International Journal of Enhanced Research in Medicines & Dental Care (IJERMDC),
ISSN: 2349-1590, Vol. 12 Issue 12, December 2025

Attitude towards Preventive Dental Care in Pregnancy

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ABSTRACT

Introduction: Pregnancy increases susceptibility to oral health problems due to hormonal and physiological changes. Preventive dental care is vital for maintaining maternal and fetal health, yet many women avoid it due to lack of awareness or misconceptions. This study explores pregnant women's attitudes towards preventive dental care to identify barriers and improve utilization.

Methods: This study employed a cross-sectional, Questionnaire-based survey design to assess the attitude of pregnant women towards oral health during pregnancy.

Results: More than half of the participants lacked awareness about the link between oral health and adverse pregnancy outcomes. While attitudes toward preventive care were generally positive, misconceptions about the safety and timing of dental visits persisted, and only a fraction reported receiving oral health advice during pregnancy.

Conclusion: Pregnant women show willingness to engage in preventive dental care but are limited by knowledge gaps and misconceptions. Integrating structured oral health education into routine antenatal care may strengthen awareness, improve practices, and enhance maternalchild health outcomes.

Keywords: Preventive dental care, pregnancy, oral health awareness, maternal health, antennal health, oral health education, oral health promotion.

INTRODUCTION

Pregnancy brings a cascade of hormonal and physiological changes that can heighten vulnerability to dental issues like gingivitis, caries, enamel erosion, and gum lesions[8]. Such oral health challenges not only affect the expectant mother but may also have repercussions on pregnancy outcomes and the future oral well-being of the child[9]. Despite this, routine preventive dental care during pregnancy is often underutilized, with many women forgoing visits due to misconceptions about safety, fear, or simply because such care is not encouraged by their healthcare providers[11]. In a recent Italian online survey involving well-educated mothers in Lombardy, nearly one-third reported experiencing dental or gum problems during pregnancy, yet only 36% visited a dentist. Moreconcerningly, over 40% were unaware of any connection between oral health and pregnancy outcomes, and a staggering 73% received no guidance from professionals regarding either their own or their baby's oral health[12].

This highlights a striking gap in awareness and professional support during a critical time. Moreover, a community-based study in Raichur District, India, revealed that pregnant women experienced poor oral hygiene, a very high prevalence of periodontal disease, and a large volume of untreated dental needs, underscoring broader public health concerns within similar low-resource settings[13]. Given these contexts and the evident knowledge and service gaps, exploring pregnant women's attitudes toward preventive dental care is vital. Understanding what drives—or discourages—them from seeking such care can inform tailored educational strategies aimed at both women and the health professionals who guide them. Your survey aims to illuminate these attitudes, providing a basis for crafting interventions that more effectively promote preventive oral health practices during pregnancy.

METHODOLOGY

This study was designed as a cross-sectional, questionnaire-based survey conducted among pregnant women. The research was carried out at [insert institution name] over a period of [insert duration, e.g., four weeks], following ethical approval from the Institutional Ethics Committee.

Minimum sample size was estimated to be 200
Eligible participants included pregnant women attending antenatal clinics or maternity hospitals.Inclusion criteria for this studywere; pregnant women aged 18 years and above, willing to provide informed consent, able to understand and respond to the questionnaire.

Exclusion criteria include; women with sever medical conditions that preclude participation, those who are unwilling or unable to provide informed consent.

Data collection was done using a structured, self-administered questionnaire. The demographic data including age, income status, education level, occupation, trimester of pregnancy, oral hygiene practices were recorded from each of the pregnant women.

The questionnaire was reviewed for clarity and reliability before being distributed. Participation was entirely voluntary, and all responses were kept anonymous to maintain confidentiality.

Statistical Methodology:
This study was thoughtfully designed to explore pregnant women's attitudes toward preventive dental care in a way that values both data and personal experience. A total of 210 responses were collected from antenatal clinic attendees, slightly exceeding the intended sample size of 200, allowing for richer insights. Participants completed a clear, culturally sensitive questionnaire covering their knowledge, beliefs, and behaviours related to oral health during pregnancy. A smaller group also took part in open, respectful interviews to share deeper personal perspectives. Quantitative data were analysed using **SPSS version 25**, with descriptive statistics, chi-square tests, and logistic regression applied to identify significant patterns, considering a **p-value of <0.05** as statistically significant. Qualitative responses were thematically analysed to ensure individual voices were meaningfully represented. Ethical approval was obtained, and all participants gave informed consent, with great care taken to ensure privacy, comfort, and cultural respect throughout the study.

