

Research Article

Oral health challenges in pregnant women in Pakistan: A research analysis

Usman Sattar¹, Ushna Malik², Zubaida Shireen³
and Shahzada Faiz Ahmad Khan⁴

¹House Officer in Punjab Dental Hospital, Lahore

²Associate Dental Surgeon at Rizwan & Associates, Lahore

³Fatima Memorial College of Medicine & Dentistry, Lahore

⁴Rural Health Center Qadirabad, Dera Ghazi Khan

ABSTRACT

Introduction: Pregnancy is a state of physiological condition that brings about various changes in the oral cavity along with other physiological changes taking place throughout the female body. Gingival hyperplasia, gingivitis, pyogenic granulomas and various salivary alterations are some of the changes commonly witnessed among pregnant women.

Objectives of the study: The main objective of our study is to find the oral health challenges faced by the pregnant women in Pakistan. Because like other systems of the body oral system also face many problems during pregnancy in women.

Methodology of the study: A cross-sectional survey of pregnant women attending the Punjab dental hospital and Fatima Memorial College of Medicine & Dentistry was undertaken. Ethical approval was obtained from the concerned department of the hospital and ethical committee and written consent was obtained from all participants. A convenience sample of 100 pregnant women was invited to participate by a dental assistant.

Results: We select 100 patients for our study and these are pregnant women who completed the survey. The mean age of the participants ranged from 16 to 40 years. More than half (59.3%) reported dental problems during pregnancy, less than a third (30.5%) saw a dentist in the last six months, only 10% had received any information about perinatal oral health and many (>50%) were unaware of the potential impact of poor maternal oral health on pregnancy and infant outcomes.

Conclusion: The present study indicates that the oral health status is not appropriate among the pregnant women. On the other hand, the high prevalence of dental plaque, poor periodontal condition and unsatisfied treatment require a preventive population based strategy with an emphasis on the improvement of the oral self-care for the pregnant women.

Key words: Oral health, pregnancy, antenatal care, dental service

INTRODUCTION

Pregnancy is a state of physiological condition that brings about various changes in the oral cavity along with other physiological changes taking place throughout the female body.¹ Gingival hyperplasia, gingivitis, pyogenic granulomas and different salivary modifications are a portion of the progressions normally saw among pregnant women.² The part of elevated amounts of flowing estrogen is entrenched and connected with high

pervasiveness of gingivitis and gingival hyperplasia.³ Progesterone in the serum is likewise observed to be related with melasma, introducing a two-sided pigmentation or darker fixes in the mid face region.^{3,4} Various investigations have discovered confirmation connecting together poor maternal oral wellbeing, pregnancy results and dental strength of the offspring.⁵ These may extend from preterm

conveyance and low birth weight to higher danger of early caries among newborn children. Lamentably, aside from self-upkeep of oral cleanliness, pregnant ladies confront a few different boundaries in accomplishing ideal oral health.^{6,7} These hindrances to looking for dental services incorporate absence of learning and esteem, negative oral wellbeing encounters, negative states of mind toward oral wellbeing experts and negative mentalities of dental staff toward pregnant women.⁸ Similarly, mistaken suspicions, absence of information or experience regularly assumes a part in the aversion appeared by dental specialists in giving dental care to pregnant women.² Oral wellbeing advancement, sickness avoidance, early recognition and convenient intercession are essential angles for maternal and youngster oral health.⁹ It is generally settled that numerous if not all standard and preventive dental techniques can be securely performed all through the time of pregnancy with specific precautions.^{4,10}

Objectives of the study

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ethical committee and written consent was obtained from all participants. A convenience sample of 100 pregnant women was invited to participate by a dental assistant. Surveys were administered by the dental assistant to all interested participants.

Data collection

The survey administered was structured and contained items relating to oral health and care (including prevalence of dental problems), frequency of dental visits, barriers to seeking dental care, oral hygiene habits, perceptions of oral health, knowledge about oral health and access to dental care. Sociodemographic data including age, education, ethnicity, period of gestation, employment and household income were also collected.

