowledge questionnaire	**Section B:** To measure the knowledge regarding COVID-19 and its preventive measures among the housekeeping staff.	It comprised of a structured knowledge questionnaire to assess the knowledge regarding COVID-19 and its preventive measures. The participants will select the appropriate answer and mark the appropriate response.	25	**Total Score-25** Inadequate 1-12 Moderate 13-19 Adequate 20-25

Self-Structured likert stigma scale	**Section C:** To assess the stigma which is expressed by the housekeeping staff.	It comprised of likert scale to assess the self-expressed stigma. The scale was based upon identifying the stigma among the housekeeping staff.	10	**Total Score-50** Favorable 10-20 Moderate 21-30 Unfavorable 31-50

3. RESULT

3.1 Data Analysis and Interpretation

The collected data were tabulated and presented according to the objectives under the following headings.

Demographic characteristics distribution of housekeeping staff those who are contributed in the study.

The data discovered, maximum of the participants that is 93% were belongs to Hindu religion and 91.66% had previous knowledge regarding COVID-19 and its preventive measures and least number of staff that is 1% were having low income and Christian religion.

Fig.1 shows 84% of the respondents had inadequate knowledge and 16% of the respondents had moderate knowledge and none of the respondents had adequate knowledge.

Fig. 2 shows 7% of the respondents had moderate knowledge, 93% of the respondents had adequate knowledge and none of the respondents had inadequate knowledge.

Fig. 3 shows that majority (86.0%) of the respondents have moderate self-expressed stigma and 14.0 % of the respondents have unfavorable self-expressed stigma regarding COVID-19 and its preventive measures.

Fig. 4 shows 58 % the respondents have moderate Self-expressed stigma and 42 % of the respondents have favorable Self-expressed stigma regarding COVID-19 and its preventive measures.

Table 1: Explanation of study participants as per demographic characteristics n=100

Characteristics	**Category**	**Respondents**	
		Frequency	**Percentage(%)**
Age	18-28 years	5	5
	29-38 years	54	54
	39-48 years	27	27
	49 years and above	14	14
Gender	Male	76	76
	Female	24	24

Marital status	Single	14	14
	Married	86	**86**
Education qualification	Primary education	55	55
	Secondary education	28	28
	Higher education	17	17
Religion	Hindu	93	**93**
	Muslim	4	4
	Christian	1	**1**
	Others	2	2
Type of family	Nuclear	50	50
	Joint	43	43
	Extended	7	7
Monthly income	5000-6000	1	**1**
	6001-7000	1	**1**
	7001-10000	10	10
	10000 and above	88	**88**
Area of residence	Urban	68	68
	Rural	32	32
Previous knowledge regarding COVID-19	Yes	55	**91.66**
	No	5	8.33
If yes, sources of information	Megazines/ Newspaper/ Journals/ Books	5	52
	Radio/ Television/ Internet	52	52
	Health professional	28	28
	Family members/ Neighbours/ Friends	15	15
Total		**100**	**100%**

