The word file is under formatting and will be replaced once received Final PDF

"An Evaluation of the Effectiveness of a Video-Assisted Teaching Module on Enhancing Knowledge About COVID-19 Among Patients at Chirayu Medical College and Hospital, Bhopal (M.P.)"

***Smita Upadhyay**

***Lecturer , Department of Medical Surgical Nursing, Chirayu Nursing College, Bhopal, Madhya Pradesh, India.**
Email: Smitauadhyay03@gmail.com
International Journal of Nursing Science Practice and Research

Volume: 11, Issue: 1, Year: 2025
Research Article
Received date: February 02, 2025
Accepted date: February 20, 2025
Published date: February 21, 2025

Abstract
This study aims to evaluate the effectiveness of a video-assisted teaching module in improving knowledge about COVID-19 among patients admitted to Chirayu Medical College and Hospital, Bhopal (M.P.). A pre-experimental research design was employed for this study, where a sample of patients admitted to the hospital was selected using a convenient sampling technique. The study involved two phases: pre-test and post-test assessments. Initially, the patients' knowledge regarding COVID-19 was assessed using a structured questionnaire. Following this, a video-assisted teaching module was administered to the participants, which provided comprehensive information on COVID-19, including its symptoms, transmission, prevention methods, and treatment options. After the intervention, the same questionnaire was administered as a post-test to assess any changes in the patients' knowledge. The results showed a significant improvement in the participants' knowledge about COVID-19 after the intervention. The mean score of knowledge in the post-test was considerably higher compared to the pre-test, indicating that the video-assisted teaching module had a positive impact on enhancing the patients' understanding of COVID-19. The findings suggest that video-assisted learning can be an effective educational tool in a hospital setting, particularly in improving health literacy during a pandemic. In conclusion, the study demonstrates the positive influence of video-assisted teaching in enhancing COVID-19 knowledge among patients. This approach can be integrated into healthcare education strategies to improve patient awareness, especially in settings with limited access to other educational resources.

Further research could explore its long-term effectiveness and application in different healthcare settings.

Keywords: COVID-19, video-assisted teaching, patient education, knowledge enhancement, healthcare setting

INTRODUCTION

On December 31, 2019, the World Health Organization (WHO) was notified about a group of pneumonia cases in Wuhan City, a major urban center in central China with a population of 11 million. By January 5, 59 cases had been confirmed, with no fatalities reported. Ten days later, WHO received information about 282 confirmed cases, including cases in Japan, South Korea, and Thailand. In Wuhan, there were six deaths, 51 patients were seriously ill, and 12 were in critical condition. On January 7, the virus responsible for the outbreak was identified, and its genetic sequence was made public on January 12. This novel coronavirus, named SARS-CoV-2, was linked to the severe respiratory illness later known as COVID-19. The rest is history, although history that is continually being rewritten: as of May 12th, 82,591 new COVID-19 cases were being confirmed daily around the world, with a death rate of over 4200 per day.

In India, the economic effects of COVID-19 have been profoundly disruptive. India's progress has been downgraded by the World Bank and credit rating agencies for the fiscal year (2021), and India has already experienced its lowest statistics in three decades, since trade liberalization in 1990. The Indian economy is expected to lose more than 32,000 corers each day during the 21-day shutdown imposed after the corona virus outbreak. Around 53% of businesses across the country will be impacted by the lockdown.

OBJECTIVES OF THE STUDY

1. To assess the pre-test and post-test knowledge scores regarding Covid-19 among patients admitted in Chirayu Medical College and Hospital
2. To evaluate the effectiveness of Video assisted teaching module regarding Covid-19 among patients admitted in Chirayu Medical College and Hospital
3. To find out the association of pre-test knowledge score with the selected demographic variables

RESEARCH METHODOLOGY

RESEARCH APPROACH: An evaluative research approach

RESEARCH DESIGN: Pre experimental (one group pre test-post test design)

SETTING: Chirayu Medical College and Hospital at Bhopal

TARGET POPULATION: Patient in the age group between 20 to>50 yrs

SAMPLE: Medical & Surgical ward patients

SAMPLE SIZE :40 patient between the age group of 20 years to > 50 years

SAMPLING TECHNIQUE: Purposive sampling technique. (Non probability)

DISCUSSION ON THE FINDINGS BASED ON THE OBJECTIVES

The information was divided into the sections below:
1. SECTION-1: Study subjects frequency and percentage distribution based on demographic factors.
2. SECTION-2: The mean, standard deviation, and mean percentage were used to analyse the pre-test and post-test knowledge scores.
3. SECTION-3: Pre-test and post-test knowledge scores compared by frequency, percentage, and total score.
4. SECTION-4: The Z-test was used to evaluate data relating to the efficiency of video assisted teaching (VAT) on knowledge of covid-19.
5. SECTION-5: Analysis of the relationship between patients' pre-test levels of knowledge of covid-19 and their chosen demographic characteristics

SECTION-1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STUDY SUBJECTS ACCORDING TO DEMOGRAPHIC VARIABLES

Table 1: Distribution of subject according to age.

(N= 40)

Age in year (pt)	Frequency	Percentage
20-30 years	12	30%
30-40 years	14	35%
40-50 years	7	17.50%
> 50 years	7	17.50%

TABLE 1 and fig 1 shows that majority 30%(30) subjects were under 20-30 years, 35% (35) subjects were under 30-40 years, 17.5%(17.5) subjects were under 40-50 years. And 17.5% (17.5) subjects were under > 50 years.