RESULTS

Sociodemographic Characteristics
A total of 210 participants were included in this study. The age distribution showed that 51.4% of respondents were between 30–40 years, 39% were in the 20–30 years category, and 9.5% were between 40–50 years.

In terms of educational attainment, the majority (68.1%) were graduates or above, followed by 24.8% with secondary education, 4.8% with primary education, and 2.4% with no formal education.

Family income varied across participants: more than half (54.8%) reported a monthly income of above ₹50,000, 26.7% between ₹30,000–₹50,000, 10.5% between ₹10,000–₹30,000, and 8.1% less than ₹10,000. (Table :1)

Table:1

Variable	Percentage (%)
Age (years)	
20–30	39.0
30–40	51.4
40–50	9.5
Education	
Graduate & above	68.1
Secondary	24.8
Primary	4.8
No formal	2.4
Monthly Income (₹)	
>50,000	54.8
30,000–50,000	26.7
10,000–30,000	10.5
<10,000	8.1

Pregnancy-Related Information

When asked about their pregnancy trimester, 32.9% admitted they were unsure, while 26.2% were in the third trimester, 24.8% in the second trimester, and 16.2% in the first trimester. (chart:1)

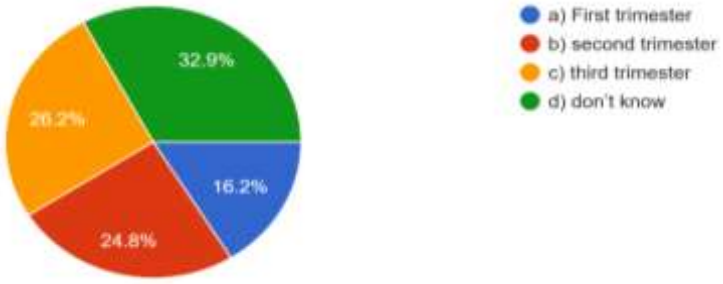

Chart: 1

Awareness and Knowledge Regarding Oral Health

Only 49.5% of participants reported receiving oral health advice during pregnancy, while 50.5% did not.
A large proportion (67.6%) were unaware that poor oral health could lead to complications such as preterm birth or low birth weight, while 32.4% were aware.

Knowledge of pregnancy gingivitis was also limited, with 61.9% having no prior awareness and 38.1% reporting awareness.

Regarding the safety of dental visits during pregnancy, 58.1% believed check-ups were safe, while 41.9% did not. When asked about the best time for dental visits, 39.5% were uncertain, 24.8% indicated the second trimester, 19.5% the first trimester, and 16.2% the third trimester.

In terms of dental X-ray safety, 47.6% reported not knowing, 30% considered them unsafe, and 22.4% considered them safe.

Oral Health Practices

When asked about brushing frequency, 62.9% of women reported brushing at least twice daily, while 37.1% did not. (chart:2)

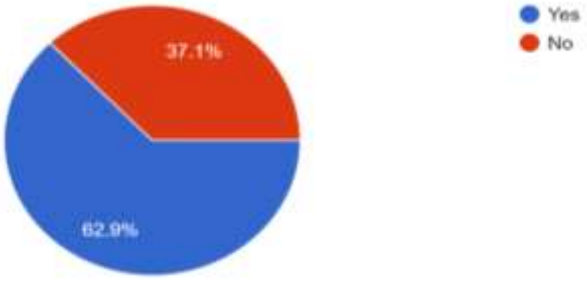

Chart:2

Beliefs about brushing effectiveness varied: 41.9% were unsure whether frequent brushing prevents oral problems, 31.9% believed it does, and 26.2% disagreed. (Chart:3)

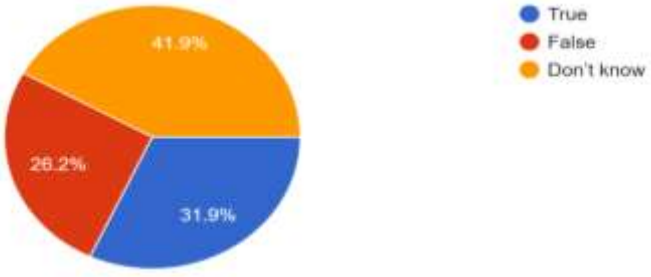

Chart: 3

Attitudes Towards Oral Health Promotion

A majority (61.4%) expressed interest in attending a short oral health session during antenatal visits, while 38.6% were not interested. (chart:4)

