Self-reported Oral and Dental Health Status among the Pregnant Women of A Selected Hospital in Dhaka City

MR Hasan1, AB Dithi2, NA Nomann3, J Nessa4, T Saito5

Abstract

Aims: The aims of this study were to gain an understanding of pregnant women's oral hygiene practices and to assess the oral and dental health status.

Materials and Methods: A semi-structured questionnaire was completed by 100 pregnant women of the gynecology department of Dr. Akhnerr Jahan Mirza Hospital, Dhaka.

Results: The women in this study 40% were in 19-22 years age group. Forty eight percent (48%) women of the subjects were having up to high school level education & 28% had low income of Sixty Thousand to One Lac taka yearly. In relation to oral hygiene habit before pregnancy majority of the women (56%) stated that they brush their teeth once a day, 19% use dental floss and 14% use mouth rinse once a day. During pregnancy women seemed to be slightly more concerned about oral hygiene but not significantly. Only 66% brush their teeth and 17% floss their teeth and 18% use mouth rinse once a day during pregnancy. The major problem in their mouth noticed by the women during pregnancy was bleeding gums (58%).

Conclusion: This study feels the necessity of giving special attention to pregnant women's oral health in Bangladesh. Women should be educated on good oral hygiene practices so as to minimize prevalence of poor maternal oral health during pregnancy.

Key words: Pregnancy, Oral hygiene, Dental knowledge.

Introduction

Pregnancy is a unique time in women's life and is characterized by complex physiological changes. These changes can adversely affect oral health.

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Therefore, the pregnant population group requires special care in terms of oral health care including nutrition. Pregnancy has no direct causation on tooth loss, but there are a number of factors that influence the rapidity and progression of incipient or already well-established oral disease. The expectant mother may be involved in a multitude of extra activities, which can lead to a neglect of her own oral care and can result in dental problems which require extra attention during this phase.

Hormonal changes during pregnancy have been suggested to predispose women to gingivitis, affecting 35-100% of pregnant women15. Mainly because of estrogen, the gum become inflamed, edematous, and sensitive, with a tendency to bleed easily, and existing gingivitis may worsen considerably during pregnancy if plaque is not removed4,8. Furthermore, advanced periodontal infections in pregnant women may pose a threat to the placenta and uterus and may increase the likelihood of pre-term delivery3,14. It has been estimated that periodontal disease of the mother might cause more than 18% of all pre-term births and low birth weight in infants14.

Support for dental treatment in governmental hospitals is not enough in district levels in Bangladesh. Mothers and children welfare center (MCWC) is a sister organization of Bangladesh government under the Ministry of Health and Family Welfare, where the antenatal women come for regular checkup.
They have dental problems but in MCWCs have no support for dental treatment. It has been recommended that all women should have a dental examination and appropriate dental hygiene care at least once during their pregnancy. However, many women in a number of countries do not visit a dentist during their pregnancy. Therefore oral and dental health practices and knowledge of pregnant women in Bangladesh should be assessed as a high risk group.

So, this study was planned to describe the self-reported oral hygiene practices and to assess the oral and dental health status among the pregnant women in gynecology department of Dr. Akhter Jahan Mirza Hospital, Dhaka, Bangladesh.

Materials and Methods

A descriptive cross-sectional study was carried out among pregnant women attending at gynecology department of Dr. Akhter Jahan Mirza Hospital, Dhaka. The sample size was 100 pregnant women. The time period of the study was limited to six months. Within this period, eight weeks were spent for data collection and the rest of the period were spent for analysis, report writing and submission. Purposive sampling technique was followed for selection of the study women. A semi-structured questionnaire was developed following a pilot study in a small similar study population. The one-to-one interview was taken as per the printed questionnaire. Security and confidentiality was maintained by taking appropriate care and sincerity of interviewers and the researcher as per ethical consideration of the research. After completion of data collection all questionnaires were filled up, statistical software SPSS (version 15.0) was used to enter data for analysis. Prior to commencement of the study, ethical clearance was taken from Ethical Review Committee (ERC, No. 10-91195) of American International University-Bangladesh (AIUB).