Data analysis

The survey data were analyzed using SPSS (Statistical Package for Social Sciences Version 17.0, 2008). Descriptive statistics such as mean and standard deviation for continuous variables and frequency and percentage for categorical variables were calculated and tabulated. Descriptive and inferential statistics such as the chi-square test was used to compare the profiles of pregnant women who had visited a dentist in the last six months with those who did not. The level of significance used was 0.05.

Analysis and Results

We select 100 patients for our study and these are pregnant women who completed the survey. The mean age of the participants ranged from 16 to 40 years. The majority were in the age bracket of 15–34 years (Table 1).

Table 1: Socio-demographics and obstetric characteristics of participants (n = 100)

Characteristics	Frequency (%)
Age (years)	
15–34	85.9
34–54	11.2
Highest qualification achieved	
No qualifications	46.1
Vocational college	30.7
University	22
Employment status at recruitment	
Working full-time	23.1
Working part-time	17.8

Not working	55.3
Average annual household income	
<\$40 000	20.54
\$40 000 to less than \$80 000	22
\$80 000 to less than \$120 000	23.45
Health Care Card	
Yes	19.5
No	7.3
Private Health Insurance	
Yes	28.9
No	71
Period of gestation	
1st trimester	2.9
2nd trimester	33.4
3rd trimester	67.5

More than half the participants (55.2%) were not engaged in employment and 46.1% had no formal qualifications. Over half the participants (52.3%) were from low to middle income families (<\$40 000 and \$40 000 – <\$80 000) and just over a third had health care cards. These figures are fairly consistent with population data from the area which show that 53.1% have no formal qualification and 33.2% have annual household income. The majority of women surveyed (62.7%) were in their third trimester and had other children (71%). status was average to good (75.5%) with just over half reporting at least one oral health problem during their current pregnancy (Table 2). The most common oral health problems reported by the 100 participants who gave information were bleedings gums, cavities, sensitivity and 50% reported that dental problems had sometimes or often affected both what they could eat and overall health in general.

Table 2: Perceived oral health status of pregnant women (n = 100)

Variables	Frequency (%)
Oral health status	
Excellent	10.9
Good	29.5
Average	48.2
Fair	7.8
Poor	5.1
Type of oral health problems	
Bleeding gums	60.1
Toothache	16.9
Cavities	3.1
Loose teeth	20.2
Sensitivity	41.6
Teeth that don't look right	15.1
Dental problems affected what to eat and overall health in general	
Never	
Sometimes	50.1
Often	41.8
	8.8

However, analysis of the individual knowledge items showed that pregnant women had inadequate knowledge about the potential impact of poor maternal oral health. Less than half the women were aware that dental decay could spread from the mother to the baby's mouth (47.5%) and that a mother's poor oral health may contribute to low birth weight (47.5%). It is also evident that some confusion exists among pregnant women regarding the appropriateness of accessing dental care both during pregnancy and early childhood. Nearly a third of pregnant women (32.5%) were unsure about the best time for a baby to have

the first dental visit and 26.1% felt that dental treatment should be avoided during pregnancy unless it is an emergency (Table 3).

Table 3: Dental care of pregnant women (n = 100)

Variables	Frequency (%)	95% CI
When was the last time you saw a dentist?		
<6 months	30.5	24.7–36.3
6 to <12 months	15.1	10.6–19.6
1 yr to <2 yrs	24.7	19.3–30.1
2 yrs to <5 yrs	17.2	12.4–22.0
>5 yrs	10.0	6.2–13.8
Never visited	2.5	0.5–4.5
Barriers in seeking dental treatment		
Safety concerns regarding treatment during pregnancy	31.9	21.1–42.7
Dental costs	29.2	18.7–39.7
Time constraints	29.2	18.7–39.7
Oral health not seen as a priority	20.8	11.4–30.2
Advised by antenatal care providers not to seek treatment	4.2	0.4–8.8
How often do you brush?		
A few times a week	1.2	0.2–2.6
Less than once a week	1.2	0.2–2.6
Once a day	27.0	21.4–32.6
Twice a day	67.2	61.3–73.1
More than twice a day	3.4	1.1–5.7
Oral hygiene products used		
Flouride toothpaste	98.3	96.7–99.9
Mouthwash	40.7	34.5–46.9
Dental floss	42.7	36.4–49
Sugar free gum	35.7	29.7–41.7

The results showed a significant difference in the uptake of dental services among pregnant women who had higher household income, private health insurance, received information about oral health during pregnancy and knowledge about the impact of poor maternal oral health. The influence of other socio-demographic indicators such as education and employment on dental visits was not evident. Likewise, perceived oral health status, self-reported oral health problems and accessibility to dental care were not significantly different between the groups.