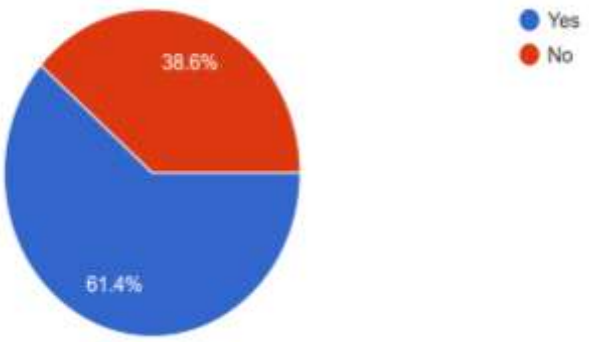

Chart:4

The preferred method of oral health education was one-on-one counselling (43.8%), followed by group sessions (29.5%), audio-video messages (16.7%), and pamphlets (10%).

Most participants (84.3%) supported integrating oral health into routine antenatal care, while 15.7% did not. (chart:5)

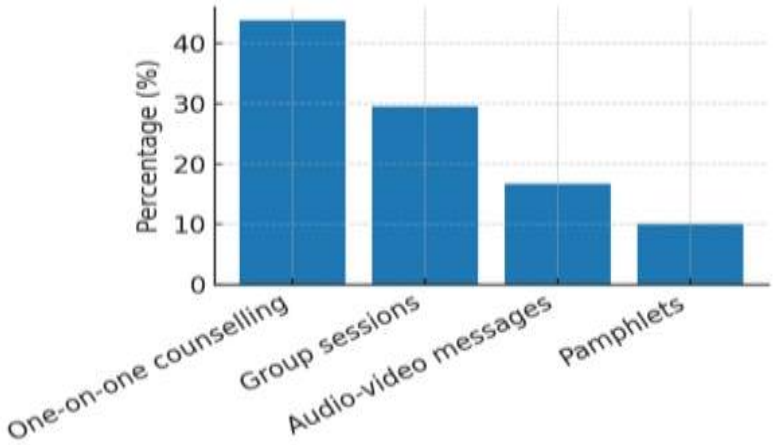

Chart:5

Table:2

Questions	Option 1	Option 2	Option 3	Option 4	Total
1)Trimester of pregnancy?	First trimester (16.2%) 34	Second trimester (24.8%) 52	Third trimester (26.2%) 55	Don't know (32.9%) 69	**n=210**
2. Have you ever received any oral health advice from your gynaecologist or health worker during pregnancy?	Yes (49.5%) 104	No (50.5%) 106			**n=210**
3.are you aware that hormonal changes during pregnancy can affect your oral health?	Yes (48.1%) 101	No (51.9%) 109			**n=210**

4. Do you know that poor oral health during pregnancy can lead to complication such as preterm birth or low birth weight?	Yes (32.4%) 68	No (67.6%) 142			**n=210**
5. Have you heard of pregnancy gingivitis?	Yes (38.1%) 80	No (61.9%) 130			**n=210**
6. Do you believe dental checkups are safe during pregnancy?	Yes (58.1%) 122	No (41.9%) 88			**n=210**
7.When is the best time to visit a dentist during pregnancy?	First trimester (19.5%) 41	Second trimester (24.8%) 52	Third trimester (16.2%) 34	Don't know (39.5%) 83	**n=210**
8. Dental X rays are completely unsafe during pregnancy?	True (30%) 63	False (22.4%) 47	Don't know (47.6%) 100		**n=210**
9. Brushing more frequently can prevent all oral problems during pregnancy?	True (31.9%) 67	False (26.2%) 55	Don't know (41.9%) 88		**n=210**
10. Regularly brush my teeth at least twice a day?	Yes (62.9%) 132	No (37.1%) 78			**n=210**
11.Would you be interested in attending a short session on oral health during your antenatal visits?	Yes (61.4%) 129	No (38.6%) 81			**N=210**
12. What would be the most convenient method for you to receive oral health education?	Pamphlets/leaflet (10%) 21	Group session (29.5%) 62	One on one counselling (43.8%) 92	Video audio message (16.7%) 35	**N=210**
13. Do you think integrating oral health into routine pregnancy checkups would be helpful	Yes (84.3%) 177	No (15.7%) 33			**N=210**

DISCUSSION

Our study highlights a compelling paradox: despite a participant pool marked by relatively high educational attainment and income levels, substantial gaps persist in knowledge, attitudes, and practices related to preventive oral health during pregnancy.

