ISSN PRINT 2319 1775 Online 2320 7876
 UGC CARE Listed (Group -I) Journal Volume 14, Iss 05, 2025

A Study to Evaluate the Effectiveness of STP On Knowledge and Attitude Regarding Antenatal Care Due to COVID-19 Among Antenatal Mothers at NMCH, Nellore

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ABSTRACT:

The research article provides an overview of the effectiveness of a "structured teaching program" (STP) in improving the knowledge and attitude of antenatal mothers towards antenatal care during COVID-19. Focusing on the care of antenatal mothers admitted at Narayana Medical College Hospital, Nellore, Andhra Pradesh, the research outcomes helped bring out specific aspects of structured teaching to improve antenatal care and mitigate the chances of COVID-19 infection. 60 antenatal mothers admitted at the OPD of NMCH, Nellore were taken as the study's sample and a structured questionnaire was formed to assess the participants' knowledge regarding antenatal care during COVID-19. Findings revealed that STP significantly helped antenatal mothers improve their knowledge and attitude towards maternity care and prevent chances of infection.

Keywords: Antenatal care, antenatal mothers, structured teaching program, pregnancy, attitude, knowledge.

INTRODUCTION:

Antenatal care or maternity care refers to the care provided by health professionals to pregnant women during pregnancy. Pregnancy is a critical phase where inadequate maternal care could increase the chances of health complications which can lead to fatal conditions for the mother and the baby. To ensure optimal maternal care, the World Health Organisation (WHO) suggests monitoring trends of "severe maternal outcomes" (SMO) to identify common symptoms, antenatal failures and preventable causes (Thakur *et al.*, 2022). Through antenatal care, health institutions allot skilled professionals to help address potential pregnancy-related health risks through disease identification, management and prevention (Thakkar *et al.*, 2023). In this regard, the current research highlights the effectiveness of structured teaching programs (STP) in improving pregnant mothers' knowledge and attitudes toward antenatal care.

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LITERATURE REVIEW:

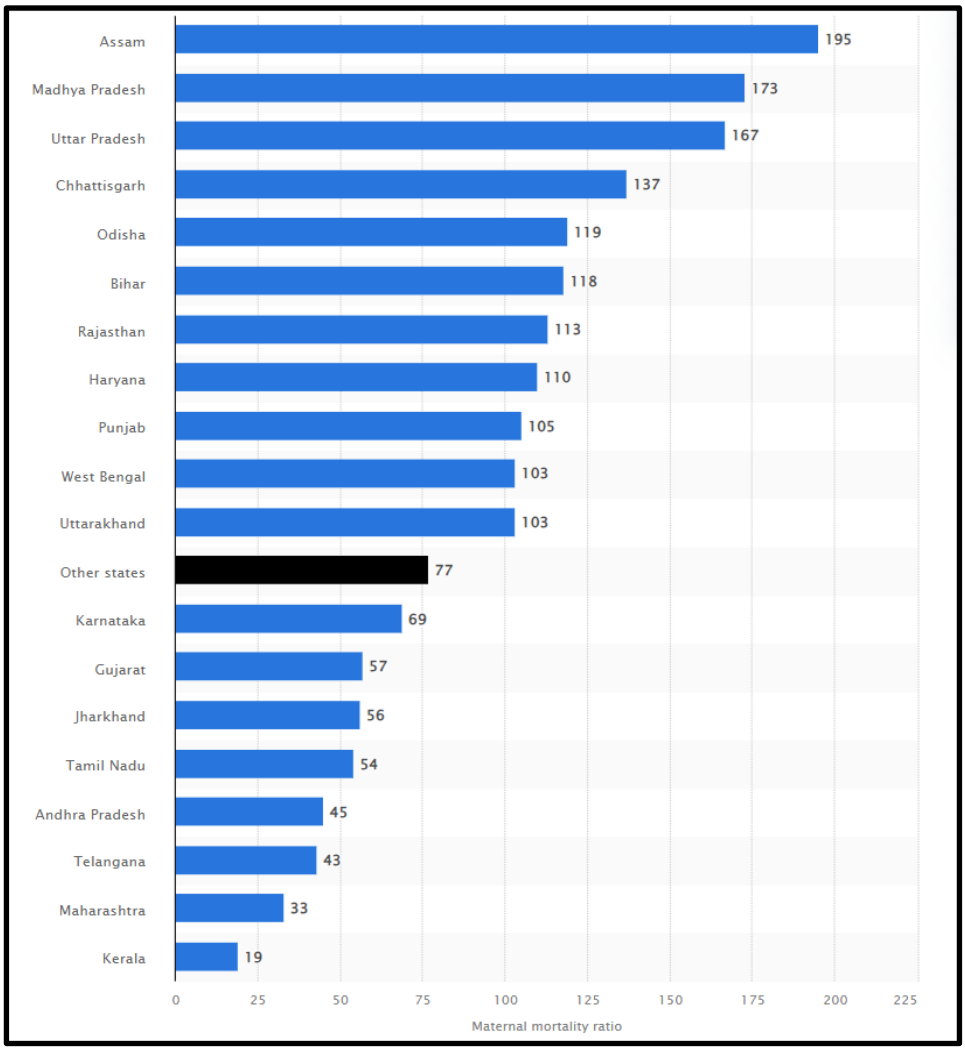


Figure 1: Maternal deaths in India (2018-2020)

(Source: Minhas, 2023)

The emergence of the COVID-19 pandemic raised significant concerns regarding antenatal care and mitigating the chances of infection. In India, the highest percentage of maternal deaths was recorded in Assam, with an average of 195 deaths per 100,000 women; the ratio was 45 per 100,00 live births in Andhra Pradesh (Minhas, 2023). The emergence of COVID-19 rendered pregnant women particularly susceptible to the disease with more than 10.4 million confirmed cases in India till February 2021 and nearly 10% of pregnant women getting infected with SARS-CoV-2 in Maharashtra itself (Gajbhiye *et al.*, 2022). These circumstances call for a structured approach to teaching pregnant women about COVID-19 prevention and changing their attitude towards antenatal care.

Regarding the knowledge of antenatal women in Northern India, Jhirwal *et al.* (2022) conducted a study which revealed that except for 1.8% of women who had poor knowledge of COVID-19, 94.5% had shown a relatively strong knowledge base. The study also points out a positive statistical significance regarding women's attitudes towards disease prevention regardless of their knowledge scores. Simultaneously, Maharlouei *et al.* (2020) conducted a cross-sectional study of 540 pregnant women who had registered in antenatal clinical facilities in Iran. The study reveals that 44.3% of the respondents had adequate knowledge

about COVID-19 and 48.9% expressed high anxiety levels in terms of contracting the virus themselves or getting their newborns affected. In this regard, the research of Shenbagavalli (2023) points out that structured teaching programs helped 80% of antenatal participants acquire adequate knowledge of COVID-19. In the post-test findings, 78% of the participants had shown a positive attitude towards antenatal care for CVOVID-19 prevention.

METHODS:

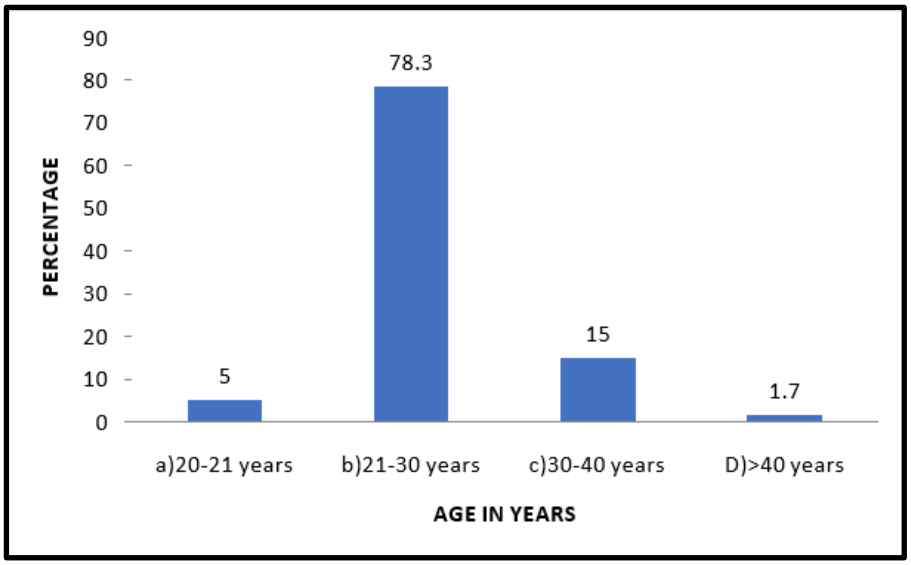
Research methodology entails the overall approach that guides a study in terms of data collection, analysis and interpretation (Pandey and Pandey, 2021). In this research, a pre-experimental design was employed in this study using a one-group pre-test and post-test approach to study the effectiveness of antenatal care through structured teaching programs. A total of 60 antenatal mothers attending the outpatient department (OPD) at NMCH, Nellore were taken as the study's sample, all of whom participated of their own will. For the selected population, a non-probability convenience sampling technique was employed to generate scientific insights into the benefits of the STP approach.

