

Effectiveness of Hands-On Training for Prevention of Covid-19 & Assessing Psychological Impact Among Pregnant Women in Selected Hospital of Vadodara.

Received: 23 October 2022, **Revised:** 24 November 2022, **Accepted:** 26 December 2022

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Key Words:

Effectiveness, hands-on training, psychological impact, covid-19, pregnant women

Abstract:

There is widespread agreement that during pandemics, both physical and mental health are impacted. Particularly in response to virus epidemics and quarantine procedures, many persons display depressed, stress, and anxiety-related symptoms. Increased financial difficulties and drastic changes in daily routine brought on by lockdown may put vulnerable groups, such as pregnant women, at risk of developing depression. The study's objectives included determining the effectiveness of practical training for prevention and evaluating the psychological effects of COVID-19 among pregnant women in a particular Vadodara hospital. Using a non-probability purposive sample technique, the researcher in this study chose a quantitative approach and pre-experimental research with one group, pre-test, and post-test to gather data from pregnant women on the prevention of COVID-19. Data from 210 pregnant women were gathered using the standardised IES-R scale (Impact of event scale-revised). Descriptive and inferential statistics like Standard Deviation, t-test, and Chi Square were used to analyse the data. In the study, significant disparities were found. Out of 210 moms, 67 (31.9%) had a moderate degree of psychological impact before the test, while 13.8% had a high level. Of the remaining 67 mothers, 67.1% had a mild impact, 28.1% a normal impact, and 4.8% a moderate impact. The amount of post-test knowledge for preventing COVID-19 was significantly correlated with a number of sociodemographic factors, including religion, types of families, education, and marital status. Hence, the intervention programme successfully raised knowledge of COVID-19, and practical training may help to reduce psychological impact of covid-19.

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Aims and Objectives of the Study

The present study is aimed to find out the effectiveness of hands-on training for prevention of covid-19 among pregnant women in selected hospital of Vadodara.

1. Introduction

The vast virus family known as coronaviruses is responsible for a variety of illnesses, from the common cold to more serious conditions including Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). ¹ In Wuhan, China, a brand-new coronavirus (COVID19) was discovered in 2019. This novel coronavirus hasn't been discovered in people before. ² Communities were gripped by fear and dread due to this deadly infection, for which there is presently no treatment. ³ Given the current circumstances, pregnant women must be given extra concern because their immunological tolerance state makes them hypimmune and because the levels of the hormones oestrogen and progesterone rise during pregnancy, making the upper respiratory tract more susceptible to infection. ⁴ Furthermore, there is strong evidence that the COVID-19 outbreak, which poses a serious risk to the lives of pregnant women, has negative effects on both the pregnancy and the foetus, including lower infant birth weight, a higher incidence of pregnancy-related complications, and depressive, anxious, and dissociative symptoms. ⁵ A woman's pregnancy, during which she endures numerous bodily and psychological transformations, is one of the most wonderful experiences in her life. ⁶ Being close to having children makes women proud and gives their lives a little more meaning. ⁷ Throughout pregnancy, women may experience some level of stress and anxiety, which is typically brought on by the worry about potential negative obstetrical consequences such foetal mortality or deformities. ⁸ The physical and mental well-being of the mother and the foetus depend on prenatal mental health. Many prospective studies showed a substantial correlation between severe perceived stress and shorter gestational times, lower birthweights, poorer Apgar scores, and greater incidence of problems. ⁹ Low birth weight, premature birth, and perinatal death were all more prevalent in pregnant women with COVID-19. The neurodevelopment, intellect, and temperament of babies are also said to be negatively impacted by prenatal stress, sadness, and anxiety. ¹⁰ The

psychological effects of the COVID-19 pandemic on pregnant women were examined in this study. In this study, it was expected that pregnant women could experience increased mental health problems. ¹¹ We also looked into what was known about the COVID-19 epidemic. Pregnant women's feeling of threat may simply and immediately indicate how the new coronavirus affects them. Does the present coronavirus epidemic have any psychological effects on pregnant women, according to this study? If the answer is yes, what level of psychological effects do expectant mothers experience? All of the aforementioned issues were scarcely touched upon. The purpose of this study was to evaluate the psychological effects of pregnancy. ¹³