Results

A total of 100 pregnant women were examined. The age groups were divided into five categories, of which 40% were in the age group of 19-22 years. Others were 15-18 years 16%, 23-27 years 15%, 28-35 years 17%, and 35+ years age 12%. The education groups were divided into “less than high school” category (which includes ability to sign own name to primary school level), “high school” category (which includes class 6 to SSC pass) “diploma”, “graduate” and “postgraduate” category. Almost half of the women studied had less than High School education (48%) [Figure-2].

![Figure-2 Level of Education](image)

In non-pregnant stage 56% and during pregnant stage 66% stated that they brush their teeth once a day and also it was found that 58% of the women in non-pregnant stage and 52% of women in pregnant stage never flossed their teeth. 14% of the women used mouth wash in non-pregnant stage and 18% in pregnant stage. However, comparing the dental hygiene before and during their pregnancy period it shows that during pregnancy women seemed to be slightly more concerned about oral hygiene but not significantly [Table-1].

![Figure-3 Annual Family Incomes](image)

Table-1 The oral hygiene status before and during pregnancy period

<table>
<thead>
<tr>
<th>Variables</th>
<th>Before pregnancy</th>
<th>During Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often brush your teeth</td>
<td>Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td>Twice or more a day</td>
<td>19</td>
<td>29</td>
</tr>
<tr>
<td>Once a day</td>
<td>36</td>
<td>66</td>
</tr>
<tr>
<td>Not every day</td>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td>How often floss your teeth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twice or more a day</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Once a day</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Not every day</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Never</td>
<td>51</td>
<td>52</td>
</tr>
<tr>
<td>Use mouth rinse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>No</td>
<td>86</td>
<td>82</td>
</tr>
</tbody>
</table>

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The major problem in their mouth noticed by the women during pregnancy was bleeding gums 58%, toothache 13%, cavities 7%, and sensitive teeth 4% [Figure-4].

**Figure – 4 Changes in teeth/gum during pregnancy**

The main change and/or problems related to mouths that were reported by women during pregnancy were bleeding gums, followed by sensitive teeth and others (such as infections or broken teeth). It is important to note that 58% of women in this study noticed bleeding gums during pregnancy. Similar findings were observed in the Australian study where 60% of the women stated that they had gums bleeding at some stage during the previous 12 months. Bleeding gums is normally one of the first signs of gingivitis and is common among pregnant women due to hormonal changes in this period which accentuate the gum’s response to plaque. It is important to point out that pregnancy does not cause gingivitis, but may aggravate pre-existing disease. However, gingivitis can progress to periodontitis (loss of connective tissue) and, according to a number of studies, can be associated with birth outcomes such as low birth weight, preterm birth and preeclampsia. Similar frequencies were observed in a number of international researches, 30% in Australia, a range of 25-50% in American studies.

There is a lack of formal guideline about oral health for pregnant women in Bangladesh, which could be beneficial for public and health professionals to inform pregnant woman about the best practices regarding this topic. The other sources of information for pregnant woman in our study were dental healthcare workers and maternity careers.

Finally, there is a lack of integration between dentistry and other professional areas such as maternity care workers, who do not normally cover this topic with their patients. Sometimes dentists are insecure about the management of pregnant patients and don’t take the opportunity to promote preventative measures.

The vast majority of women receive antenatal care from midwives, obstetrician and attend antenatal classes. Thus, maternity careers are in a strategic position to provide counseling to pregnant women regarding oral health. Women could be advised to see the dentist before becoming pregnant and visit the dentist and other dental health workers during pregnancy, especially for checkup and cleaning. They should be advised to brush their teeth at least twice a day, floss at least once a day and have a balanced diet avoiding excessive amount of sugary snack.
Conclusions

This study feels the necessity of special attention to pregnant women's oral health in Bangladesh. From this study, we can conclude that majority of the pregnant women had a poor level of oral hygiene with gingivitis. So, dental health education programs should be carried out at regular intervals to impart knowledge on dental health and oral hygiene practices. The dentist should be consulted as early as possible in the first stages of pregnancy for a thorough examination so that all necessary treatments can be carried out well in advance.

References