Data collection entails the approach taken by the researcher to collect relevant data and information for analysis (Mazhar *et al.*, 2021). In this study, a structured questionnaire consisting of 19 close-ended questions was used as the data collection tool to assess the participants' knowledge about COVID-19, while another questionnaire was designed to study their knowledge of antenatal care. The research intervention involved using an LCD projector for a 30 to 40-minute-long structured teaching session in Telegu, and the data was collected over a six-week span through pre-tests and post-tests.

Data analysis refers to the methods taken to analyse and interpret the collected data (Pandey and Pandey, 2021). Descriptive statistics were used to analyse the responses based on demographic variables, percentages and mean scores. Additionally, chi-square tests and t-tests were used to measure the effectiveness of STP and establish associations between participants' demographics, attitudes and post-test knowledge. All of these approaches helped determine the importance and impact of structured teaching programs in improving antenatal care during COVID-19, keeping in mind the ethical considerations in collecting and analysing data.

FINDINGS AND DISCUSSION:

Section I: Socioeconomic and Obstetric Variables:



ISSN PRINT 2319 1775 Online 2320 7876
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Figure 2: Age distribution

78.3% of the participants were aged between 21 to 30 years, whereas 15 belonged to the 30 to 40-year age group. Hence, most participants seeking antenatal care belonged to the younger age group.

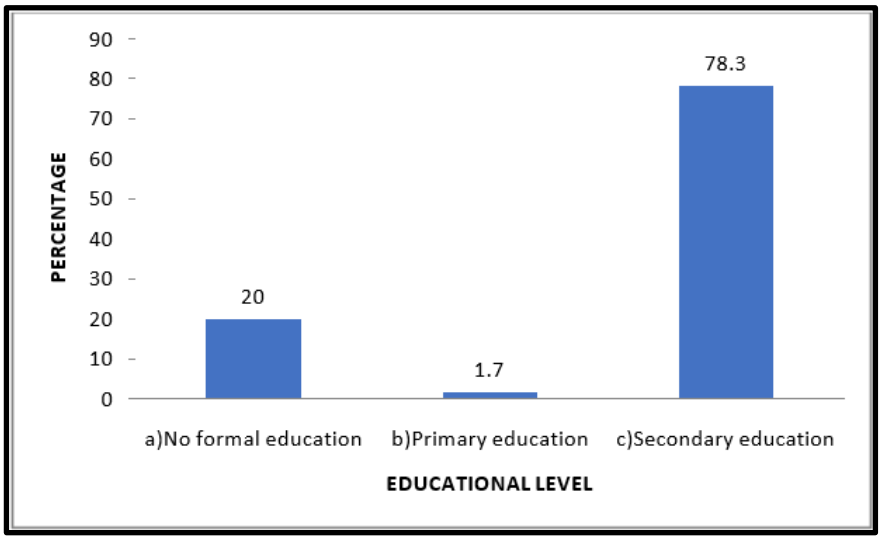

Figure 3: Education level

The findings point out that while 20% of the participants did not receive any formal education, 1.7% had primary education and 78.3% had secondary education.