2. Methodology

The goal of the current study was to determine how well practical training for preventing COVID-19 among pregnant women in a particular Vadodara hospital worked. In this study, the investigator's goal was to evaluate the practical training's effectiveness in preventing COVID-19 and evaluating its psychological effects on expectant mothers in a particular Vadodara hospital. So, for this study, a quantitative research approach was used. A research design, according to Polit and Beck (2015), is the entire strategy for answering a research topic and includes guidelines for strengthening the objectivity of the study. The plan, structure, and investigational plan that addresses the study choice is known as the research design. It is the general strategy for choosing and carrying out the study. For this study, a pre-experimental research approach was used. The samples chosen for data collection in the current investigation were those that met the requirements for sample selection and were available throughout the data collection period. They were chosen using a process known as purposeful non-probability sampling. Based on the study's goals, descriptive and inferential statistics were used to examine the data. The socio-demographic information, awareness of COVID-19 prevention among pregnant women, and assessment of the psychological impact of COVID-19 among pregnant women were described using descriptive statistics like frequency and percentage. paired t-test to determine the importance of the variation in mean scores between the pretest and posttest. Pregnant women's post-test knowledge of COVID-19 prevention was evaluated using the chi-

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square test to determine the success of the program's application in relation to their chosen demographic factors. Pre-test and post-test assessments of knowledge and psychological impact were conducted

using paired t tests. The data were analysed using version 22 of SPSS statistical software. Before to data collection, the ethical committee SVIEC's clearance was acquired, as well as consent from the subjects.

3. Result

Table 1: Socio-demographic characteristics of the sample pregnant women

SR. NO.	VARIABLES	FREQUENCY	PERCENTAGE
1.	Age		
	a. 19 – 21 years	89	42.4 %
	b. 22 – 24 years	75	35.7 %
	c. ≥ 25 years	46	21.9 %
2.	Marital Status	209	99.5 %
	a. Married	0	0.5 %
	b. Unmarried	1	
	c. Widow		
3.	Religion	68	32.4 %
	a. Hindu	93	44.3 %
	b. Muslim	49	23.3 %
	c. Christian	0	0 %
	d. Other		
4.	Types of Family	112	53.3 %
	a. Nuclear Family	98	46.7 %
	b. Joint Family		
5.	Qualification	52	24.8 %
	a. 10 th Pass	69	32.9 %
	b. 12 th pass	55	26.2 %
	c. Under Graduate	34	16.2 %
	d. Graduate		

The 210 participants who took part in the study are shown in the above table for the study's final analysis. 42.4% (n=89) of the moms there were between the ages of 19 and 21. About 99.5% of the respondents (n=209) were married. Of the participants, 44.3% (n=93) were Muslim, 53.3% (n=112) belonged to a nuclear family, and 32.9% (n=69) had completed the

12th grade. The information in table 1 illustrates how samples were distributed by age for the vast majority of samples. 89 (42.4%) of the population is between the ages of 19 and 21; 75 (35.7%) are between the ages of 22 and 24. The distribution of samples by marital status shows that 46 (21.9%) people are older than 25. 209 of the samples—99.5%—were married,

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and 1 (0.5%) was a widow. the breakdown of samples according to religion. Islam religion is practised by 44.3% of the sample 93 population. 49 (23.3) were members of the Christian religion, while 68 (32.4%) were Hindus. the breakdown of samples by family type. 53.3% of sample 112's participants are from

nuclear families. 98 people (46.7%) belonged to joint families. the division of samples according to qualification. The majority of the sample, 69 (32.9%), was 12th pass, followed by 34 (16.2) graduates, 55 (26.2) undergrads, and 52 (24.8%) 10th pass.