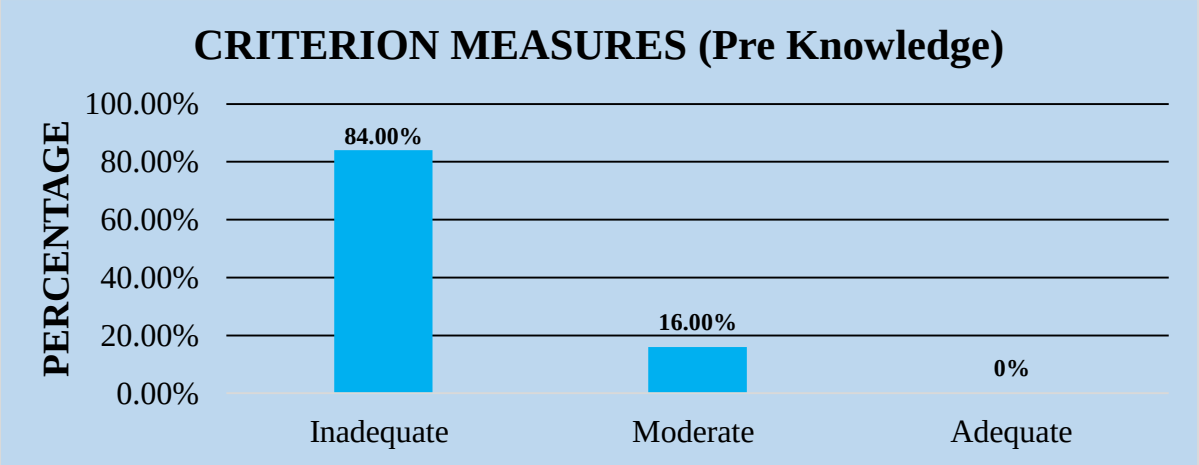

Figure 1: Percentage distribution of pre-test knowledge score.

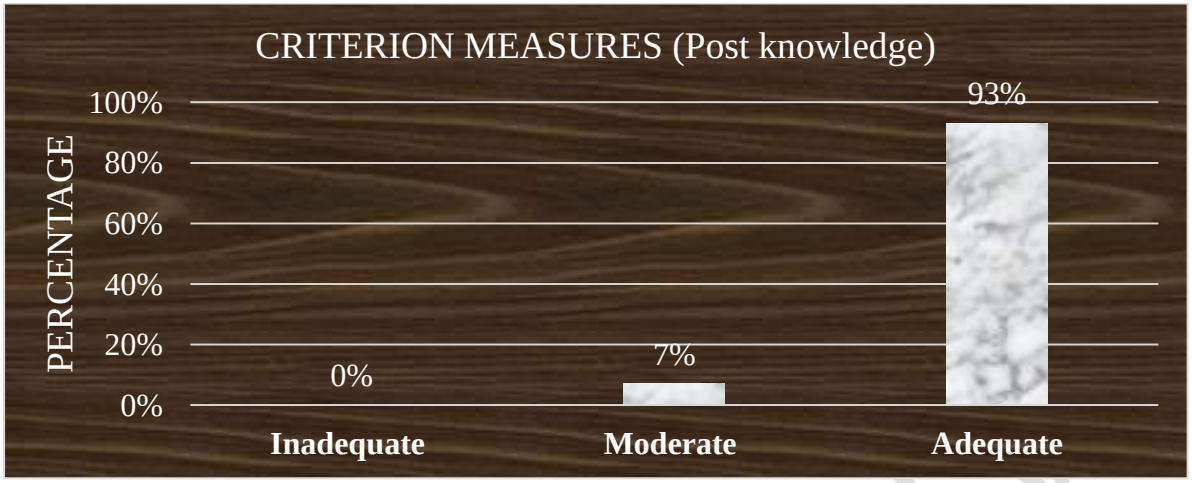

Figure 2: Percentage distribution of post-test knowledge score.