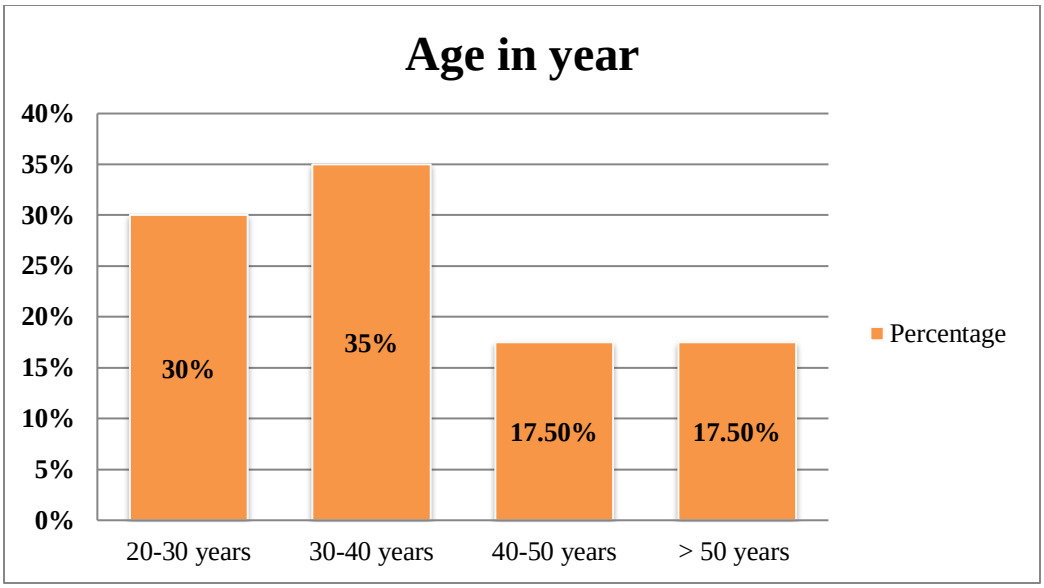


FIG: 1Column graph showing distribution of subject according to age

TABLE: 2: DISTRIBUTION OF SUBJECT ACCORDING TO GENDER

(N=40)

Gender	Frequency (F)	Percentage (%)
Male	30	75%
Female	10	25%
Other	0	0%

TABLE 2 and fig 2 shows that majority 75% (75) subjects were belongs to male, 25% (25) belongs to female.

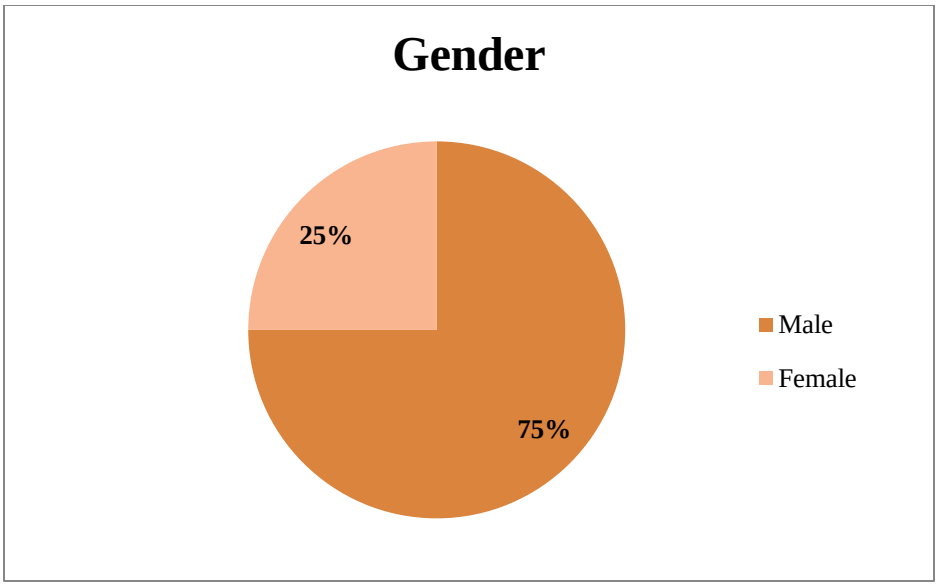


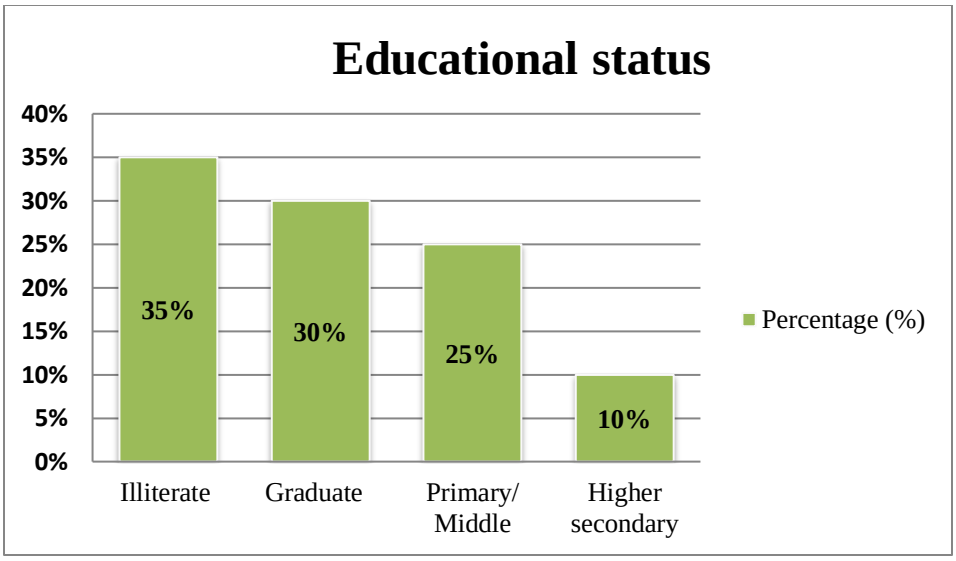
FIG 2: Pie graph showing distribution of subject according to gender.

TABLE: 3: DISTRIBUTION OF SUBJECT ACCORDING TO EDUCATION

(N= 40)

Education	Frequency (F)	Percentage (%)
Illiterate	14	35%
Graduate	12	30%
Primary/ Middle	10	25%
Higher secondary	4	10%

Table 3 and Fig 3 shows that majority 35% (35)subject were indicate illiterate, 30%(30) subjects were having graduate, 25% (25) subjects were having primary education, and 10%(10) subjects were having higher education.



Fig; 3 Column graph showing distribution of subject according to education

TABLE-4: DISTRIBUTION OF SUBJECT ACCORDING TO MARITAL STATUS

(N=40)

Marital status	Frequency (F)	Percentage (%)
Single	12	30%
Married	21	52.50%
Widow	3	7.50%
Separated	4	10%

Table 4 and Fig 4 shows that majority 52.50% (52.50) subject were indicate married, 30%(30) subjects were having single, 10% (10) subjects were having separated, and 7.5%(7.5) subjects were having widow.