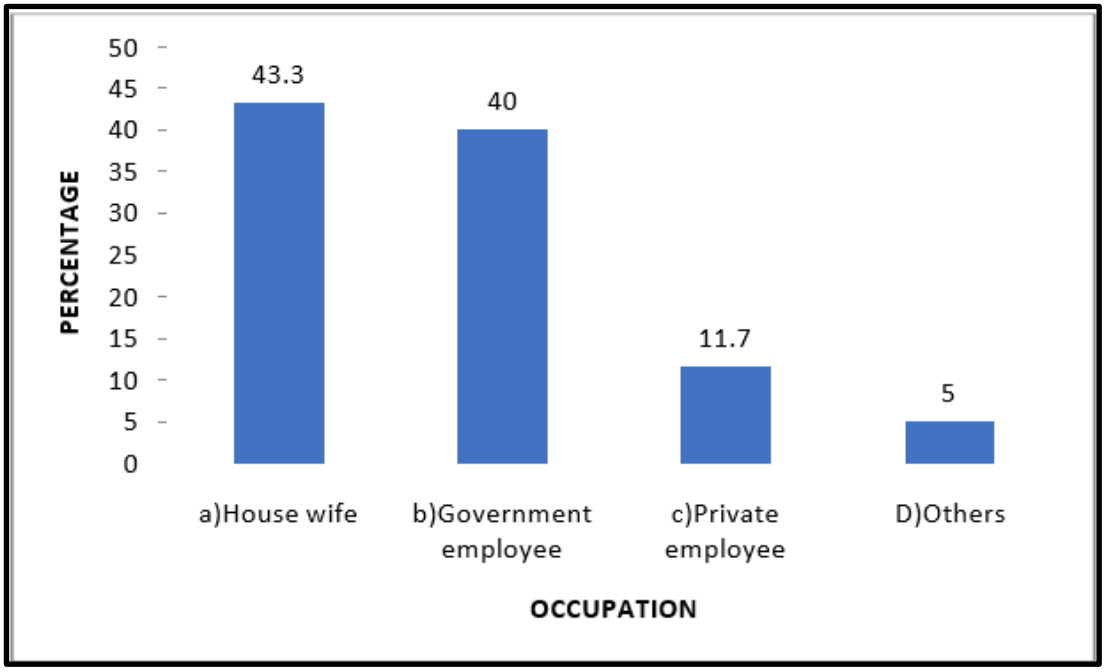

Figure 4: Occupational status

The majority of participants were housewives (43.3%) and government employees (40%) whereas 11.7% were private employees.

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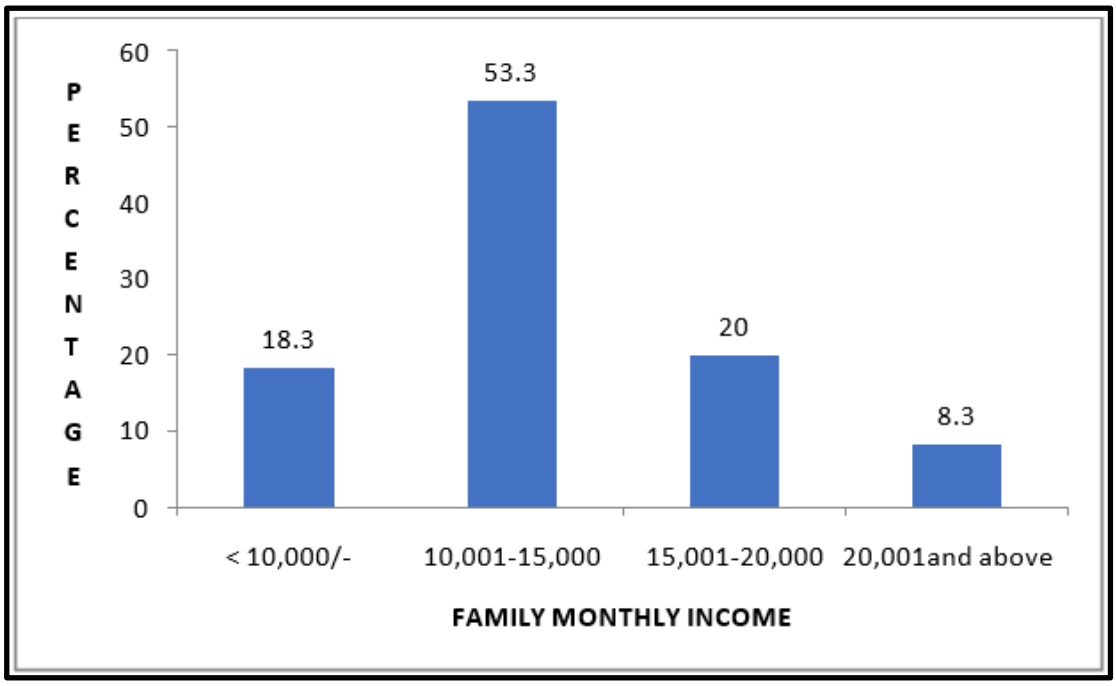

Figure 5: Monthly family income

Most antenatal patients had a monthly family income between 10,001 to 15,000 INR (53%).