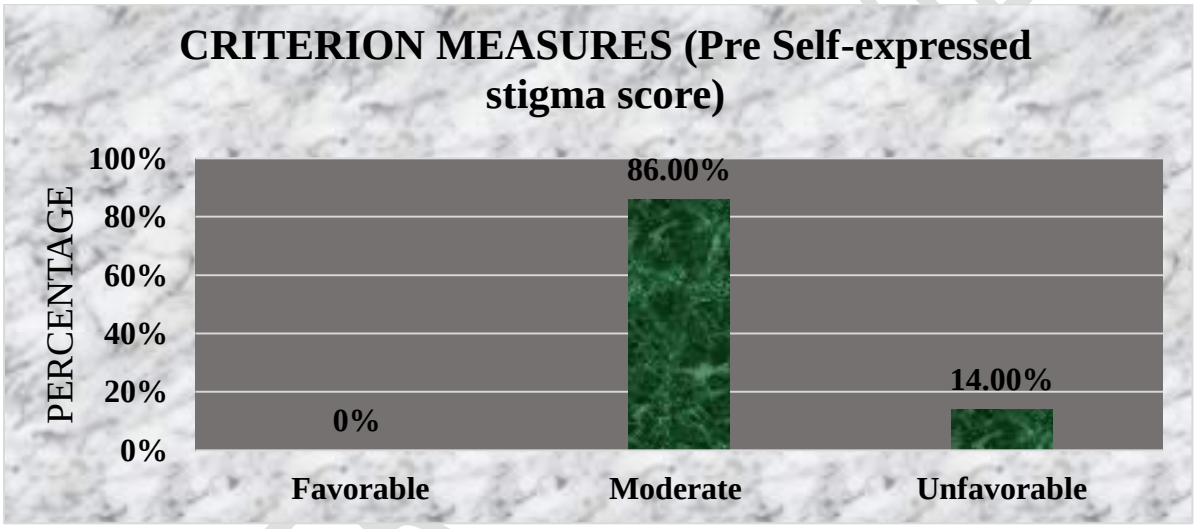

Figure 3: Percentage distribution of pre self-expressed stigma score

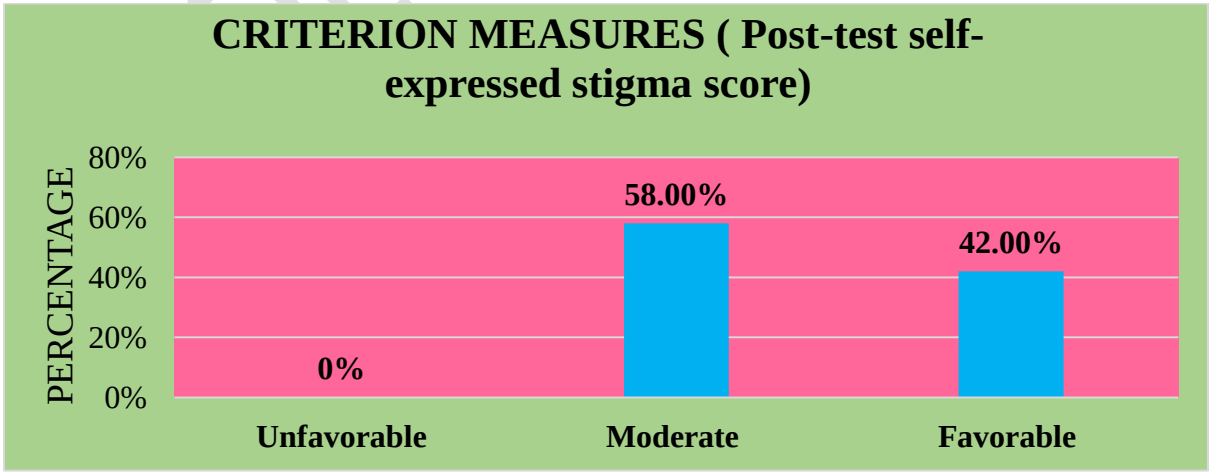

Figure 4: Percentage distribution of post self-expressed stigma score.

Table 2. Effectiveness of Video assisted Teaching Regarding COVID-19 and its preventive measures.

	Group	Mean ±SD	Mean difference	df	t value	p value*
Knowledge	Pre-test	10.53±2.355	11.92	99	58.477	**0.001**
	Post-test	22.45±1.855				
Self-expressed stigma	Pre self-expressed stigma	28.15±3.328	7.28	99	15.156	**0.001**
	Post self-expressed stigma	20.87±2.820				

*Significant at ≤0.05 level

Table 3. Association between pre-test Knowledge level with selected Demographic characteristics. n=100

Demographic Variable	Category	Sample	Respondents Knowledge				χ^2 value	df	p value	Inferences
			Inadequate (A)		Moderate (B)					
			N	%	N	%				
Agegroup	18-28	5	3	60	2	40	2.632	3	7.82	NS
	29-38	52	45	86.54	7	13.46				
	39-48	28	24	85.71	4	14.29				
	49 and above	15	12	80.00	3	20.00				
Gender	Male	76	64	84.21	12	15.79	0.010	1	3.84	NS
	Female	24	20	83.33	4	16.67				
Marital status	Single	14	11	78.57	3	21.43	0.357	1	3.84	NS
	Married	86	73	84.88	13	15.12				
Education qualification	Primary education	55	45	81.82	10	18.18	0.483	2	5.99	NS
	Secondary education	28	24	85.71	4	14.29				
	Higher education	17	15	88.24	2	11.76				
Religion	Hindi	93	77	82.80	16	17.20	1.434	3	7.82	NS
	Muslim	4	4	100.00	0	0.00				
	Christian	1	1	100.00	0	0.00				
	Others	2	2	100.00	0	0.00				
Types of family	Nuclear	50	41	82.00	9	18.00	0.298	2	5.99	NS
	Joint	43	37	86.05	6	13.95				
	Extended	7	6	85.71	1	14.29				
Income	5000-6000	1	1	100.00	0	0.00	5.709	3	7.82	NS
	6001-7000	1	0	0.00	1	100.00				