Table: 2 Frequency and percentage distribution of effectiveness of hands-on training on knowledge regarding covid-19 among pregnant women

KNOWLEDGE LEVEL	SCORE	PRE-TEST		POST-TEST	
		Frequency	Percentages	Frequency	Percentages
Poor	≤1	40	19.0%	0	0%
Average	2&3	164	78.1%	25	11.9%
Good	≥4	6	2.9%	185	88.1%

The results of the knowledge test showed that 78.1% of participants (n=164) had average understanding on covid-19, 19% (n=40) had poor knowledge, and 2.9% (n=6) had good knowledge. In contrast, 88.1% of post-test participants (n=185) had strong understanding of covid-19, whereas 11.9% (n=25) had average knowledge. Pregnant women were divided into three groups based on their understanding of

COVID-19: 164 (78.1%) had average knowledge, 40 (19%) had poor knowledge, and 6 (2.9%) had strong knowledge. The information shown in figure 8 illustrates how the sample's knowledge of COVID-19 is distributed. Among pregnant women who took the post-test, 185 (88.1%) had good knowledge, 25 (11.9%) had average knowledge, and 0 (00%) had poor knowledge.

Table 3: Frequency and percentage distribution of effectiveness of hands-on training regarding psychological impact on covid-19 among pregnant women

PSYCHOLOGICAL IMPACT	SCORE	PRE-TEST		POST-TEST	
		Frequency	Percentages	Frequency	Percentages
Normal psychological impact	0-23	10	10%	59	28.1%
Mild psychological impact	24-32	104	49.5%	141	67.1%
Moderate psychological impact	33-36	67	31.9%	10	4.8%
Severe psychological impact	≥37	29	13.8%	0	0%

Above table shows the frequency and percentage distribution of psychological impact of covid-19 among pregnant women. Among them 49.5% (n=104) were having mild psychological impact and 31.9% (n=67) were having moderate psychological impact,

while 13.8% (n=29) were having severe psychological impact and only 10% (n=10) was having normal psychological impact of covid-19 in pre-test. While in post-test 67.1% (n=141) were having mild psychological impact, 28.1% (n=59) were having normal

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psychological impact, 4.8(n=10) were having moderate psychological impact and there is no one is having severe psychological impact.

Table 4: Comparison of the effectiveness of hands-on training on knowledge regarding prevention of covid-19 among pregnant women of selected hospital of Vadodara.

Test	Mean	Mean difference	SD	t value	Tablevalue	Significance
Pre-test	1.8667	1.78643	0.79981	34.339	1.660	Significant
Post-test	3.7619			df (209)		

The table depicts that there is significant difference between effectiveness of hands-on training on knowledge regarding prevention of covid-19 among pregnant women of selected hospital of Vadodara, Gujrat, hence research hypothesis H1 is significant.

Table: 5 Comparison of the effectiveness of hands-on training on psychological impact on prevention of covid-19 among pregnant women of selected hospital of Vadodara.

Test	Mean	Mean difference	SD	t value	Tablevalue	Significance
Pre-test	2.5619	0.95427	0.88897	13.584	1.660	Significant
Post-test	1.7286			df (209)		

The table depicts that there is significant difference between effectiveness of hands-on training on psychological impact of covid-19 among pregnant women of selected hospital of Vadodara, Gujrat, hence research hypothesis H1 is significant.