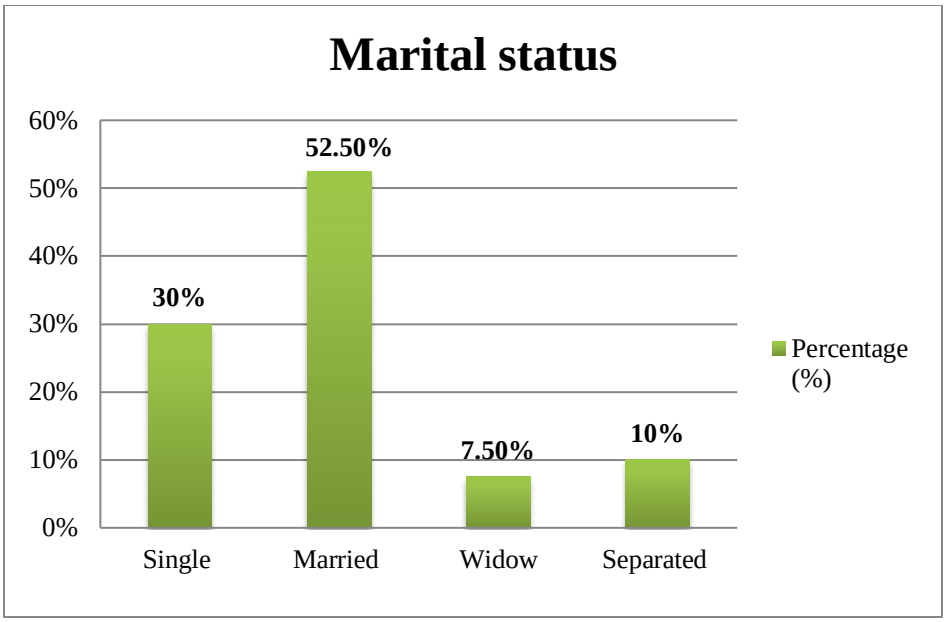


Fig: 4 Column graph showing distribution according to of subject marital status.

TABLE: 5: DISTRIBUTION OF SUBJECT ACCORDING TO TYPES OF FAMILY

(N=40)

Types of family	Frequency (F)	Percentage (%)
Nuclear	30	75%
Joint	10	25%
Total	40	100

Table 5 and Fig 5 shows that majority 75% (75) subject were indicate nuclear family, 25 %(25) subjects were having joint family.

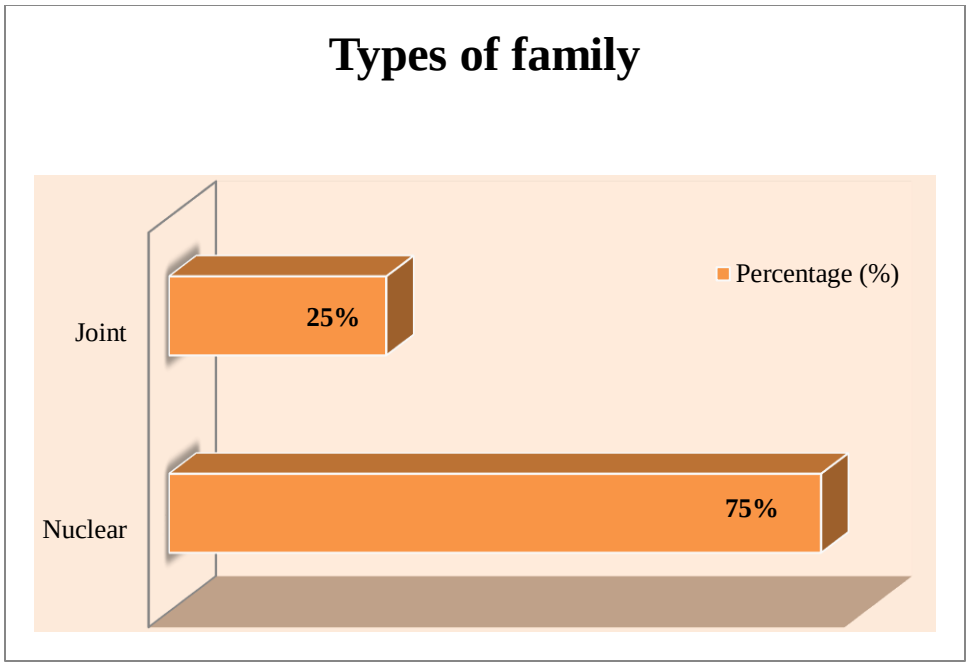


Fig: 5 Bar graph showing distribution of subject according to types of family.

TABLE: 6: DISTRIBUTION OF SUBJECTS ACCORDING TO RELIGION

(N=40)

Religion	Frequency (F)	Percentage (%)
Hindu	13	32.50%
Christian	14	35%
Muslim	13	32.50%
Others	0	0

Table 6 and Fig 6 shows that majority 18% (18) subject belong to Christian, 16 % (16) Subjects belong Muslim religion and 16% (16) subjects belong to, Hindu religion and 0 %(0) subjects to other religion.

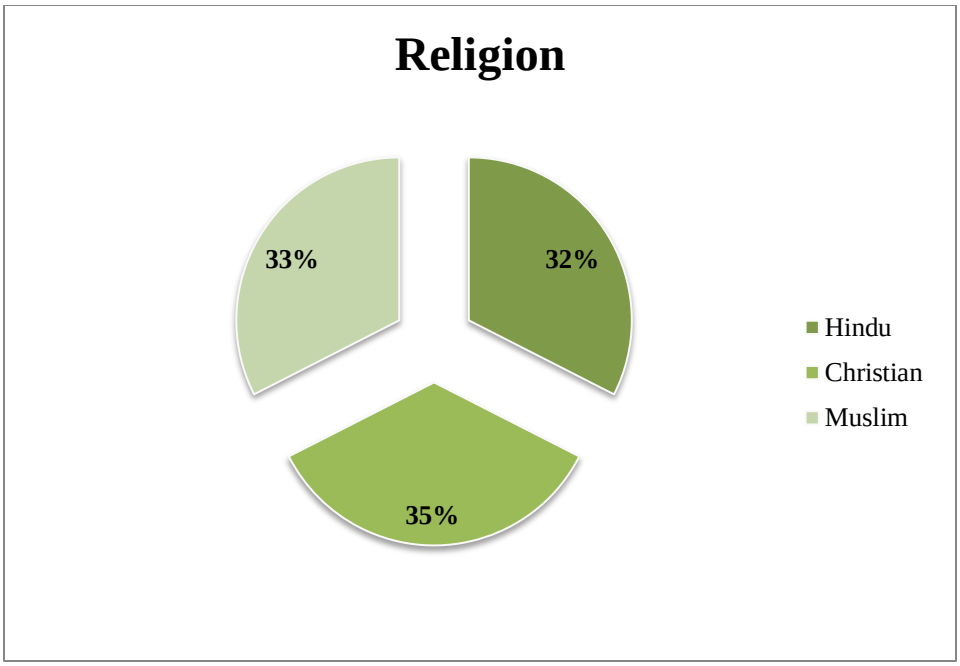


Fig: 6 Pie graph showing distribution of subject according to religion.