More than half of the participants were unaware that poor maternal oral health could contribute to adverse outcomes such as preterm birth and low birth weight. This aligns with broader findings that oral health knowledge among pregnant women remains inadequate, even in well-educated samples [14]. Common misconceptions—such as that dental treatments are unsafe during pregnancy or that pregnancy inherently causes tooth loss—further discourage timely dental visits [16]

Although a majority believed dental check-ups were safe during pregnancy, clarity about the optimal timing of such care was lacking; fewer than a quarter correctly identified the second trimester as ideal. This mirrors other studies where uncertainties and misconceptions deterred prenatal dental care [1] and reflects the need for clear professional guidance.

While nearly two-thirds of respondents reported brushing twice daily, many doubted its efficacy in preventing oral issues—a disconnect between behaviour and belief. This ambivalence underscores the necessity of reinforcing not just actions but the rationale behind preventive habits.

Encouragingly, most participants expressed interest in attending brief oral health sessions during antenatal visits, especially through one-on-one counselling. This preference resonates with qualitative research where expectant mothers advocated for integrating oral health into routine prenatal care, supported by referral systems and assessments [23]. Furthermore, structured interventions—such as individual counsellinghave demonstrated significant improvements in maternal knowledge and practices, outperforming group sessions or digital reminders [10].

Interestingly, our findings echo research indicating that higher socioeconomic status does not necessarily confer oral health literacy. This suggests that without systematic educational support, even well-off or highly educated women remain susceptible to knowledge deficits—a gap that health systems must bridge proactively

To better promote preventive dental care among pregnant women, the following strategies appear promising:

- Embed Oral Health into Antenatal Care: Including oral health assessments in standard prenatal checklists can normalize dental conversations and prompt timely referrals [2].
- Professional Training: Both prenatal and dental providers benefit from collaborative training frameworks and shared guidelines to ensure consistent messaging and support for oral health during pregnancy [23].
- Tailored Counselling: One-on-one education sessions, augmented by culturally relevant materials, can directly address misconceptions and reinforce the importance of oral hygiene [10].
- Policy and Structural Support: Establishing funding mechanisms, referral pathways, and standardized protocols can reduce systemic barriers to care [23].

This study illuminates the attitudes and perceptions of a demographically advantaged sample, revealing that knowledge gaps are not confined to underprivileged groups. However, the cross-sectional design limits causal inference, and findings may be influenced by recall or social desirability bias. A longitudinal or interventional design would strengthen understanding of how education efforts translate into behaviour change and improved outcomes.

CONCLUSION

The findings underscore a paradox wherein higher education and income do not necessarily translate into adequate oral health awareness during pregnancy. Although attitudes toward learning and preventive care are positive, misconceptions and uncertainty continue to hinder practice. These results highlight the urgent need to embed oral health promotion into routine antenatal care, supported by interprofessional collaboration between dental and obstetric providers. Such integration could dispel myths, empower pregnant women to seek timely care, and ultimately improve pregnancy outcomes.

6. Acknowledgement:
I am deeply thankful to my guide **Dr. Apurva Kale**whose guidance, encouragement, and thoughtful feedback shaped every stage of this project. Your support made a difficult topic feel manageable and meaningful.I would also like to express my heartfelt gratitude to all the **Women'swho participated in this study**. Thank you for your honesty, vulnerability, and willingness to share your experiences.

7. Author Contributions:
Manasi laddad was in-charge for the overall conception and design of the studyThey created the questionnaire, performed the literature analysis, and collected data. They also performed the data analysis and interpretation, and led the writing of the manuscript, including the discussion and conclusion sections.

Dr. Apurva kale who provided academic guidance throughout the research process. They contributed to refining the study design, supported ethical approvals, and provided critical feedback on the analysis and final draft of the paper.

8. Disclosure
The author declares **no conflicts of interest** related to the content, authorship, or publication of this research.

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