

Assessment of Oral Health Awareness and Practices in Pregnant Females

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Running title: Awareness and practices in pregnancy

ABSTRACT

Background: Oral tissues are known to be affected by the hormonal influences during pregnancy. The present study was conducted to assess oral health awareness and practices in pregnant females.

Materials & Methods: 158 pregnant females were proved with a questionnaire which included questions regarding oral hygiene, their oral health status, visit to the dentist, and barriers in seeking treatment.

Results: Age group 18-34 years had 60 and >35 years had 98. Parity was primipara in 56 and multipara in 102. Period of gestation was first trimester in 26, second trimester in 60 and third trimester in 72 subjects. Common complaints were bleeding gums in 60, cavity in 25, pain in 14, bad breath in 30, sensitivity in 12 and gingival enlargement in 40 patients. Last visit to dentist

was last week in 25, 1 month in 45, 6 months in 88. Barrier in seeking dental treatment was dental cost in 52, time constraints in 40, oral health not seen as priority in 25 and advised by others not to take treatment in 41. The difference was significant ($P < 0.05$).

Conclusion: Pregnant females had poor oral hygiene and practice. Hence there is need to educate them through counselling.

Keywords: Oral hygiene, Pregnant, Knowledge

Introduction

Oral tissues are recognized to be affected by the hormonal effects during pregnancy. Most thoughtful of these effects are visible on gingival tissues.¹ Higher levels of estrogen and progesterone in pregnancy may induce edema and hyperemia and bleeding in periodontal tissue as well as a higher incidence for gingival enlargement. A link has been recommended between the higher levels of pregnancy hormones in plasma and deteriorating periodontal health status.² The oral health status of a pregnant female can distress the health of the unborn child within the womb. Abundant of evidence proposes that an association happens between periodontal disease and preterm low birth weight deliveries. This correlation now is not only restricted to preterm babies but also rather has been expanded to adverse pregnancy outcomes, miscarriage, stillbirth, preeclampsia, and intrauterine growth retardation.³

Dental treatment regarding pregnant women has still been surrounded by myths, beliefs and negative traits causing them not to seek for care during this period. The main reasons were reported as follows: the uncertainty regarding treatment during pregnancy, risks concerning fetus formation and the low perception of treatment needs. On top of these they also reported: fear of the dentist, the possibility of feeling pain and discomfort, the dental high speed drilling noise as well as the belief that pain is a pregnancy associated fact.⁴ All these are influential issues impair the quest for dental treatment. Few dentists' fear in supplementary pregnant women cause these dental professionals to often postpone treatment for the post-natal period, which can lead to oral health worsening and therefore injury both pregnant woman's and baby's health.⁵ The present study was conducted to assess oral health awareness and practices in pregnant females.

Materials & Methods

The presents study comprised of pregnant female patients reporting to the Department of Dentistry, SKMCH, Muzaffarpur, Bihar. Institutional ethical clearance was obtained and the patients were informed regarding the study. A total of 158 patients willing to participate in the study were included after their consent was obtained.

Demographic profile comprised of name, age, gender etc. was recorded. A questionnaire was provided to them which include questions regarding oral hygiene, their oral health status, visit to the dentist, and barriers in seeking treatment. Results were tabulated and statistically analyzed. P value less than 0.05 was considered significant.

Results

Table I Distribution of subjects

| Parameters | Number | P value |
|----------------------------|--------|---------|
| Age group (years) | | |
| 18-34 | 60 | 0.05 |
| >35 | 98 | |
| Parity | | |
| Primipara | 56 | 0.02 |
| Multipara | 102 | |
| Period of gestation | | |
| First trimester | 26 | 0.05 |
| Second trimester | 60 | |
| Third trimester | 72 | |

Table I shows that age group 18-34 years had 60 and >35 years had 98. Parity was primipara in 56 and multipara in 102. Period of gestation was first trimester in 26, second trimester in 60 and third trimester in 72 subjects. The difference was significant ($P < 0.05$).

Table II Assessment of oral health status

| Variables | Parameters | Number | P value |
|-----------------------|----------------------|--------|---------|
| Complaints | Bleeding gums | 60 | 0.05 |
| | Cavity | 25 | |
| | Pain | 14 | |
| | Bad breath | 30 | |
| | Sensitivity | 12 | |
| | Gingival enlargement | 40 | |
| Last visit to dentist | Last week | 25 | 0.02 |
| | 1 month | 45 | |

| | | | |
|-------------------------------------|---|----|------|
| | 6 months | 88 | |
| Barrier in seeking dental treatment | Dental cost | 52 | 0.05 |
| | Time constraints | 40 | |
| | Oral health not seen as priority | 25 | |
| | Advised by others not to take treatment | 41 | |

Table II, graph I shows that common complaints were bleeding gums in 60, cavity in 25, pain in 14, bad breath in 30, sensitivity in 12 and gingival enlargement in 40 patients. Last visit to dentist was last week in 25, 1 month in 45, 6 months in 88. Barrier in seeking dental treatment was dental cost in 52, time constraints in 40, oral health not seen as priority in 25 and advised by others not to take treatment in 41. The difference was significant ($P < 0.05$).