TABLE: 7: DISTRIBUTIONS OF SUBJECT HAVE YOU SUFFERED WITH COVID-19.

(N=40)

Have you suffered with Covid-19	Frequency (F)	Percentage (%)
Yes	26	65%
No	14	35%

Table 7 and Fig 7 shows that majority 65% (65) subject belong to suffer with Covid-19, and 35 %(35) subjects not belong to suffered with Covid-19.

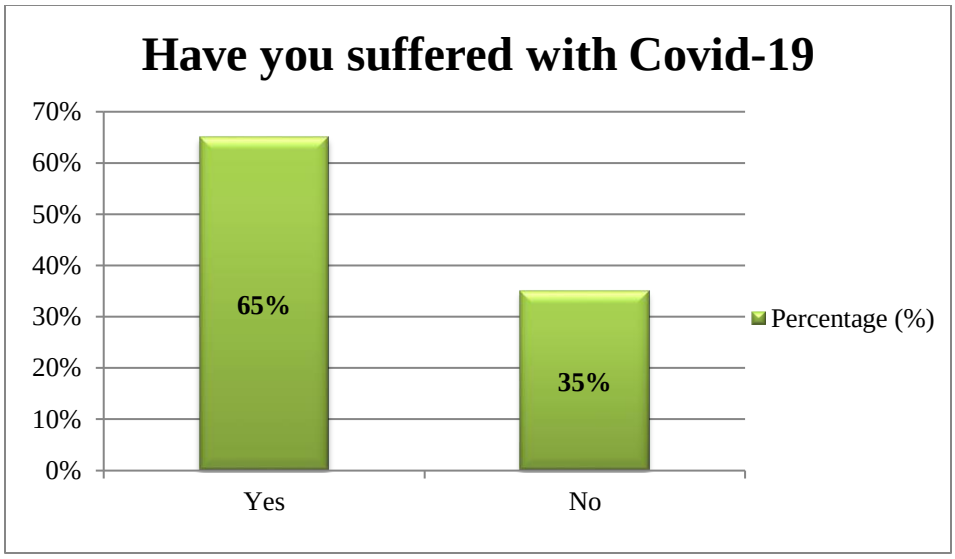


Fig: 7 Column graph showing distribution of subject according to have you suffered with Covid-19.

TABLE 8:DISTRIBUTION OF ACCORDING TO IF YES, SPECIFY FROM SOURCE OF WHOM?

(N=40)

If yes, specify from source of whom	Frequency (F)	Percentage (%)
Yes	25	62.50%
No	15	37.50%
Total	40	100%

Table 8 and Fig 8 showing that majority 62. 50% (62.50) subject belong to suffer with Covid-19, and 37.50 %(37.50) subjects not belong to suffered with Covid-19.

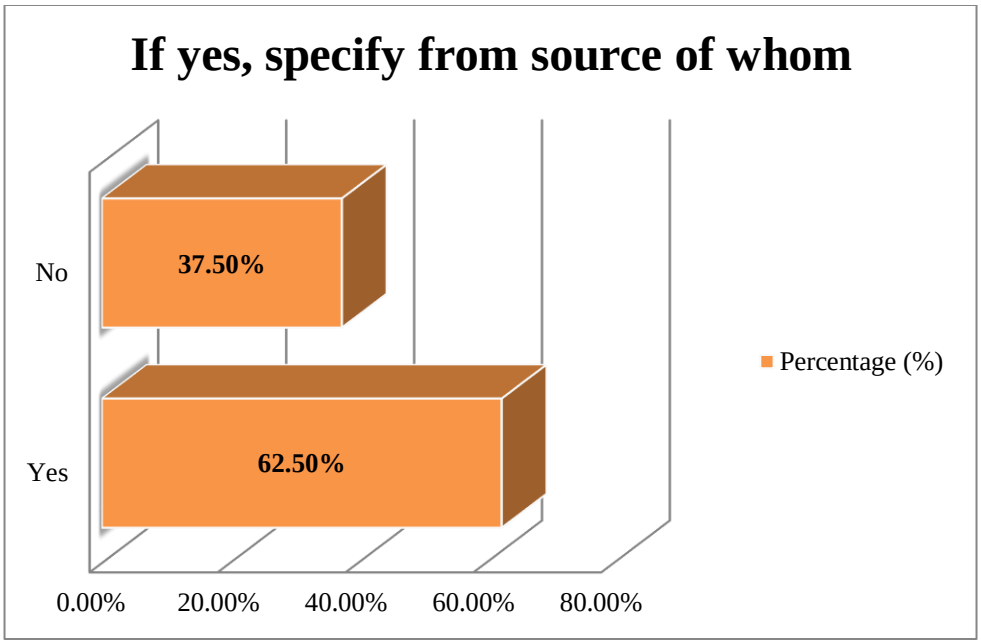


Fig: 8 Bar graph showing distribution of subject according if yes, specify from source of whom.

TABLE 9: SOURCE OF INFECTION (YES)

Specify source of infection	Frequency (F)	Percentage (%)
Travelling	14	56%
Work place	3	12%
Market	8	32%

Table 9 and Fig 9 shows that majority 56% (56) subject infection belong to travelling, 32% (32) infection belong to Market and 12 %(12) infection belong to work place.