Table: 6 Association of post-test level of knowledge among pregnant women with their selected socio-demographic variables

Variables	Poor	Average	Good	Total	χ^2	df	Table value	Level of significance
1. Age								
19-21 years	0	7	82	89	7.342	2	5.991	NS
22-24 years	0	15	60	75				
≥ 25 years	0	3	43	46				
Total	0	25	185	210				
2. Marital status								
Married	0	25	184	209				

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Unmarried	0	0	0	0	0.136	1	3.841	S
Widow	0	0	1	1				
Total	0	25	185	210				
3. Religion								
Hindu	0	10	58	68	0.762	2	5.99	S
Muslim	0	10	83	93				
Christian	0	5	44	49				
Other	0	0	0	0				
Total	0	25	105	210				
4. Types of family								
Nuclear family	0	16	96	112	1.297	1	3.84	S
Joint family	0	9	89	98				
Total	0	25	185	210				
5. Education								
12 th pass	0	8	61	69	0.796	3	7.82	S
Graduate	0	5	29	34				
Under-graduate	0	5	50	55				
10 th pass	0	7	45	52				
Total	0	25	185	210				

The above tables depicts that there was significant association between level of knowledge regarding prevention of COVID-19 among pregnant women of selected hospital of Vadodara with their selected socio-demographic variables are significant. hence research hypothesis H2 is accepted.

Hence research hypothesis H2 is significant that there is significant difference between level of knowledge before and after performing hands-on training among pregnant women.

4. Discussion

The first objective of the present study was to assess the level of knowledge and psychological impact on prevention of COVID-19 among pregnant women.

The results of the study showed that 164 (78.1%) of the participants had average knowledge, 40 (19.0%) had bad knowledge, and just 6 (2.9%) had strong knowledge in the pretest. After receiving hands-on training, 185 (88.1%) of them scored well on the post-test, whereas 25 (11.9%) scored averagely.

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Just 10% (n=10) of them had a normal psychological impact of covid-19 in the pre-test, with the psychological impact level among them being 49.5% (n=104) with mild psychological impact and 31.9% (n=67) with moderate psychological impact. After receiving hands-on training, 67.1% of participants (n = 141) reported mild psychological impact, 28.1 percent (n = 59) reported normal psychological impact, 4.8 percent (n = 10) reported moderate psychological impact, and none reported severe psychological impact.

The second objective of the study was to assess the effectiveness of hands-on training for prevention of covid-19 among pregnant woman.

The corresponding hypothesis was H1: "There would be a substantial difference in knowledge and psychological impact between pre-test and post-test for prevention of COVID-19 in pregnant women before and after hands-on training.

In this study, the difference between the pre-test and post-test in terms of knowledge (M=1.8667, 3.7619, SD= 0.79981) and the pre-test and post-test in terms of psychological impact (M=2.5619, 1.7286, SD= 0.88897) were compared.

At the p0.005 level, the computed 't' value of 13.54 was statistically very significant. This demonstrates unequivocally that the practical training had a significant impact by lowering the psychological impact on pregnant women post-test compared to pre-test.

The research hypothesis H1, which asserts that there is a considerable difference in the effectiveness of hands-on training, is therefore accepted. Of psychological impact among pregnant women in pre-test and post-test.

The third objective was to find out the association between post-test knowledge regarding COVID-19 among pregnant woman with selected demographic variables.

Age: Although the calculated chi-square (X2) value of 7.342 is higher than 3.84 and the chi-square (X2) table value at the 2 degree of freedom and 0.05 level of significance, age is not a significant factor in the samples' level of knowledge.

Marital status: Since the calculated chi-square (X2) value of 0.136 is less than 3.84 and the chi-square (X2) table value at the 1 degree of freedom and 0.05 level of significance is significant for the samples' level of knowledge, marital status is important.

Religion: The chi-square (X2) calculated value of 0.762 is less than 3.84, the table value of chi-square (X2) at the 2 degree of freedom, and the 0.05 level of significance Thus, religion has a major impact on the degree of knowledge among the samples.

Family type: Because the estimated chi-square (X2) value of 1.297 is less than 3.84 and the table value of chi-square (X2) at the 1 degree of freedom and 0.05 level of significance, family type is significant for the samples' level of knowledge.

Education is relevant for the level of knowledge among the samples since the estimated chi-square (X2) value of 0.796 is smaller than 3.84 and the chi-square (X2) table value at the 3 degree of freedom and 0.05 level of significance.

