To Assess the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Prevention of COVID-19 among Antenatal Mother

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Study Protocol

ABSTRACT

Introduction: Since the year 2019, COVID-19 (Corona Virus Disease 2019) has sparked numerous discussions and rumours. Undoubtedly, the core foundation of health care system has been shattered due to the absence of any specific treatments. Hence, this research study is selected and will be carried out to prevent the pandemic by providing knowledge through video assisted teachings to the antenatal mothers.
Aim: To assess the effectiveness of video assisted teaching programme on knowledge regarding prevention of COVID-19 among antenatal mothers in selected maternity hospitals.
Methodology: This study will be based on a Quantitative research approach along with the use of non-probability convenient sampling technique. The sample population will consist of 400 antenatal mothers from selected maternity hospital. Lesson plan and structured questionnaires will contribute to the context of V.A.T.P.

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Expected Result: The study should be able to depict the positive effect of video-assisted teaching programme on prevention of COVID-19 among antenatal mothers from selected maternity hospitals, along with studying the association of their knowledge score to the respective demographic variables.

Conclusion: Video-assisted teaching programme should be effective method for delivering health education at all times and final conclusion will be drawn from the ultimate results of the statistical review.

1. INTRODUCTION

When it comes to reality, women play a key role to educate her family in some or the other way, due to the immense care to serve everyone around her with good health. But, since the Corona Virus Disease 2019, nobody is able to maintain their health in any of the dimensions, due to the lack of knowledge to prevent the disease and maintain their health. There is no specific age group or gender to define the vulnerability, as everyone is equally exposed to the ill-effect of the disease. Therefore, we aim to induce knowledge among antenatal mothers to prevent COVID-19, because any women who is going to be a mother, knows how to protect her baby from any external fatal risks, thereby will contribute to this research project and also will share her knowledge with two families.

It is also observed that the ANC mothers are undergoing health complication due to heavy stress, which is contributing to further risks and complications to the baby in womb as well as to other family members. Hence, preventive measures like isolation or quarantine, lockdown, social distancing, use of personal protective equipment i.e., gloves, face masks, sanitizers and many such things have been made into practices, which have shown positive impact to reduce the spread of the pandemic. But not many people are aware about it or know the correct way to practice it. Therefore, video assisted teaching programme regarding the knowledge on prevention of COVID-19 will be delivered to ANC mothers without the fear to skip out any points along with teaching them the right way to perform healthy practices.

Preterm birth cases were reported in the mothers with the risk of coronavirus infection with it types as SARS or MERS during their third trimester of pregnancy. Usually, pregnancy changes the immune system and the body's reaction to viral infections, that can lead to more severe symptoms in some cases. However, it is yet not clear whether the preterm births were all iatrogenic or if some were spontaneous among women with COVID-19 [1].

1.1 Need for the Study

According to a report released by the CDC in late June 2020, pregnancy may raise the risk of a person to serious sickness due to COVID-19. Pregnant women were more liable to be admitted to the critical care unit and undergo mechanical ventilation than non-pregnant women. Therefore, pregnant women as well as their family members should take appropriate precautions to avoid contact with COVID-19. This study is needed in reaction to prevent the impact of COVID-19, as well as to raise awareness about the danger of infection owing to the COVID-19 pandemic among pregnant women [1].

Health education is one of the fundamental parts while delivering primary health care as affirmed by the Alma Ata Conference (1978), which intended the positive effect from the kingdom's Primary Health Care centres (PHCs). The national "plan of action" for PHCs' activities, underlines the importance of appropriately dissemination of vital information on antenatal care and related concerns so that women can improve their response for a safe pregnancy till childbirth. Health education related to maternal and new born care is also emphasized by various source like social media, news channels and even educational books [1,2,3]. In other words, health care practitioners in other countries are also working to ensure that pregnant women have proper health awareness. However, multiple studies have found that many pregnant women are either unaware of or unconcerned about specific health hazards [1,2,3,4]. This shows the positive impact to educate women and assist them in acquiring suitable knowledge and developing optimistic attitude towards a safe pregnancy [5].

1.2 Background and Need of the Study

Ever since COVID-19 was highlighted by World Health Organization, epidemiology was drastically affected. Morbidity rate along with mortality rate kept breaking records over millions with each day. Hence, several countries united to introduce and practice "Quarantine norms" in each country, in order to limited the vigorous spread of the fatal pandemic. All along the way, the pregnant women as well as their family members are concerned regarding the COVID-19 effect, because of which this research study will be carried out to prevent the pandemic to an extent.