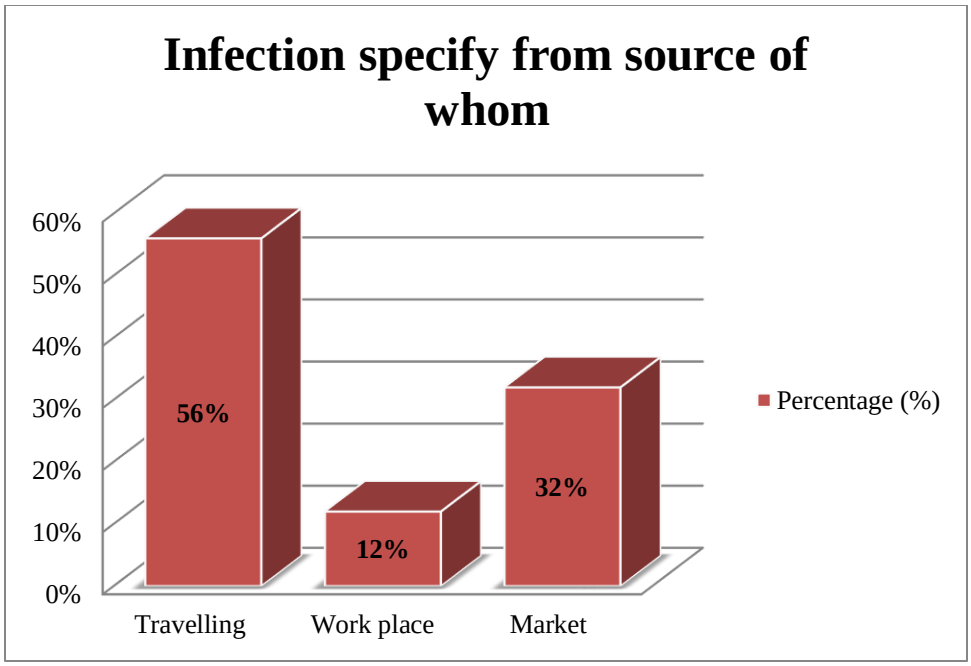


Fig: 9 Column graph showing distribution of subject according infection if yes, specify from source of whom.

TABLE: 10 : DISTRIBUTION OF SUBJECT ACCORDING TO SUBJECT ANY FAMILY MEMBER AFFECTED BY COVID-19 IF YES, SPECIFY FROM WHOM.

(N=40)

Family member affected by Covid-19	Frequency(F)	Percentage (%)
Yes	28	70%
No	12	30%

Table 10 and Fig 10 shows that majority 35% (35) family member affected by Covid-19 infection and 15% (15) not affected by Covid-19.

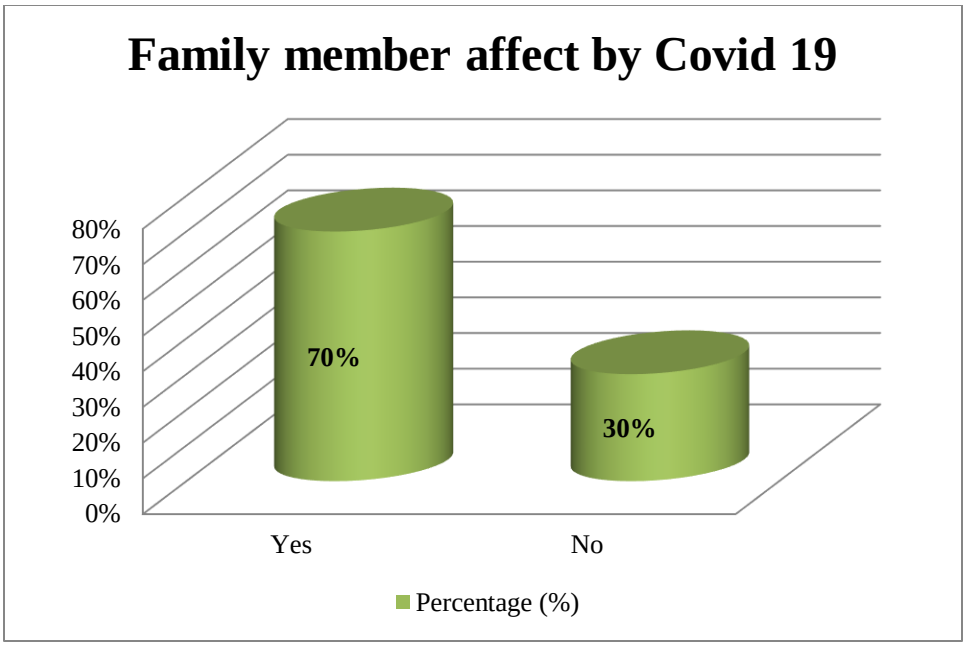


Fig: 10 Cylindrical graph showing distribution of subject according any family member affected by covid-19 if yes, specify from whom.

TABLE: 11: FAMILY MEMBER AFFECTED WITH COVID-19 (YES)

If yes, specify from whom	Frequency(F)	Percentage (%)
Family	5	17.80%
Friends	5	17.80%
Market	15	53.50%
Hospital	3	10.70%

Table 11 and Fig 11 shows that majority 35% (35) family member affected by Covid-19 infection and 15% (15) not affected by Covid-19.

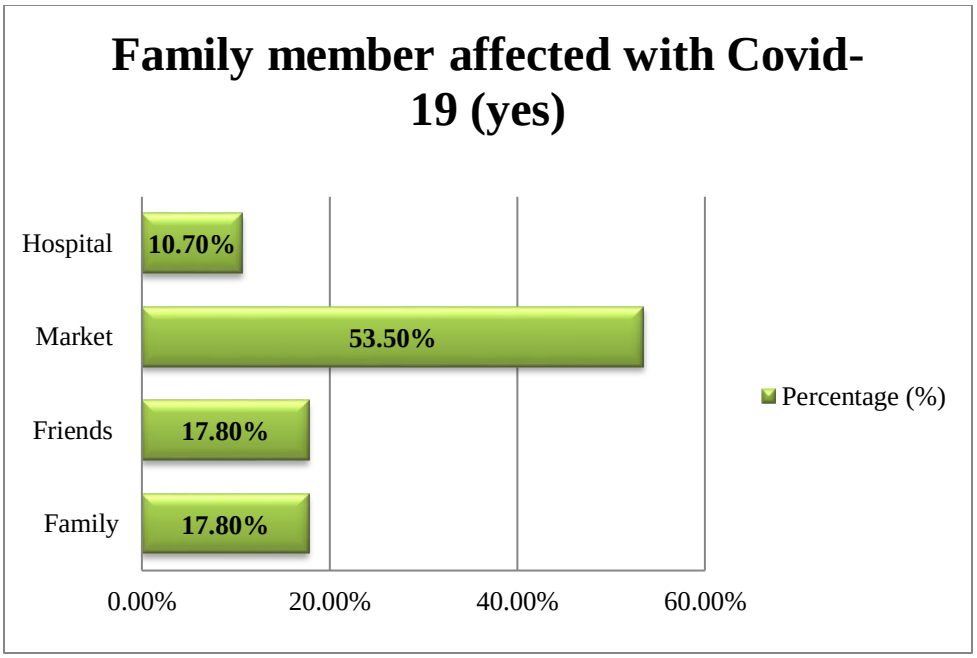


Fig: 11 Bar graph showing distribution of subject family member affected by covid-19.

