

Self Reported Oral Health, Self Care and Dental Attendance of Pregnant Women in India: A Postnatal Survey

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ABSTRACT

Introduction: Daily oral hygiene and regular dental visits are important components of oral health care. The aims of this study were to assess women's knowledge and experiences of dental health in pregnancy, including their oral hygiene behaviour and dental visiting habits and to examine the self-care practices of pregnant women in relation to their oral health.

Material and Methods: Women in the postnatal ward at a private hospital completed a questionnaire to assess their knowledge, attitudes and practices to periodontal health. Pregnancy outcomes were collected from their medical records and results were analyzed.

Results: Of the 259 women enrolled in the survey, 213 (89.8%) completed the questionnaire. Almost 63.8% (136) were in the age group of 21-29 years. Most women demonstrated reasonable knowledge about dental health, with 185 (86.8%) of the women aware that daily brushing would help prevent gum disease. However only 59 (27.6%) visited the dentist in the last twelve months for check up and treatment.

Conclusion: Most women were knowledgeable about oral and dental health. Whether more intensive dental health education in pregnancy can lead to improved oral health and ultimately improved pregnancy outcomes requires further study.

Keywords: dental health, periodontal health, pregnancy

INTRODUCTION

Pregnancy is a delicate condition involving complex physical and physiological changes. The mouth is an obvious portal of entry to the body, and oral health reflects and influences general health and well being. In recent times, there has been a greater focus on the oral health of pregnant women. The most important objective of dental health care in pregnancy is to establish a healthy environment through adequate plaque control by brushing, flossing and professional prophylaxis including scaling, root planing and polishing.¹ Dental treatment can be safely provided at any time during pregnancy² allowing pregnant women to achieve an optimal level of dental health throughout their pregnancy. During pregnancy, the commonest problems encountered in the oral cavity include gingivitis, periodontitis, pregnancy tumour, caries, etc. Gingivitis is an inflammation of the soft tissues surrounding a tooth or gingiva not causing loss of periodontal attachment, whereas periodontitis causes inflammation and destruction of supporting tissues around the teeth.² Periodontal disease has the potential to affect pregnancy outcomes. A systematic review of 25 studies (13 case-control, 9 cohort and 3 controlled trials) has demonstrated that periodontal disease may be associated with adverse pregnancy outcomes in hu-

mans.³ Although some observational studies have indicated a significant association of periodontal disease with adverse pregnancy outcomes.^{4,5} others have not.^{6,7} During pregnancy due to hormonal changes, there is an increase in the level of oestrogen and progesterone which can lead to hyperaemia, oedema and bleeding in the periodontal structures. This makes the tissues susceptible to bacterial infections.⁸

Studies have shown that lower educational level correlates to greater incidence of periodontal disease. A similar correlation has been observed with lower socio-economic status and high periodontal disease state.⁸⁻¹⁰

Fortunately, periodontal disease can be easily prevented by controlling plaque by methods like brushing, flossing, scaling and root planing. These measures can aid in maintaining a good oral health in pregnancy.¹¹ There is, however, minimal information available on women's understanding of dental hygiene and whether pregnant women comply with current oral health strategies. The aims of this survey were to assess women's knowledge and experiences about dental hygiene in pregnancy in India and assess the self-care practices of pregnant women in relation to their oral health.

MATERIAL AND METHODS

The women who gave birth to a healthy infant with no major congenital anomaly were included in the study. A questionnaire was designed to assess the knowledge about dental health, their past dental experiences and experiences in the past one year. Information about role of periodontal disease

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and plaque in oral health, particular dental requirements in pregnancy including common signs and symptoms of gingival and periodontal health was also obtained.

Relevant clinical information was sourced from the medical records of the woman and her infant. Eligible women were approached on the postnatal ward and given a study information pamphlet. Women who gave informed written consent were asked to complete the questionnaire.

RESULTS

Baseline demographic characteristics

More than half of the women enrolled in the study were between the age of 21-29 years (136, 63.8 %). Most of the women enrolled in the survey were primigravida (119, 55.8 %). (Table 1).

Knowledge of dental practices

Most women had a good understanding of good oral hygiene, with 185 (86.8%) women agreeing brushing their teeth would help prevent gum disease. Likewise, most women understood using dental floss (163, 70.8%) would help prevent gum problems. However less than half of the women surveyed knew that fluoride, whether in toothpaste or water helps in preventing tooth decay. (Table 2)

Knowledge of dental disease and gingival health

Most women had some knowledge of dental disease and gingival health with the majority of women surveyed agreeing sweet foods could cause tooth decay (179, 84%). However, fewer were aware that dental problems can be serious (can cause other health problems (107, 50.22%). Less than half of the women surveyed knew about the role of dental plaque in causing periodontal disease. (Table 3)

Current dental practices

Of the women surveyed, 199 (93.4%) stated they brushed their teeth one or more times a day with just over half (111, 52.1%) indicating they used dental floss weekly or more. In contrast only just over a third of women (221, 55%) said that they used mouthwash daily. (Table 4)

Knowledge of dental problem in last 12 months

Almost half of the women, (87, 40.8%) stated they had gums which hurt and bled at some stage during the previous twelve months and more than a third 75 (35.2%) had persistent bad breath. 77 (36.1%) women had sores on their tongue and/or inside their mouth; while only 10 (4.6%) women had a broken or chipped natural tooth during the previous 12 months. (Table 5)

Dental attendance in the past 12 months

During the previous twelve months only 59(27.6%) women surveyed had attended the dentist. This is comparable to other studies which have reported prevalence rates of dental care use during pregnancy in the range from 23% to 43%.^{10,11} Less than a fifth of the women surveyed, 42 (19.5%), had at least one scaling and cleaning of their teeth during these dental visits. (Table 6)