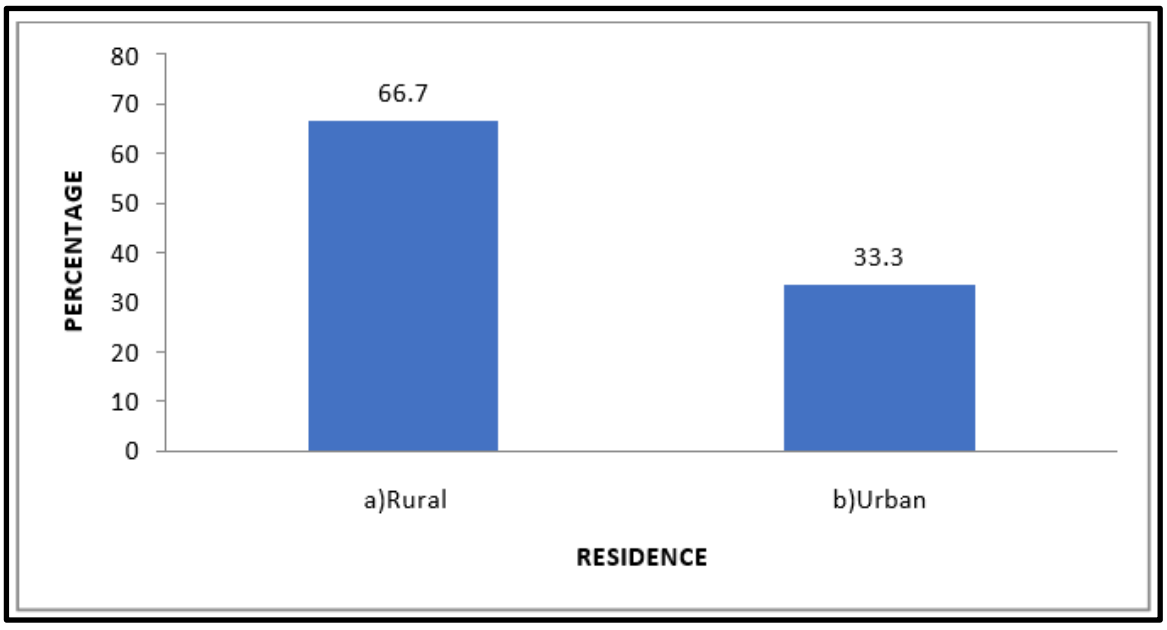

Figure 6: Residence distribution

The majority of antenatal mothers (66.7%)resided in rural localities.