The risk of COVID-19 infection in babies from mothers who test positive for the virus is still unknown. Doctors in France revealed the first confirmed case of a new-born catching COVID-19 while still in the womb [2]. According to the Centre for Disease Control and Prevention (CDC),

- COVID-19 can be transmitted to babies through intimate contact with an infected person.
- Shortly after birth, several infants tested positive for the virus. It's unclear if the virus infected these kids before, during, or after birth.
- The majority of babies who tested positive for COVID-19 had minor to no symptoms and recovered completely. However, some neonates have been reported to be severely unwell.
- Preterm birth has been recorded in babies delivered to COVID-19 positive tested mothers. Though, it is unclear whether these occurrences were linked to the virus or not [2].

1.3 Aim of the Study

"To assess the effectiveness of video assisted teaching programme on knowledge regarding prevention of COVID-19 among antenatal mothers in selected maternity hospitals."

1.4 Objectives of the Study

1. To assess the existing knowledge regarding prevention of COVID-19 among antenatal mothers.
2. To assess the effectiveness of video assisted teaching on knowledge regarding

prevention of COVID-19 among antenatal mothers.
3. To associate the findings with the selected demographic variable.

1.5 Hypothesis

1. H1 - There will be a significant difference between the pre and post-tests level of knowledge regarding prevention of COVID-19.
2. H2 - There will be a significant association between demographic variables with the knowledge of antenatal mothers regarding prevention of COVID-19.

1.6 Variables

➢ **Independent variable:** Video-assisted teaching.
➢ **Dependent variable:** Knowledge regarding prevention of covid-19 among antenatal mothers.
➢ **Demographic variables:** Age, residential area, type of family, monthly family income, education.

2. METHODOLOGY

➢ **Research approach:** Quantitative evaluative approach.
➢ **Research design:** One group pre-test and post-test
➢ **Setting of the study:** The study will be conducted in selected Maternity hospitals in Wardha district.
➢ **Population:** Antenatal mothers in Wardha district.
➢ **Sampling technique:** Non-probability convenient sampling technique.
➢ **Sample:** Antenatal mothers in selected hospitals in Wardha district.
➢ **Sample size:** 400 antenatal mothers.
➢ **Criteria for sample selection:**

- **Inclusion Criteria:**

1. Those who are willing to participate and are available at the time of data collection regardless of the primigravida or multigravida.
2. Those are from in- patient department of the maternity hospital, i.e., who is admitted to

hospital and will be staying there for at least 7 days in the hospital.

- **Exclusion Criteria:**

1. Those who are from out- patient department of the maternity hospital or has visited for follow up care.
2. Those who are mentally ill or has/had history of mental illness.
3. Those are diagnosed as high-risk patients (e.g.: Obstetrically complicated cases, chronically / genetically ill patients, women aged above 35 years or below 19 years).

Description of tools:

The research tool is distributed into 3 sections:

Section 1: Baseline Performa. (Age, education, religion, occupation)

Section 2: Questionnaire on COVID-19

Section 3: Video on COVID-19 (Introduction, signs and symptoms, investigation, Treatment and prevention)

Method of data collection:

Collection of data is precise yet comprehensive procedure which is relevant to the research problem. The approval for conducting research will be obtained from responsible authorities of selected maternity hospitals. Further the process of collecting data by introducing themselves and providing the details regarding the study to the subjects of study should be initiated. The data will be collected at the selected maternity hospital of Wardha district, notably Acharya Vinoba Bhave Rural Hospital, Sawangi (Meghe), Wardha and Other hospitals in Wardha district. At the time of data collection, the researchers primarily will ensure for better co-operation from study's sample. The nature and objective of the study will be presented to the participants. Further, the consent from the participants must be obtained, prior to enrolling them in the research. They will be assured that the data would be kept confidential. The validated tools will be used, which includes pre-test via structured questionnaires, followed by video assisting teaching framed from the lesson plan. Then after a week the post-test will be assessed. 15-30 minutes will be provided to the samples to answer the questions. Any queries by the participants will be clarified in all 400 recruited

subjects for the study from day 2 - day 6. Data, consisting 400 pre-test and 400 post-test samples will be collected approximately within 6 months by the researchers.