TABLE: 12: DISTRIBUTION OF SUBJECT ACCORDING VACCINATION

(N=40)

Are you vaccinated	Frequency (F)	Percentage (%)
Yes	24	60%
No	16	40%

Table 12 and Fig 12 shows that majority 60% (60) people have done Covid-19 vaccine and 40% (40) people have not done Covid-19 vaccine.

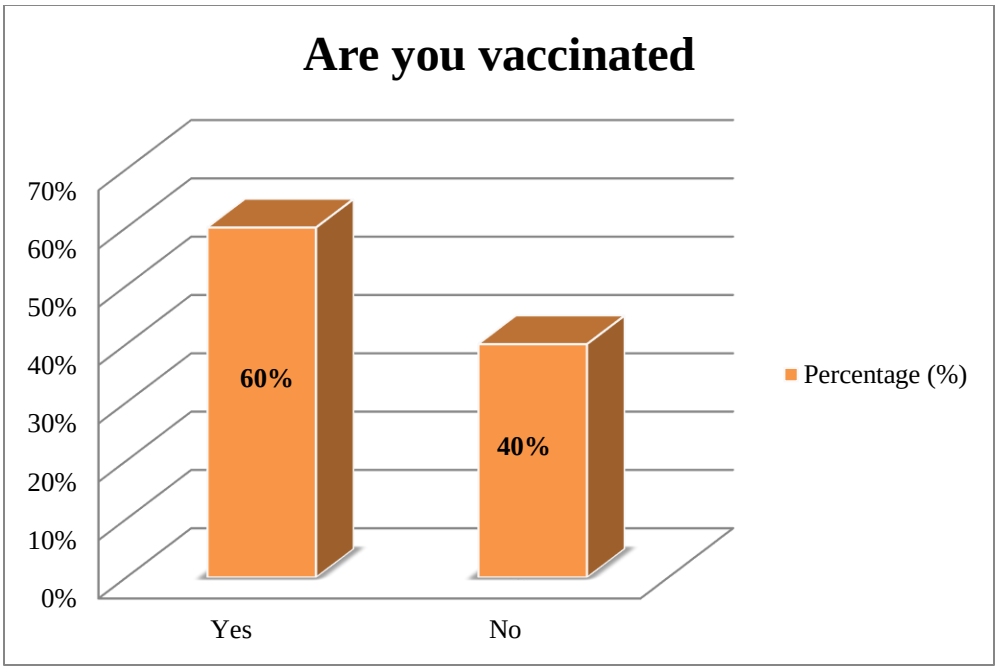


Fig: 12 Column graph showing distribution of subject according to covid-19 vaccination

SECTION-2: ANALYSIS OF PRE-TEST AND POST TEST KNOWLEDGE SCORE USING MEAN, STANDARD DEVIATION AND MEAN PERCENTAGE.

Table 13 analysis of pre-test and post-test knowledge score mean, mean percentage, and standard deviation of patients at Chirayu Medical Hospital Bhopal, M.P

(N=40)

Knowledge	Mean	Mean percentage	Standard deviation
Pre-test	13.47	33.67%	1.98
Post-test	21.55	53.87%	2.51

The above table 13 showed that the pre-existing knowledge of patients was less as pre-test knowledge score was 539. The calculated mean was 13.47 with standard deviation of 1.98 and mean percentage was 33.67%, post-test knowledge score of patient was increased to 862. The calculated mean value was 21.55 with standard deviation of 2.51 and mean percentage was 53.87%. The result signifies that there has been a consistent increase in knowledge score in post-test when compared to pre-test of patients regarding Covid-19.

Hence, it proven that H_1 is accepted.

SECTION-3: Pre-test and post-test knowledge scores compared by frequency, percentage, and total score.

TABLE: 14: COMPARISON OF KNOWLEDGE SCORES BETWEEN PRE-TEST AND POST-TEST BY FREQUENCY, PERCENTAGE AND TOTAL SCORE

Table 14 and Fig 13 frequency and percentage distribution according to the level of knowledge score of pre-test and post-test among patients.

(N=40)

S.No	Scores	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
1	Good	0	0%	05	12.5%
2	Average	28	70%	35	87.5%
3	Poor	12	30%	00	0%

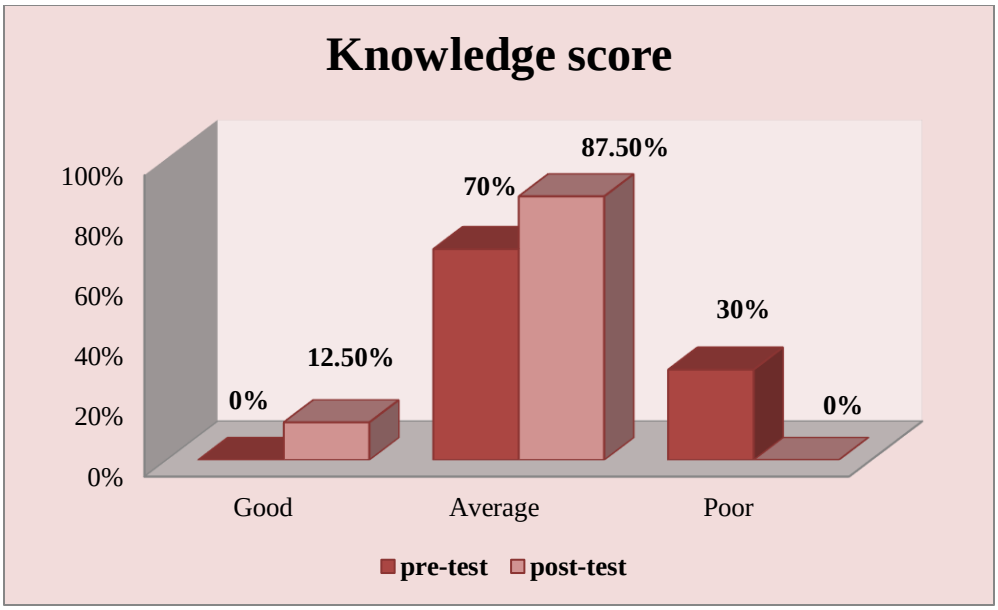


Figure 13: Column diagram showing the distribution of subject according to knowledge score.