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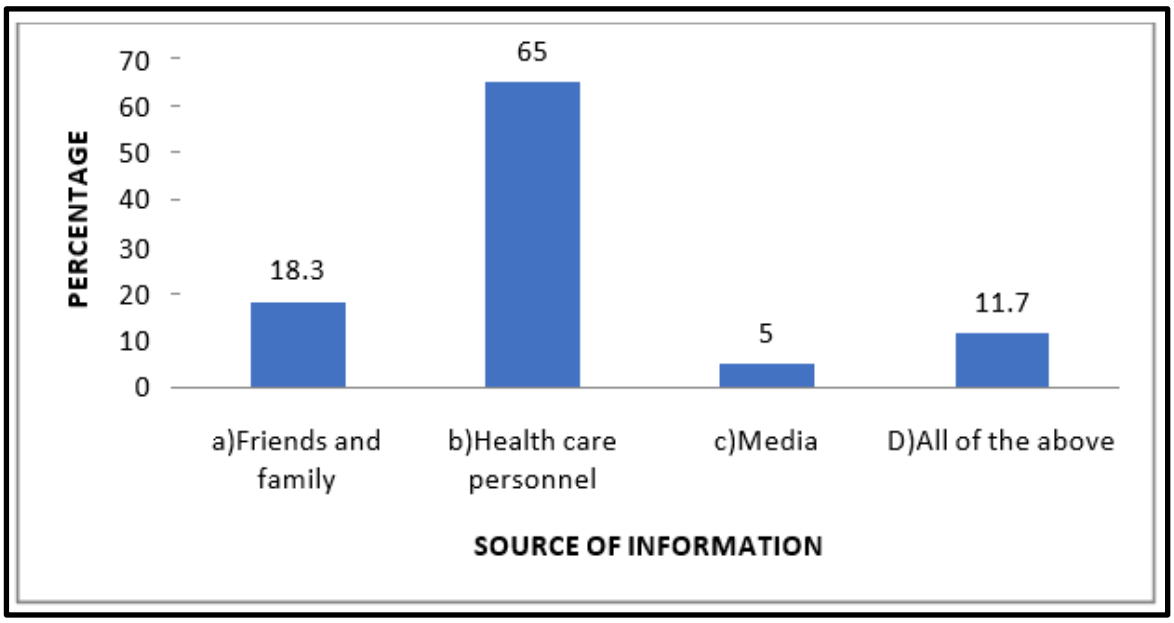

Figure 7: Source of information

65% of the participants knew about covid-19-related antenatal care from healthcare personnel and 18.3% were informed by friends and family.

Section II: Pretest and Posttest Knowledge and Attitude Scores:

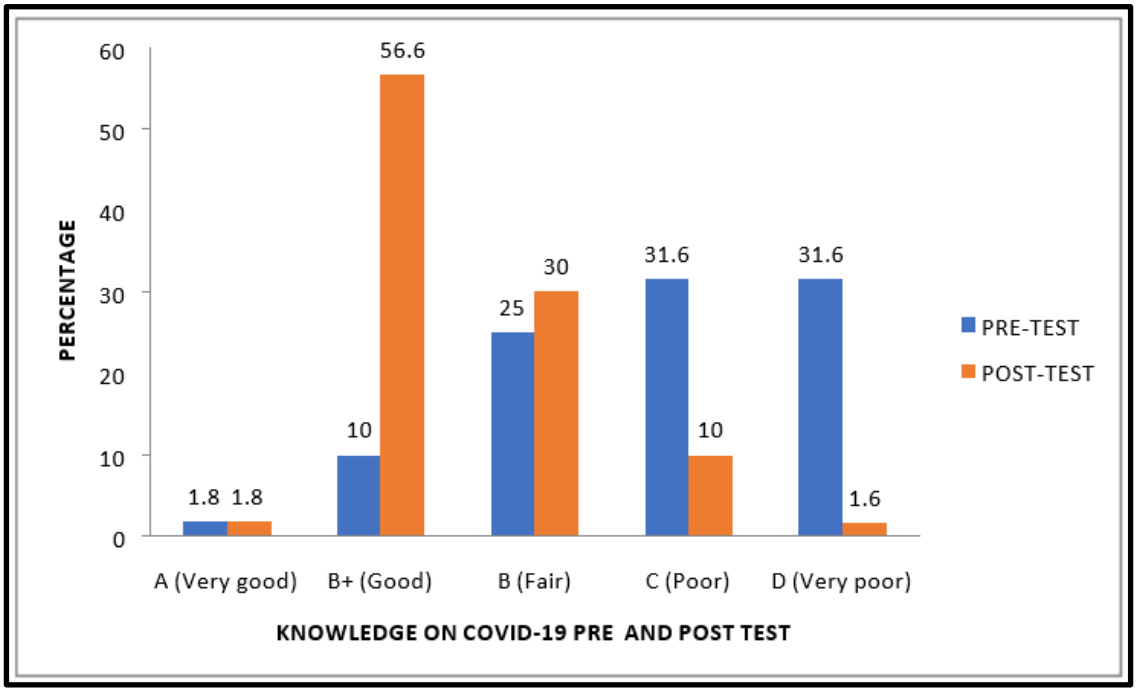

Figure 8: Knowledge scores

According to the collected data the majority of participants had poor knowledge of covid-19 before the test whereas significant improvements were observed in post-test knowledge through the structured teaching program (STP).