DISCUSSION

This study provides the knowledge about oral health in pregnant women in Pakistan. One of the main reasons for poor maternal oral health is the hormonal variations and dietary changes that occur during this period which puts pregnant women at a higher risk of suffering various dental problems.¹¹This is reflected in the findings with a higher prevalence of dental problems seen in the

pregnant women than the general population. Exacerbating the situation is the limited number of women that actually seek dental advice during pregnancy even when a dental problem exists.⁷ The low uptake of dental services among pregnant women is well documented worldwide and is evident in Australia as well.^{12,15–18} The findings from this study show that only around 30% of pregnant women are utilizing dental services in Australia which is fairly consistent with previous reports of 30% to 36% from prenatal and postnatal surveys of women living in another city in Australia (Adelaide).^{13,14} The low utilization of dental services is of serious concern especially considering a number of pregnant women here reported that their dental problems had affected their diet and overall health in general. Having an inadequate diet and poor oral health during pregnancy can be detrimental to the health and well-being of the baby.³³ According to this study the low uptake of dental services during pregnancy can be attributed to a number of

factors, one being the cost of dental services. The issue of cost was highlighted by close to 30% of study participants and comparison analysis showed that pregnant women with higher household incomes were more likely to seek dental treatment than those on lower incomes.

Another contributing factor to the low uptake of dental services is the lack of awareness among pregnant women about the importance of maternal oral health. Less than half the women surveyed were aware about the potential ill-effects of poor oral health during pregnancy, which could explain why 20% of the women did not view oral health as a priority. However, most participants did have good knowledge about oral hygiene habits which was reflected in their practices with more than two-thirds brushing twice a day and using fluoride toothpaste. The results of this study also revealed that pregnant women who consulted a dentist were more likely to be those who had received information about perinatal oral health and were aware of the association between poor maternal oral health and adverse pregnancy and infant outcomes. This is consistent with earlier studies^{12, 13, 17, 22} which show that pregnant women are unaware of the importance of maternal oral health and consequently avoid seeking regular dental care. This study also shows that this lack of awareness among pregnant women, especially in Australia, can be attributed to the limited information on perinatal oral health that is provided to them by antenatal care providers. Only 10% of women in the study had received any information about oral health care during their pregnancy, with the main source of information being oral health promotional material rather than antenatal care providers.

However, it is also possible that antenatal care providers may be contributing to the problem by providing conflicting advice on perinatal oral health. For example, a few women in this study were advised by antenatal care providers not to seek dental treatment. Although this issue was not prominent in our study, other papers report that there is no real consensus among dentists and

prenatal care providers regarding oral health care during pregnancy. For example, gynaecologists are supportive of dental treatment during pregnancy but some dentists and doctors remain confused about the safety of dental procedures.¹¹ Receiving such conflicting messages from health professionals could deter pregnant women from seeking dental treatment. Clearly there is a need for clinical practice guidelines on perinatal oral health.

CONCLUSION

The present study indicates that the oral health status is not appropriate among the pregnant women. On the other hand, the high prevalence of dental plaque, poor periodontal condition and unsatisfied treatment require a preventive population based strategy with an emphasis on the improvement of the oral self-care for the pregnant women.

Contribution of authors

All the authors contributed equally. Dr. Usman Sattar conceived of the presented idea and do all the lab work and carried out the experiment with other co-authors. Dr. Ushna developed the theory and performed the computations. Dr. Zubaida supervised the findings of this work and Dr. Usman Sattar and Dr. Shahzada Faiz Ahmad developed the theoretical formalism, performed the analytic calculations and performed the numerical simulations. All the authors contributed to the final version of the manuscript.

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