The corresponding null hypothesis was H2: "There will be a substantial correlation between demographic factors and pregnant women's knowledge of COVID-19."

According to the study's findings, there was a strong relationship between the chosen demographic characteristics and post-test. Hence the hypothesis H2 was accepted.

5. Conclusion

The study presents the conclusion drawn, implication, limitation and recommendation of present study. The study undertaken to assess the knowledge and psychological impact pregnant women in selected hospital of Vadodara. . The size of sample 210 and selection of the sample was done according to inclusion criteria. The result was analyzed by using both descriptive and inferential statistics.

Reference

- [1] Emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control.
- [2] Jain A, Sami-Zakhari IR. Pulmonary complications of obstetric and gynecologic

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- conditions. *Respiratory Medicine*. 2017, Oct 24: 139–61. PMID:PMC7121584.
- [3] Urato AC. Consensus bundle on maternal mental health: perinatal depression and anxiety. *Obstet & Gynecol*. 2017, 130(2): 467–468.
- [4] Lau JTF, Griffiths S, Choi KC, Tsui HY. Avoidance behaviors and negative psychological responses in the general population in the initial stage of the H1N1 pandemic in Hong Kong. *BMC Infect Dis* (2010) 10:139. 10.1186/1471-2331-10-139.
- [5] Roberton T, Carter ED, Chou VB, Stegmuller AR, Jackson BD, Tam Y, Sawadogo-Lewis T, Walker N. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Health*. 2020;8(7): e901–8.
- [6] Wang C, Pan R, Wan X, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health* 2020; 17:1729.
- [7] Serrano-Castro PJ, Estivill-Torrus G, Cabezudo-Garcia P, Reyes-Bueno JA, Ciano Petersen N, Aguilar-Castillo MJ, Suarez-Perez J, Jimenez-Hernandez MD, Moya-Molina MA, Oliver-Martos B, et al. Impact of SARS-CoV-2 infection on neurodegenerative and neuropsychiatric diseases: a delayed pandemic? *Neurologia*. 2020;35(4):245–51.
- [8] Heneka MT, Golenbock D, Latz E, Morgan D, Brown R. Immediate and long-term consequences of COVID-19 infections for the development of neurological disease. *Alzheimers Res Ther*. 2020;12(1):69.
- [9] Shi K, Lu J, Fan H, Jia J, Song Z, Li W, Gao J, Chen X, Hu W. Rationality of 17 cities' public perception of SARS and predictive model of psychological behavior. *Chin Sci Bull*. 2003;48(13):1297–303.
- [10] Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, Rubin GJ. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020;395(10227):912–20.
- [11] Rogers JP, Chesney E, Oliver D, Pollak TA, McGuire P, Fusar-Poli P, Zandi MS, Lewis G, David AS. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. *Lancet Psychiatry*. 2020;7(7):611–27.
- [12] Dean DC 3rd, Planalp EM, Wooten W, Kecskemeti SR, Adluru N, Schmidt CK, Frye C, Birn RM, Burghy CA, Schmidt NL, et al. Association of prenatal maternal depression and anxiety symptoms with infant white matter microstructure. *JAMA Pediatr*. 2018;172(10):973–81.
- [13] Madigan S, Oatley H, Racine N, Fearon RMP, Schumacher L, Akbari E, Cooke JE, Tarabulsky GM. A meta-analysis of maternal prenatal depression and anxiety on child socioemotional development. *J Am Acad Child Adolesc Psychiatry*. 2018;57(9):645–57.
- [14] Flacking R, Lehtonen L, Thomson G, Axelin A, Ahlqvist S, Moran VH, Ewald U, Dykes F, Separation, Closeness Experiences in the Neonatal Environment g: Closeness and separation in neonatal intensive care. *Acta Paediatr* 2012, 101(10):1032–1037.