Graph I Assessment of oral health

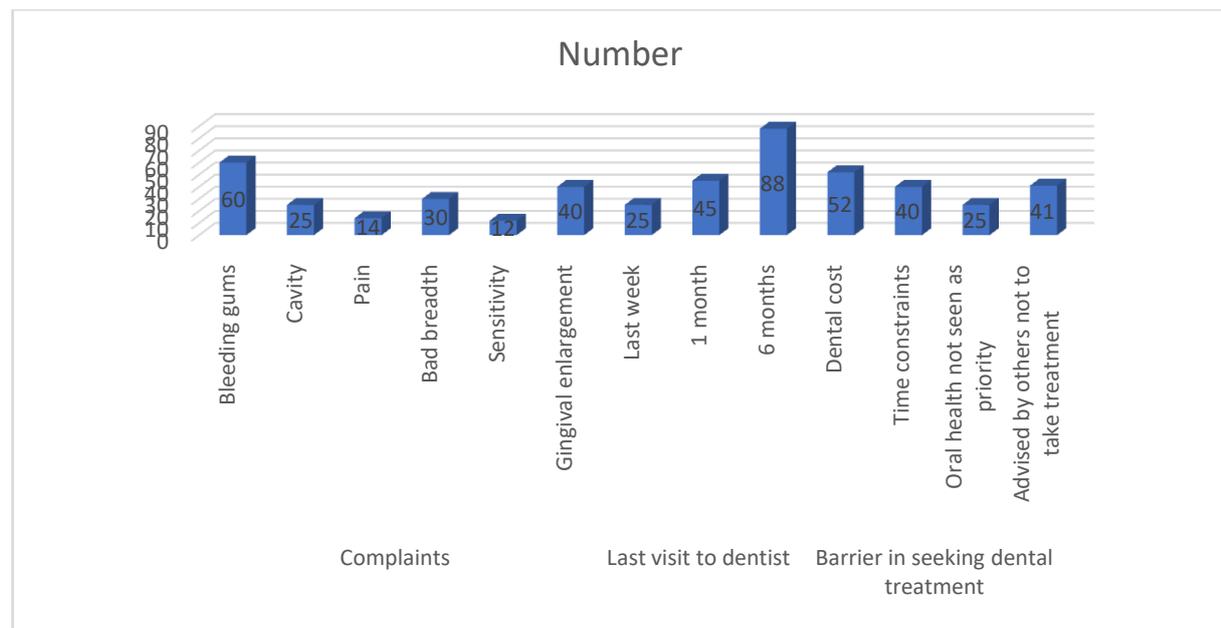


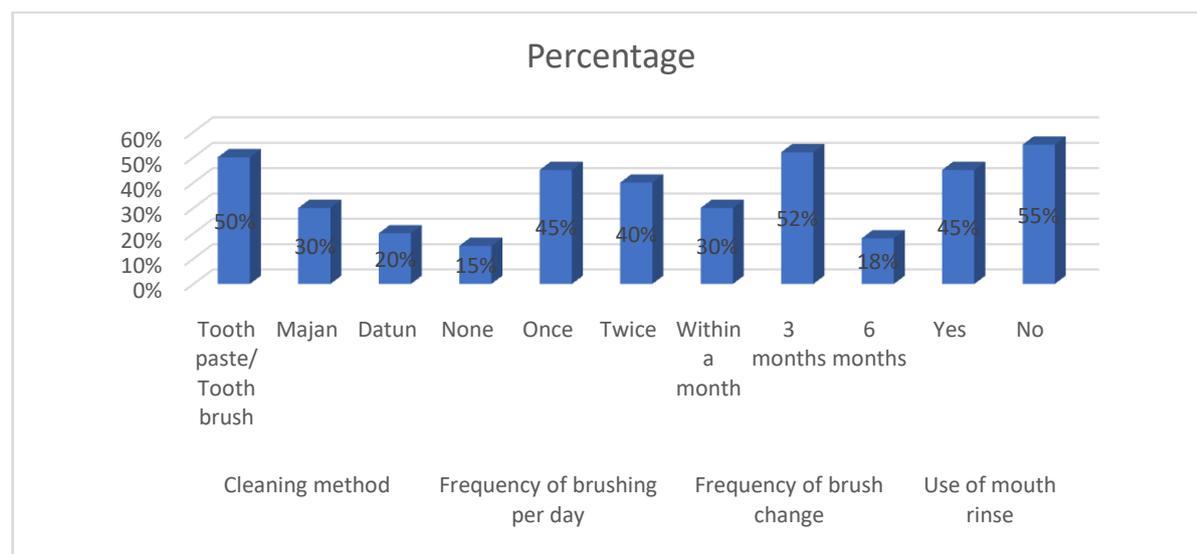
Table III Oral health practices

| Variables | Parameters | Percentage | P value |
|-------------------------------|--------------------------|------------|---------|
| Cleaning method | Tooth paste/ Tooth brush | 50% | 0.01 |
| | Majan | 30% | |
| | Datun | 20% | |
| Frequency of brushing per day | None | 15% | 0.02 |
| | Once | 45% | |

| | | | |
|---------------------------|----------------|-----|------|
| | Twice | 40% | |
| Frequency of brush change | Within a month | 30% | 0.05 |
| | 3 months | 52% | |
| | 6 months | 18% | |
| Use of mouth rinse | Yes | 45% | 0.91 |
| | No | 55% | |

Table III, graph II shows that cleaning method used by subjects was tooth paste/ tooth brush in 50%, Majan in 30% and Datun in 20%. Frequency of brushing per day none in 15%, once in 45%, twice in 40%, frequency of brush change was within a month in 30%, 3 months in 52% and 6 months in 18%. Mouth rinse was used by 45%.

Graph II Oral health practices



Discussion

Pregnancy-related physiological differences have been regarded to affect oral health. The most recurrent and greatest variations have been reported to affect the gingiva and periodontal tissues influencing to their impairment.⁶ These changes are accredited to amplified concentrations of sex hormones, oestrogen, and progesterone, which touches vasculature of periodontal tissue inducing hyperaemia, edema, bleeding, and increasing the risk of bacterial infections.⁷ There are some causative factors which worsen the oral health during pregnancy. Socioeconomic status, education, age, nutrition, lack of dental awareness, and hygiene habits should be taken into account.⁸

The hormonal variations during pregnancy put pregnant females at a higher risk for developing various dental problems.⁹ It is considered that lesser number of females seek dental treatment during pregnancy even when there is an existing dental problem. In our observation, 43.5% of participants never visited a dentist even though 72.44% of participants self-reported one or more oral health problem. One-third of participants reported effect of oral health problems on their eating habits. Inadequate diet as well as lower reporting and visit to dentist can affect the well-being of the developing fetus.¹⁰ The present study was conducted to assess oral health awareness and practices in pregnant females.