	7001-10000	10	9	90.00	1	10.00				
	10000 & above	88	74	84.09	14	15.91				
Area of residence	Urban	68	55	80.88	13	19.12	1.537	1	3.84	NS
	Rural	32	29	90.63	3	9.38				
Previous knowledge	Yes	93	79	84.95	14	15.05	0.885	1	3.84	NS
	No	7	5	71.43	2	28.57				
If yes, Sources	Megazines/ Newspaper/ Books	5	3	60.00	2	40.00	2.632	3	7.82	NS
	Radio/ Television/ Internet	52	45	86.54	7	13.46				
	Health personnel	28	24	85.71	4	14.29				
	Family members/ Neighbours/ Friends	15	12	80.00	3	20.00				

* Significant at ≤0.05 level significant

Table 3 reveals that there is no association between pre-test knowledge level of respondents on COVID-19 and its preventive measures with age, gender, marital status, education qualification, religion, types of family, income per month, area of residence, and knowledge about COVID-19 and its preventive measures.

Table 4 displays that there is a no association between pre- Self-expressed stigma level of respondents on COVID-19 and its preventive measures with age, gender, marital status, education qualification, religion,types of family, income per month, area of residence, previous knowledge and sources of information about COVID-19 and its preventive measures.

TABLE 4: Association between Self-expressed stigma level with selected Demographic characteristics. n=100

Demographic Variable	**Category**	**Sample**	**Respondents Self-expressed stigma**				**χ2 value**	**df**	**p value**	**Inferences**
			Unfavorable (C)		**Moderate (B)**					
			N	**%**	**N**	**%**				
Age group	18-28	5	2	40	3	60	3.492	3	7.82	NS
	29-38	52	7	13.46	45	86.54				
	39-48	28	4	14.29	24	85.71				
	49 and above	15	1	6.67	14	93.33				
Gender	Male	76	10	13.16	66	86.84	0.187	1	3.84	NS
	Female	24	4	16.67	20	83.33				
Marital status	Single	14	3	21.43	11	78.57	0.746	1	3.84	NS
	Married	86	11	12.79	75	87.21				
Education qualification	Primary education	55	10	18.18	45	81.82	3.568	2	5.99	NS

	Secondary education	28	4	14.29	24	85.71				
	Higher education	17	0	0.00	17	100.00				
Religion	Hindi	93	13	13.98	80	86.02	0.890	3	7.82	NS
	Muslim	4	1	25.00	3	75.00				
	Christian	1	0	0.00	1	100.00				
	Others	2	0	0.00	2	100.00				
Types of family	Nuclear	50	8	16.00	42	84.00	1.306	2	5.99	NS
	Joint	43	6	13.95	37	86.05				
	Extended	7	0	0.00	7	100.00				
Income	5000-6000	1	1	100.00	0	0.00	6.769	3	7.82	NS
	6001-7000	1	0	0.00	1	100.00				
	7001-10000	10	2	20.00	8	80.00				
	10000 & above	88	11	12.50	77	87.50				
Area of residence	Urban	68	9	13.24	59	86.76	0.103	1	3.84	NS
	Rural	32	5	15.63	27	84.38				
Previous knowledge	Yes	93	13	13.98	80	86.02	0.001	1	3.84	NS
	No	7	1	14.29	6	85.71				
If yes, Sources	Megazines/ Newspaper/ Books	5	2	40.00	3	60.00	3.492	3	7.82	NS
	Radio/ Television / Internet	52	7	13.46	45	86.54				
	Health personnel	28	4	14.29	24	85.71				
	Family members/ Neighbours/ Friends	15	1	6.67	14	93.33				

* Significant at 0.05Level, significant

4. DISCUSSION

The studys' findings were constructed on statistical analysis. The paired 't' test was used to evaluate the efficiency of the knowledge and self-expressed stigma regarding COVID-19 and its preventive measures. Chi-square test applied on the way to invent relationship between knowledge level and Self-expressed stigma level with demographic characteristics.