3. PLAN FOR DATA ANALYSIS

The data will be coded, tabulated and analysed by using descriptive statistics and inferential statistics methods i.e., standard deviation, mean percentage. Paired 't' test will be used, to determine the significance of the difference at the 5% level of significance, and the tabulated 't' value will be compared to the computed 't' value. The estimated 'p' values will be also compared against acceptable 'p' values. The demographic variables associated with the knowledge level regarding prevention of COVID-19 among antenatal mothers will be done by using one way ANOVA and independent t-test. Overall, the research study data will be depicted in the form of tables and graphs.

4. EXPECTED OUTCOME / RESULTS

The primary goal of this study is to assess the effectiveness of video assisted teaching programme on knowledge regarding prevention of COVID-19 among antenatal mothers in selected maternity hospitals, therefore this study should be able to depict the improvement of knowledge of the antenatal mothers, which will further help them to prevent diseases like COVID-19 as well as maintain their health.

5. DISCUSSION

Women during their pregnancy, appear to be no more susceptible to infection than the general population as pneumonia induced COVID-19 cases in pregnant women have been reported to be milder and to recover quickly. The pandemic raises the threat of anxiety and sadness in the perinatal period. Hence, it calls for support to those women and her family in every aspect of health including mental health.

According to a recent study, pregnant women in China had a lower incidence of melancholy, anxiety, sleeplessness, and Post-Traumatic Stress Disorder (PTSD) during the COVID-19 outbreak. Those listed symptoms were commonly seen in non-pregnant women of reproductive age. Their findings help to deploy medical resources more efficiently and design targeted psychological treatment for women of

reproductive age to promote mental health during the COVID-19 epidemic [6].

Another study shows the impact of the COVID-19 pandemic in terms of depression and anxiety levels on pregnant women. Their findings indicate that providing psychosocial support during this crisis is critical. Otherwise, unfavourable occurrences during pregnancy may occur, affecting both the mother and the foetus [7].

Some study shows that when the mother gives birth via vaginal delivery, the rate of COVID-19 infection to neonates, neonatal mortality, and maternal mortality is no higher. Individualized birthing methods should be chosen based on a woman's choices as well as obstetric indications. More high-quality studies using full serial tests from numerous specimens and long-term neonatal follow-up are urgently needed [8].

Pregnant women's experiences have been impacted by the COVID-19 pandemic, which has the potential to damage their psychosocial well-being. The primary themes found in this study can help organisations establish woman-centred care throughout the pandemic and improve pregnant women's psychosocial wellness [9].

A study shows that antenatal moms' knowledge has improved, implying that the Video Assisted Teaching Program was successful. The pre-test knowledge score was substantially connected with the demographic factors of Antenatal moms. Antenatal women will benefit from the implementation of a video-assisted teaching programme since it will improve their knowledge of PPIUCD [10].

So the researchers also plan to implement the video-assisted teaching programme for pregnant mother to provide knowledge regarding prevention of COVID-19.

COVID-19 vaccination received a 70.9% approval rating. COVID-19 vaccination uptake was linked to demographic variables of those pregnant women. Pregnant women should be given health education and pamphlets about COVID-19 preventive measures by health care workers. Furthermore, they must promote the safety and effectiveness of the COVID-19 vaccine before administering it to pregnant women [11].

It is noted that 3 out of 10 pregnant mothers who visited obstetric outpatient clinics, used the antenatal care services to the fullest extent possible. During COVID-19, women's educational status, prioritising maternal health services, and improving the quality of ANC services were emphasised, along with promoting them to prevent any further complications [12].

Pregnant women are more likely to experience perceived stress, worry, and depression during the COVID-19 outbreak. To comfort and support pregnant mothers, mental health care is desperately needed. Creating material tailored to pregnant women Using social media, women on how to deal with emergencies and big disease outbreaks. Social media platforms could be a good approach to deal with mental health issues [13].