In present study, age group 18-34 years had 60 and >35 years had 98. Parity was primipara in 56 and multipara in 102. Period of gestation was first trimester in 26, second trimester in 60 and third trimester in 72 subjects. Payal et al¹¹ included 20 pregnant females, and a control group consisted of 103 age-matched nonpregnant females. A cross-sectional self-reported questionnaire-based survey and clinical examination was conducted. Out of 320, 192 (60%) pregnant females had some dental problem during pregnancy. Community periodontal index (CPI) score for total pregnant females (2.16) was significantly higher in comparison to control group (1.29). Nearly 72.81% of pregnant females had never attended the dentist. Trimester-wise comparison showed time-dependent increase in CPI score. Low educational status, older age, earlier issues, poor hygiene habits, and tobacco use showed a direct effect on compromised oral health.

We observed that common complaints were bleeding gums in 60, cavity in 25, pain in 14, bad breath in 30, sensitivity in 12 and gingival enlargement in 40 patients. Last visit to dentist was last week in 25, 1 month in 45, 6 months in 88. Barrier in seeking dental treatment was dental cost in 52, time constraints in 40, oral health not seen as priority in 25 and advised by others not to take treatment in 41. Hans et al¹² in their study a total of 225 pregnant females participated. Majority of participants self-reported some form of oral health problems with bleeding gums as a chief complaint leading the survey. Around half of the participants had never visited a dentist, and an abundant number of pregnant females reported safety concerns for developing the child as a reason for not taking any treatment during pregnancy. A highly significant number of participants were unaware of the importance of oral health during pregnancy and believed in age-old myths.

We observed that cleaning method used by subjects was tooth paste/ tooth brush in 50%, Majan in 30% and Datun in 20%. Frequency of brushing per day none in 15%, once in 45%, twice in 40%, frequency of brush change was within a month in 30%, 3 months in 52% and 6 months in 18%. Mouth rinse was used by 45%.

The limitation of the study is small sample size.

Conclusion

Authors found that pregnant females had poor oral hygiene and practice. Hence there is need to educate them through counselling.

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