SECTION-4

TABLE: 15: EVALUATION OF DATA RELATED TO EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAM ON KNOWLEDGE REGARDING COVID-19 BY Z-TEST.

(N=40)

S. No.	Criteria Knowledge	Mean	Mean difference	Standard deviation	Standard error	Z-value
1.	**Pre-test**	13.47	8.07	8.46	1.33	**38.17**
2.	**Post-test**	21.55				

Table 15 illustrates the effectiveness of the video-assisted teaching program. According to the table, the mean score for knowledge in the pre-test was 13.47, while the post-test mean score was 21.55, resulting in a mean difference of 8.07. The standard deviation was 8.46, and the standard error was 1.33. The Z-value for the knowledge score was 38.17, which is statistically significant at > 0.05, confirming the effectiveness of the video-

assisted teaching program. The researcher hypothesized that there would be a significant difference in the mean pre-test and post-test knowledge scores of patients regarding COVID-19, and as a result, H1 is accepted.

SECTION-5: Chi square analysis for association between the selected socio demographic variables with pre-test knowledge scores of patients

TABLE: 16: Association between the selected socio demographic variables with pre-test knowledge score

S.No.	Characteristics	Characteristics			Chi square	df	P value	Inferences
		Poor	Average	Good			P>0.05	
Age in years	20-30 yr	10	2	0	0.61	3	3.18	Not significant
	30-40 yr	10	4	0				
	40-50 yr	5	2	0				
	>50 yr	5	2	0				
Gender	Male	20	10	0	0.13	2	4.30	Not significant
	Female	6	4	0				
	Other	0	0	0				
Education	Illiterate	12	2	0	3.82	3	3.18	Significant
	Primary/middle	8	2	0				
	Higher secondary	2	2	0				
	Graduate	8	4	0				
Marital status	Single	10	2	0	0.63	3	3.18	Not significant
	Married	15	6	0				
	Widow	2	1	0				
	Separated	3	1	0				
Types of family	Nuclear	20	10	0	0.86	1	12.71	Not significant
	Joint	5	5	0				

Religion	**Hindu**	10	3	0	2.96	3	3.18	Not significant
	Christian	12	2	0				
	Muslim	8	5	0				
	Others	0	0	0				
Have you suffered with Covid-19	**Yes**	20	6	0	0.14	1	12.71	Not significant
	No	10	4	0				
If yes, specify from source of whom.	**Yes**	20	5	0	0.49	1	12.71	Not significant
	No	10	5	0				
a) **Yes**	**Travelling**	10	4	0	0.17	2	4.30	Not significant
	Workplace	2	1	0				
	Market	5	3	0				
Any family members affected by Covid-19 if yes, specify from whom.	**Yes**	18	10	0	1.44	1	12.71	Not significant
	No	10	2	0				
a) **Yes**	**Family**	3	2	0	0.28	3	3.18	Not significant
	Friends	4	1	0				
	Market	10	5	0				
	Hospitals	2	1	0				
	Yes	15	9	0	0.66	1	12.71	

Are you vaccinated	**No**	12	4	0				Not significant

Table 16 presents the relationship between patients' pretest knowledge scores about COVID-19 and various selected demographic variables. The association between pre-test and selected demographic variable are calculated through chi- square test and formula was Chi- square **test =** $\frac{(\mathbf{O}-\mathbf{E})^2}{\mathbf{E}}$ used. Age was not significantly associated with pretest knowledge level as the p value was >0.05. Similarly, gender, Marital status, Types of family, Religion, Have you suffered with Covid-19, If yes, specify from source of whom, Any family members affected by Covid-19 if yes, specify from whom, Are you vaccinated were also not significantly associated with pretest knowledge score education was significantly associated with pretest knowledge level as the p value was >0.05. as the computed chi square value for all these demographic variables was less than table value at 0.05 level for the corresponding degree of freedom (df = (c-1) (r-1). **Hence stated hypothesis H_2 is rejected.**

MAJOR FINDINGS OF THE STUDY

SECTION 1

- Majority (35%) of the samples belonged to 30-40 years and least (17.5%) samples belonged to > 50 years.
- Majority (75%) of the samples belonged to male, and least (25%) samples belonged to female.
- Majority (35%) of the samples belonged to illiterate, and least (10%) samples belonged to higher education.
- Majority (52.50%) of the samples belonged to married, and least (7.5%) samples belonged to widow.

- Majority (75%) of the samples belonged to nuclear family and least (25%) samples belonged to joint family.
- Majority (35%) of the samples belonged to Christian and least (2.50%) samples belonged to Muslim.
- Majority (65%) of the samples belonged to suffer with Covid-19, and least (35%) samples not belong to suffered with Covid-19.
- Majority (62.50%) of the samples belonged to suffer with Covid-19, and least (37.50%) samples not belong to suffered with Covid-19.
- Majority (56%) samples infection belonged to by travelling and least (12%) samples infection belonged to work place.
- Majority (70%) of the samples belonged to infection with Covid-19 and least (30%) family members are not affected by Covid-19 infection.
- Majority (53.50%) of the samples belonged to Covid-19 infection family member affected Covid-19 by Market, and least (10.7%) family member affected by Hospital.
- Majority (60%) of samples has done Covid-19 vaccine and least (40%) people have not done Covid-19 vaccine.

A retrospective cohort study compared the risk of death from COVID-19 among different religious groups. It found that, compared to Christians, all other religious groups had a higher risk of death related to COVID-19. The highest age-adjusted hazard ratios (HRs) were observed for Muslim and Jewish males, with HRs of 2.5 (95% CI: 2.3 to 2.7) and 2.1 (95% CI: 1.9 to 2.5), respectively. For Muslim and Jewish females, the HRs were 1.9 (95% CI: 1.7 to 2.1) and 1.5 (95% CI: 1.7 to 2.1), respectively. The difference in risk between the groups decreased after the lockdown. Those with no religious affiliation had the lowest risk of COVID-19-related death both before and after the lockdown.