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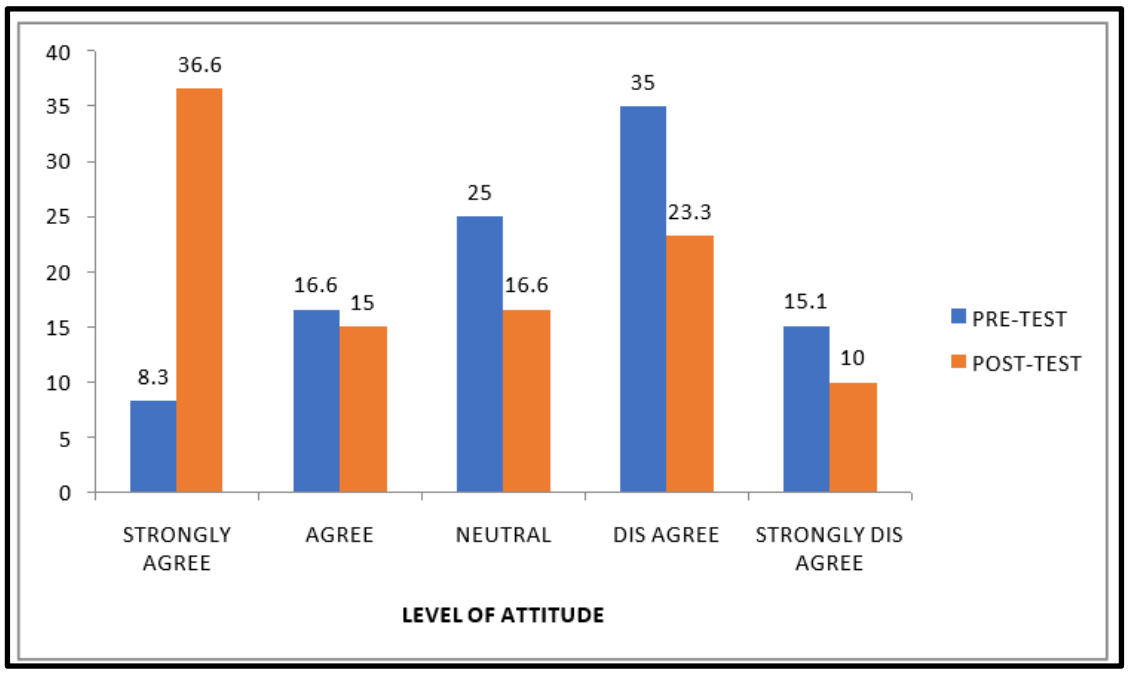

Figure 9: Attitude score

Free test attitude levels range from strongly agree to strongly disagree while posttest attitude levels were significantly improved after STP.

Section III: STP Effectiveness on Knowledge and Attitude Scores:

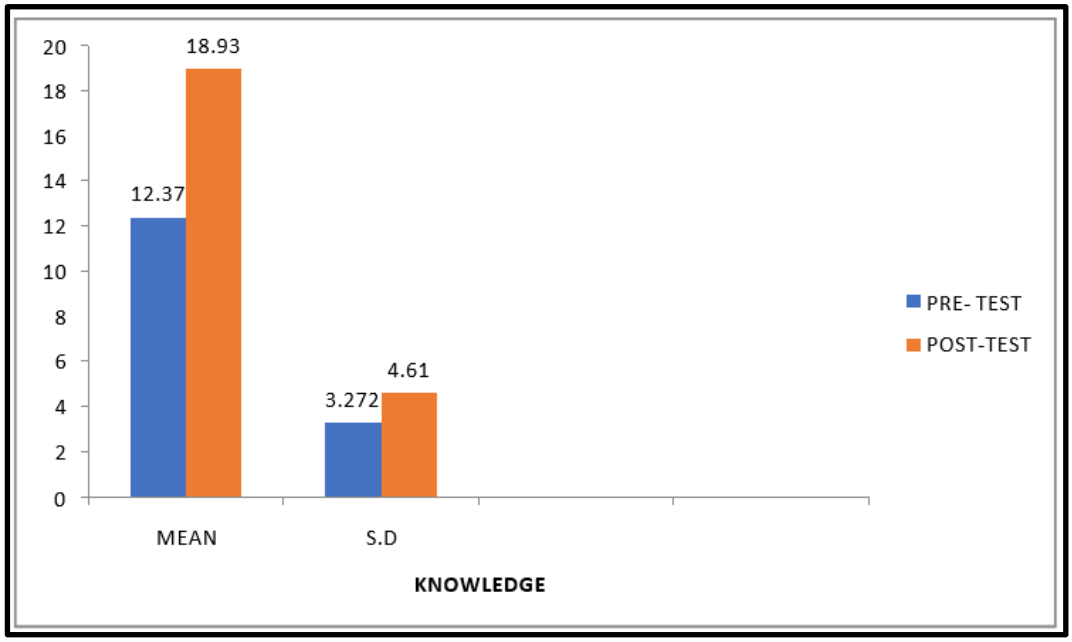

Figure 10: STP impact on knowledge

Through STP the mean knowledge score increased from 12.37 in the pretest to 18.93 in the post-test scenario.

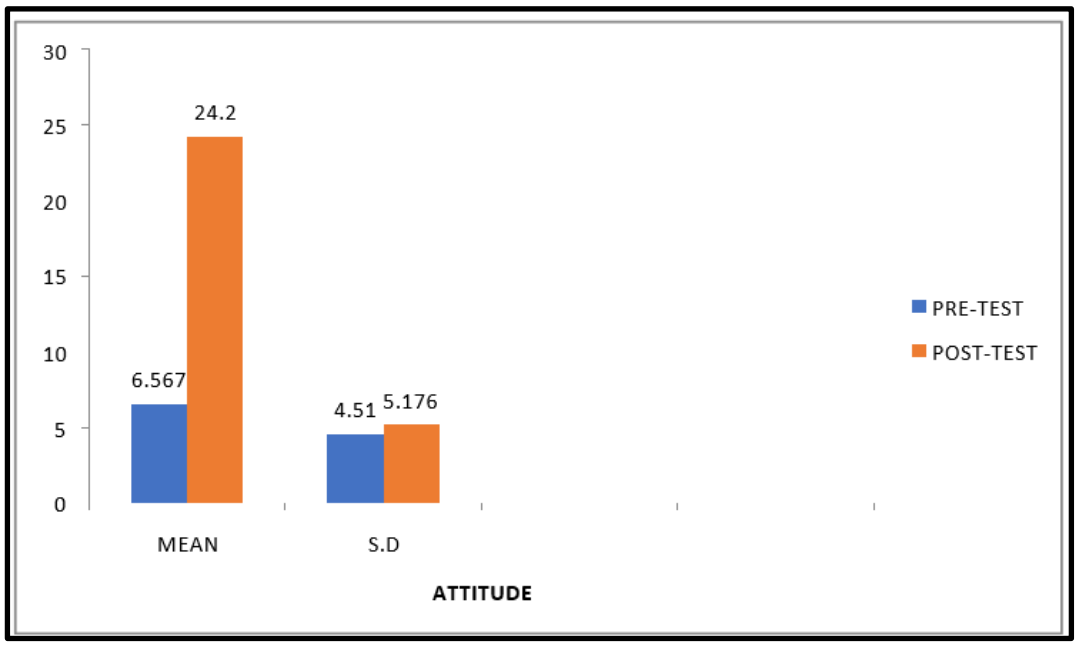

Figure 11: STP impact on attitude

The attitude of participants towards covid-19 increased significantly through STP and the attitude level increased in mean value from 6.57 to 2.42.

Section IV: Association Between Sociodemographic Variables and Post-Test Knowledge and Attitude Scores:

Based on the chi-square test outcomes, no statistically significant association has been observed between the age of participants and post-test knowledge scores. However, the knowledge course where higher among younger participants. No significant association was observed between educational levels and post-test knowledge. Besides, factors such as occupation family monthly income, type of family, residence, religion or source of information did not show any statistical association with post-test knowledge scores. On the other hand, occupation monthly family income and religion were significantly associated with the post-test attitude scores, whereas factors such as age, source of information, family type and educational status were not statistically significant with attitude.

CONCLUSION:

Based on the findings, it can be concluded that developing programs and teaching interventions to influence antenatal women's attitudes towards COVID-19 can significantly help change their perceptions and improve disease prevention initiatives.

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