Objective 1: To assess the knowledge and self-expressed stigma regarding COVID-19 among housekeeping staff at selected hospital, Gurugram, Haryana.

Most of the participants had inadequate knowledge and few of them were having moderate knowledge and none of the respondents had adequate pre-test knowledge while in self-expressed stigma the majority of the respondents have Moderate self-expressed stigma some are having unfavorable self-expressed stigma and none of the participants have favorable stigma regarding COVID-19 and its

preventive measures. Total pre-test mean and SD in knowledge score is 10.53±2.355 and 28.15±3.328 in self-expressed stigma.

Incongruent with the findings of Mehrotra Sameer, Jambunathan Prashant, et al., (2020) conducted a study to investigate health care workers' knowledge of coronavirus illness (COVID-19). Medical workers who took part in the study had a moderate degree of understanding, with 65.5 percent having a moderate level of knowledge. In analyzed, the score of the nurse, doctors and dental surgeons are not differ statistically significantly. [11]

Objective 2: To assess the effectiveness of Video Assisted Teaching in terms of knowledge and self-expressed stigma regarding COVID-19 among housekeeping staff at selected hospital, Gurugram, Haryana.

The evaluation of overall pre and post-test knowledge score earlier and afterward the implementation of Video Assisted Teaching. Housekeeping staff were enhanced their knowledge from 10.53 to 22.45 and reducing the stigma from 28.15 to 20.87. Considering overall score of knowledge and self-expressed stigma in housekeeping staff is improved as there is a vast transformation between the pre and post evaluation score. Variances between pre and post assessment score was analysed via staff paired 't' test. And the 't' value in knowledge is 58.477and in self-expressed stigma is 15.156 with the p value is 0.001 in both knowledge and self-expressed stigma. So, the Video Assisted Teaching was effective and is statistically significant.

In congruence with this study Rakesh Sharma, Aroop Mohanty, and colleagues published a paper in 2021 titled "Effectiveness of Video-Based Online Training for Health Care Workers to Prevent COVID-19 Infection." The results of pair-wise comparisons of pre-test and post-test scores revealed that intervention using video-assisted teaching-learning resulted in a statistically significant improvement in knowledge (p-value 0.001). It was concluded that during the COVID-19 pandemic, video-assisted teaching-learning using virtual platforms effectively taught health workers on infection prevention and control methods.[12]

Objective 3: To find out the association between knowledge with the selected demographic variables.

Current study displays that there is no association between knowledge with the selected demographic variables.

This study is different from the study done by Amirhossein Erfani, Reza Shahriarirad, and colleagues published a paper in 2020 titled "Knowledge, Attitude, and Practice Regarding the Novel Coronavirus (COVID-19) Outbreak." The total obtained knowledge score for COVID-19 features was 90%, with 60.8 percent of the general community having a moderate understanding of the illness. Male gender, non-healthcare related jobs, being unmarried, and having a lower degree of education were all significantly associated with poorer knowledge scores, according to multiple linear regression analysis.[13]

Objective 4: To find out the association between self-expressed stigma with the selected demographic variables.

The present study which was done among 100 participants there is a no association between pre-test self-expressed stigma scores on COVID-19 and its preventive measures with age, gender, marital status, education qualification, religion, types of family, income per month, area of residence, and knowledge and sources of information.

5. CONCLUSION

The study found a significant difference in knowledge and self-expressed stigma on COVID-19 and its preventive measures among housekeeping workers in a chosen hospital in Gurugram, Haryana, before and after VAT programme. There is no association between pre-test knowledge and pre-test

self-expressed stigma scores and certain demographic variables. It was proved that Video Assisted Teaching was effective in teaching COVID-19 and its preventive measures to housekeeping staff in a selected hospital in Gurugram, Haryana.

6. RECOMMENDATION

- Frequent hand hygiene and maintaining social distancing to prevent COVID-19 for better health and each staff should have proper knowledge regarding COVID-19 and its preventive measures in order to take prevention timely.
- A research can be conducted on a variety of sample.
- To compare the effectiveness of VAT programme with different teaching methods, a comparison research can be undertaken.

CONSENT

Consent of all the participants obtained prior to the study.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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