A cross-sectional study involving 409 participants, with a response rate of 96.7%, examined knowledge and attitudes towards the second COVID-19 vaccine dose. More than half of the respondents had high knowledge regarding the second dose, and 95.6% expressed a favorable attitude towards it. Factors influencing knowledge about the second vaccine dose included

educational status (AOR=1.82, 95% CI=1.1–2.2), age (AOR=2.01, 95% CI=1.76–3.01), and profession (AOR=2.32, 95% CI=1.42–3.01). Variables influencing attitudes toward the second dose included educational status (AOR=5.42, 95% CI=4.1–6.7), age (AOR=12.4, 95% CI=10.54–15.8), profession (AOR=4.33, 95% CI=2.32–6.87), work experience (AOR=4.33, 95% CI=2.32–6.87), marital status (AOR=2.47, 95% CI=1.33–5.95), risk level (AOR=2.33, 95% CI=1.31–4.11), and gender (AOR=3.42, 95% CI=2.91–4.98).

CONCLUSION

Following conclusions are drawn from the present study findings:

The chief deduction after this current education stands that greatest of the Covid-19 in patients admitted in Chirayu Medical Hospital in experimental group get pre-test and post-test in experimental. Increase the level of knowledge among patients and its determination recover the excellence of lifetime which contains the constancy in physical, emotional and occupational lifecycle stylishness features.

ACKNOWELEDGEMENT

First to all my heart full thanks to my **God Almighty** for his abundant blessing showered on me, to complete the study successfully. Thank you for always supporting me through everything that I do and giving me courage, strength and patience, so thank you for everything because I see and get it.

I take this opportunity to express our heartiest gratitude to **Dr. Ajay Goenka, Chairman Medical College and Hospital** Bhopal (M.P.) for providing an opportunity to uplift our professional education.

It gives us immense pleasure to express our deep indebtedness to **Prof. Dr. Pramilaa. R, Principal** of Chirayu College of Nursing Bhopal for her consistent encouragement, prayers blessing and expert guidance in the completion of the study.

I feel highly obligated to **Dr. Sunil Ashwani Director** of R.M. Hospital Lalghati Bhopal (MP).for their encouragement, support, valuable suggestion and permission for conducting research in R.M. Hospital Lalghati Bhopal (MP).

I express my grateful thanks to the guide of **Professor Seema Varghese** of Medical Surgical Nursing Department, Chirayu College of Nursing Bhopal, who graciously accepted the burden of supervision of this study in spite of her heavy engagement. Her continuous inspiration and encouragement, meticulous supervision, brilliant suggestion, constructive criticism, affectionate attitude and above all his vast width and breadth of knowledge specially in information and technology has helped me immensely to complete this research work and preparing the thesis successfully. I am highly indebted to her.

My sincere thanks to our class co-ordinator **Prof. Grace Mary,** Chirayu College of Nursing Bhopal for their valuable guidance and support

I deeply extend my thanks to all the **HODs of different departments** Chirayu College of Nursing, Bhopal for her expert guidance, constructive suggestion for the successful completion of this study.

My sincere thanks to the all the **M.Sc. Faculty** in Chirayu College of Nursing, Bhopal for the consistent guidance and precious advice throughout the study

My profound thanks to the all **B.Sc. Faculty** in Chirayu College of Nursing, Bhopal for your valuable guidance and support

I feel highly obliged to all experts of **research committee** who gave their expert opinion and valuable guidance for their encouragement, support and valuable suggestion for the tool validation

My profound thanks to all the **statisticians** in Chirayu College of Nursing Bhopal for their encouragement, support and valuable suggestion in statics

My deepest thanks to **Mrs. Anuradha Dwivedi** and all librarian staff in Chirayu College of Nursing Bhopal for to give us permission to issue books from library to get success and happing us for the completion of our study.

I would like to express my sincere gratitude to both the teaching and non-teaching faculty for their valuable contributions and for providing the necessary facilities throughout the study. I also extend my heartfelt thanks to everyone who, directly or indirectly, assisted in the successful completion of this study. I convey my sincere thanks to all my **classmates** for their extended sorts of cooperation and help of the study.

I own a deep sense of appreciation; I also acknowledge my heartiest gratitudeness and thankfulness to **printers** for their help and sincere efforts to give perfect shape to my thesis.

Last but not the least I would like to thanks my beloved **parents** for their wholehearted cooperation, continuous support, constants encouragement, inspiring me with their affectionate words, constants assurance, which enabled me to complete this paper successfully.

BIBLIOGRAPHY

BOOKS:

1. BT. Basvanthappa, Nursing Research and Statistics, Second Edition, 2007 Year, New Delhi Published by Jaypee Brothers Medical Private Limited. Page No. 278.
2. Suresh K. Sharma, Nursing Research and Statistics, Second Edition, 2014 Year , New Delhi Published by Reed Elesevier India Private Limited, Page No. 103-104.
3. Mrs. Sunada S Ray Chowdhiry, Nursing Research and Statistics, First Edition, 2010 Year , New Delhi Published by Kumar Publisher House, Page No. 102-105.
4. DR. Sreelekha, Dr. Seethal, Hand Book Of Nursing Research and Statistics, Third Edition, 2016 Year, Bangalore, Published by Emmess Medical, Page No. 103,105
5. Nisha Clement , Text Book On Nursing Research and Statistics , First Edition , 2015 Year by Manju Nath .S Page No. 163-164

6. JOURNALS

7. **1. American Academy of Pediatrics. Children and COVID-19: state-level data report. 2021**
8. **2. Bailey LC, Razzaghi H, Burrows EK, et al. Assessment of 135,794 pediatric patients tested for severe acute respiratory syndrome coronavirus 2 across the United States. JAMA Pediatr. 2021.**
9. **3. Brambilla I, Castagnoli R, Caimmi S, et al. COVID-19 in the pediatric population admitted to a tertiary referral hospital in Northern Italy: preliminary clinical data. Pediatr Infect Dis J. 2020 Jul;39(7):e160.**
10. **4. Castagnoli R, Votto M, Licari A, et al. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in children and adolescents: a systematic review.**