Many studies showed that COVID-19 prevention techniques and understanding were both lacking age, place of residence, and perceptions of COVID-19's impact on chronic disease were all found to be independent determinants in the use of preventative measures. Pregnant women under the age of 35 should be counselled by their healthcare professionals on COVID-19 prevention strategies [14].
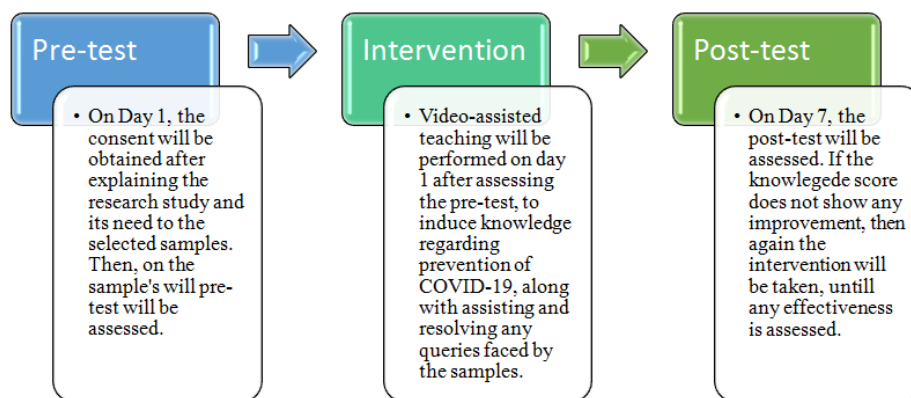

Fig. 1. Study schedule

Table 1. Study schedule

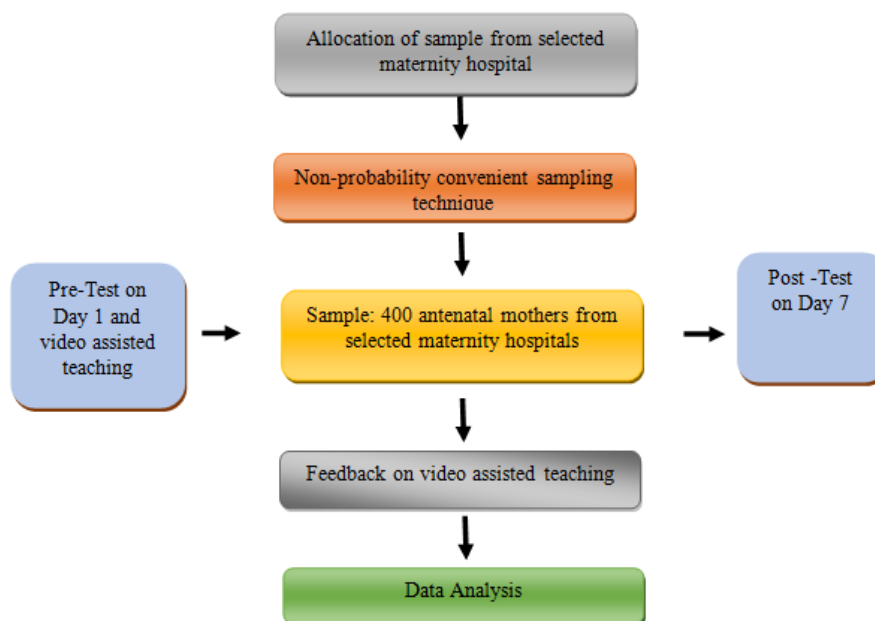| Day 1	Day 2 – Day 6	Day 7
Pre-test followed by Video assisted teaching programme.	Assisting the antenatal mothers with their queries and demonstrating healthy practices during her pregnancy in COVID-19.	Post-test followed by feedback and data analysis.

Fig. 2. Schematic diagram of study methodology including the sample selection, sampling technique, sample size, feedback and data analysis

6. CONCLUSION

The study aims to assess the effectiveness of video assisted teaching programme on knowledge regarding prevention of COVID-19 among antenatal mothers in selected maternity hospitals. The data will be collected in online mode with confidentiality from selected areas in Wardha. The objectives were set as it will be helpful for the researchers to reach the desired findings. For the data collection, the tools will be distributed in three sections i.e., lesson plan, video-assisted teaching and structured questionnaires. Hence, the findings of the present study will be interpreted with respect to the pre-test and post-test knowledge score along with the association between the knowledge scores and the demographic variables of the samples.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

ETHICAL ASPECTS

The Institutional Ethics Committee (IEC) (Ref. No. DMIMS (DU)/IEC/2020-21/155) was approved this study and the it will be conducted in accordance with the ethical guidelines prescribed by IEC on Human Research.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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