Demographic feature		Number	Percentage
Age in years	<20	49	23
	21-29	136	63.8
	30<	28	13.1
Parity	0	119	55.86
	1-2	60	28.1
	3 and above	34	15.9

Table-1: Demographics of women who completed the survey

Dental practice	Number	Percentage
Daily Brushing of teeth would help prevent gum disease	185	86.8
Use of dental floss would help prevent gum problems	163	70.8
Fluoride in toothpaste or water helps to prevent tooth decay	99	46.4

Table-2: Knowledge of dental practices of women who completed the survey

Dental disease	Number	Percentage
Sweet foods could cause tooth decay	179	84
Dental problems can cause other health problems	107	50.2
Role of dental plaque in causing periodontal disease.	105	49.2

Table-3: Knowledge of dental disease and gingival health of women who completed the survey

Current Dental practice	Number	Percentage
Brush teeth one or more times in a day	199	93.4
Use dental floss once or more weekly	111	52.1
Use mouthwash daily	74	34.7

Table-4: Knowledge of current dental practices of women who completed the survey

Dental problem in last 12 months	Number	Percentage
Bad breath	75	35.2
Bleeding gums	87	40.8
Sores	77	36.1
Gingival growth	14	6.5
Broken tooth	10	4.6
Any other	8	3.7

Table-5: Knowledge of dental problem in last 12 months of women who completed the survey

Dental visit and treatment in last 12 months	Number	Percentage
Visited dentist for routine check up	59	27.6
Had scaling and polishing done	42	19.7
Required fillings	49	23
Had tooth extraction	19	8.9
Any other treatment	21	4.1

Table-6: Knowledge of dental attendance in last 12 months of women who completed the survey

DISCUSSION

In this survey of recently pregnant mothers, most women were knowledgeable about dental health but only a small percentage knew about periodontal disease. They were also not aware of the changes and increased susceptibility rendered to oral cavity during pregnancy. Preoccupation with pregnancy and the bodily changes led to neglect of the otherwise routine dental check-ups or maintenance of dental hygiene as per previous standards.

Gastric acid regurgitation is more frequent during pregnancy. This can cause erosion of the protective enamel cover of the teeth. Thus if rough tooth brushing is done post vomiting in this period it can lead to more severe tooth surface loss. Preventive fluoride application can help to reduce such damage.¹²

many factors contribute in increased caries incidence in pregnant women including increased acidic oral environment, changed dietary preferences and neglect of oral health. inflammation of gingival tissues is the most common oral finding accounting to about 60 to 75 % whereas inflammation of periodontal tissues accounts for 30% and pregnancy tumour about 5%.¹²

Women in our study sample confirmed many common signs of periodontitis including dysgeusia, spontaneous gingival bleeding and discomfort.^{8,13} Unfortunately less than half of these women had any dental treatment done for the same. infact only about one third of the sample even had a dental consultation done in the last one year.

Similar finding have been reported in studies in America where only half of the study population could obtain dental intervention.^{10,14}

The ramifications of these results indicate a high amount of neglect in this population regarding the dental and oral health.¹

This survey also highlights important gaps in dental knowledge and practices in women. Providers and public health clinics already have an established role in the prevention and early identification of health problems and routinely discuss a variety of topics; this role could be expanded to include provision of counseling and screening on oral health and dental care in early pregnancy. Oral health care in pregnancy is often avoided and misunderstood by physicians, dentists, and patients. Lee et al conducted a study to understand US dentists' attitudes, knowledge, and practices regarding dental care for pregnant women. They put forth five attitudes (perceived barriers) associated with providing less dental services, namely: time, economic, skills, dental staff resistance, and peer pressure.¹⁵

Proper oral health screening, timely advice on oral hygiene maintenance and appropriate referral for dental treatment is must for every pregnant woman. Most dental treatments including fillings, gingival and periodontal treatments with appropriate radiographic investigations are ideally performed in the second trimester of pregnancy.

Anti bacterial mouthwashes like Xylitol and chlorhexidine when used in addition for women with high cariogenic risk will help to reduce chance of transmission of microorganism

to the offspring. Timely oral health care will thus help in reducing the same in the infants.¹²

Various articles have identified the potential challenges in achieving good oral and dental health in pregnancy including traditional beliefs of risk associated with dental procedures, inappropriate information amongst the mothers as well as health care personnel.¹⁶

It is thus important to increase awareness among the susceptible pregnant women about the importance of maintaining dental and oral health in view of long term benefits for themselves as well as their children.¹⁷

Efforts should be made to educate the health care personnel including the doctors, nurses and all associated medical staff about the measures of prevention of dental diseases. This training will enable them to impart appropriate guidance and encourage their patients to take timely dental treatment.

This knowledge can also be included in their training to enable them to give a comprehensive treatment regarding nutrition, role of possible teratogenic, effect of certain drugs, vitamin and other deficiencies on the growth and development of oral and dental tissues of their children as well as their future oral health needs.¹

The period of pregnancy can be utilised to lay down a solid foundation of dental and oral care practices for the mother herself as well as for her children.¹⁶

CONCLUSION

The finding in this study sheds light on the important aspect of dental health during the critical period of pregnancy in the life of a women. The study shows a lack between knowledge of dental health among women and seeking dental treatment for themselves. It is important to educate the pregnant women and the health care givers to ensure optimum oral hygiene practices, timely intervention and dental treatment to ensure good oral health of the mother and the child.

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