

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

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### **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. Akhter 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 women<sup>15</sup>. 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 removed<sup>4,8</sup>. Furthermore, advanced periodontal infections in pregnant women may pose a threat to the placenta and uterus and may increase the likelihood of pre-term delivery<sup>3,14</sup>. 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 infants<sup>14</sup>.

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<sup>12</sup>.

It has been recommended that all women should have a dental examination and appropriate dental hygiene care at least once during their pregnancy<sup>1</sup>. However, many women in a number of countries do not visit a dentist during their pregnancy<sup>5,6,11</sup>. Therefore oral and dental health care 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 filed up, statistical software SPSS (vesion 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%. [Figure-1]

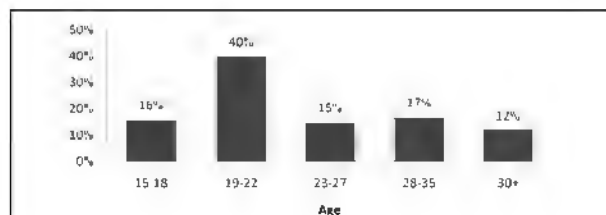


Figure -1 Different Age group

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].

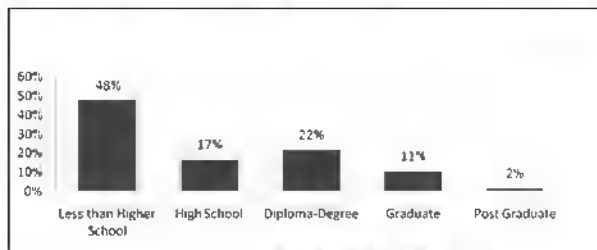


Figure - 2 Level of Education

About household income, 28% of the study women had a low (60,000-1 lac taka) annual income and 26% did not know their household income [Figure-3].

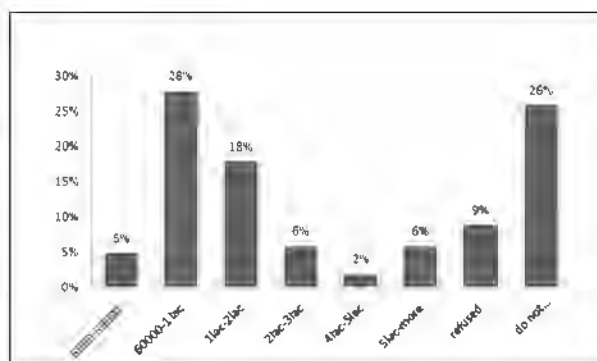


Figure- 3 Annual Family Income

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].

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

Variables	Before pregnancy	Current Pregnancy
<b>How often brush your teeth</b>	<b>Percentage</b>	<b>Percentage</b>
Twice or more a day	19	29
Once a day	56	66
Not every day	25	5
<b>How often floss your teeth</b>		
Twice or more a day	8	12
Once a day	19	17
Not every day	15	19
Never	58	52
<b>Use mouth rinse</b>		
Yes	14	18
No	86	82

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].

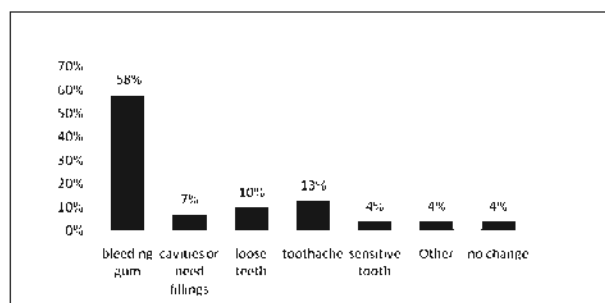


Figure – 4 Changes in teeth/gum during pregnancy

### Discussion

A number of self-reported studies around the world have investigated about the level of dental care, dental health access and knowledge about dental health and their relationship with pregnancy outcomes<sup>2, 5, 7, 9, 16</sup>.

So far this is the first study in Bangladesh adopting a similar approach. Previously, Makowharemahihi presented a thesis on “A community-based health needs assessment of the oral health needs of Maori mothers in Porirua”, in which she extrapolated through a qualitative study the needs of a group of Maori mothers<sup>10</sup>.

The present study, sought to provide more broadly quantitative information about expectant mothers in the gynae department of Dr. Akhtar Jahan Mirza Hospital, Dhaka. The main finding of this research on pregnant women participating in this study presented with poor oral hygiene habits, more than half of the women reported bleeding gums during pregnancy. The first objective of this research was to analyze oral health care practices and behavior of women before and during pregnancy, and whether these changed during this period. This was achieved through a series of questions relevant to dentistry including oral hygiene.

In this study, most women reported “fair” & “poor” oral hygiene, brush their teeth one time per day, use floss and mouth wash occasionally. Their hygiene pattern did not change significantly during pregnancy, with 29% brush their teeth twice or more per day, 12% flossed their teeth once a day and 18% using mouth rinse. Other international studies show similar findings of oral hygiene during pregnancy, but these studies did not compare this with oral hygiene practices before pregnancy<sup>7, 15</sup>.

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<sup>16</sup> 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)<sup>13</sup> and, according to a number of studies; can be associated with birth outcomes<sup>14</sup> such as low birth weight, preterm birth and preeclampsia. Similar frequencies were observed in a number of international researches, 30% in Australia<sup>16</sup>, a range of 25- 50% in American studies<sup>5, 9</sup>.

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.

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