

Self-reported of Oral Hygiene Knowledge & Attitude among Iranian Prenatal Women: A Single Center Experience

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Abstract

Background: Pregnant women are more susceptible to periodontal disease and it may be associated with adverse pregnancy outcomes.

Objectives: The objectives of this study were to assess women's knowledge and attitude towards oral and dental health during pregnancy and to observe their self-care practices in relation to oral and dental health.

Methods and Materials: This is a cross-sectional descriptive and analytical study conducted at the parental clinic. The study groups were included of 450 pregnant women attending in the clinic using convenience sampling method. A self-administered validated questionnaire was used. Statistical analysis done using SPSS version 22.

Results: Of the total study group, 450 responded to the questionnaire and participated in the study. All the women brushed at least twice daily. However, only 40% flossed daily, 31.1% brushed after meals and 24.2% had a dental check-up at least twice a year. The knowledge among them related to dental health care was also poor. Though the majority (88.9%) agreed that women should have a dental check-up during pregnancy, only 42% actually do practice. This raises serious concern since pregnant women may need extra oral and dental care due to susceptibility to gingival diseases during pregnancy, which may contribute to low birth weight babies and premature births.

Conclusion: This study highlights important gaps in dental knowledge and practices related to oral and dental healthcare among pregnant women. More intense dental health education, including oral health promotion in maternal child health centers can lead to improved oral and dental health, and ultimately pregnancy outcomes.

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Introduction

Oral health is a part of general health and so it affects the total well-being of individuals [1]. And oral hygiene is the cumulative result of both the progressive and relatively diseases-free periods during a lifetime. Recently in public health aspect of medical sciences, the importance of general hygiene has been highlighted. One of the most important elements of general health is oral hygiene. Personal knowledge combined with professional tooth brushing can reduce the progression of dental caries and periodontal disease [2, 3].

Pregnancy involves complex physical and physiological changes characterized by series of adaptive changes in body

structure with an increased production of estrogens, progesterone and gonadotropins [4]. Therefore pregnant women are more susceptible to periodontal disease because of female reproductive hormonal effects. A few surveys have been demonstrated that periodontal disease may be associated with adverse pregnancy effects, such as premature birth and low birth weight [5-7]. Accessible evidence has established association between oral health and pregnancy and its outcome [7-13, 5].

Prevention of oral and dental problems and their complications during pregnancy is possible through having pregnant women expressing appropriate knowledge, attitude and practice. This study provides a small understanding of country's current situation on oral health care among pregnant women, and it will promote awareness on the importance of good oral and dental healthcare not only in pregnant women, but in a general public. The purpose of this present research were to undertake a questionnaire survey of pregnant women with particular reference to their knowledge, attitudes and habits to oral and dental health self-care practices.

Methods and Materials

This is a cross-sectional, descriptive and analytical study. The study was lead over a six months period in April 2012 on all pregnant women attending the maternity private clinic at Qazvin province.

Questionnaire

A self-administered questionnaire were used; with convenience sampling method. The questionnaire is divided into four parts: (1) The questionnaire elicited information on demographic data consisting of age, education and occupation status, (2) knowledge, (3) attitude, (4) oral and dental health practice of pregnant women. It was pre-tested and validated proceeding to the beginning of the study for validating of the questionnaire.

Sample

We distributed questionnaires among pregnant woman in prenatal private clinic in Qazvin (in western of Iran). Participants returned four hundred fifty of the four hundred sixty seven distributed questionnaires. We excluded 16 questionnaires due to its missing more than 50% of the information data. Their ages ranged from 16-46 years. The response rate was 97.9%.

Statistical Analysis

Data was entered using the Epi Info computer program after which it was transferred to the SPSS, version 22, and program for analysis. Univariate analyses were performed by used of T-test and Chi-square to compare the difference in knowledge and practice associated to oral and dental health by age group, educational level and job status.

Results

A questionnaire was distributed to four hundred sixty seven pregnant women. Four hundred fifty participants fully completed returned (with response rate of 96.3%), and ages ranged from 16 to 46 years old.

The variables of socio-demographic characters included age, education, and job status are shown in (Table 1). There was no significant association between all 6 practices with age, educational level or job status. All the women brushed their teeth at least twice daily.

However, only 41% had daily flossed, 31.1% brushed after breakfast and dinner, and 24.2% had at least twice a year dental checkup. Additionally the women express poor knowledge of dental care (Figure 1). The results from the responses to the 6 questions concerning knowledge and practice related to oral and dental healthcare indicate that the knowledge related to oral and dental treatment like; filling, scaling, and extraction during pregnancy was significantly related with educational level and job status, as illustrated in (Table 1).

Also in (Figure 2) displays the attitude of 197(43.8%) pregnant women who have not had a dental check-up for the current pregnancy towards having a dental check-up in the future. The assessment between knowledge and practice of oral and dental healthcare among the pregnant women (Table 2). Knowledge related to the frequency of brushing, flossing and brushing times was significantly associated with their practice (all P-values <0.001). However, no significant association was found between the knowledge and practice of frequent dental checkup, taking checkup during pregnancy, or avoiding oral and dental treatment during pregnancy.

Discussion

Very few studies have investigated dental awareness during pregnancy. Consequently, it is difficult to assess how knowledgeable an expectant mother is about oral hygiene care and how she can put this knowledge into practice. With poor oral hygiene, seventy percent of periodontal disease can increase during pregnancy. In the course of pregnancy, however the plaque index will increase during the last month of gestation, the scores leveled off well above the point for the onset of pregnancy [14]. According to the results which obtained from the questionnaire showed that most of the woman exhibited a high degree of dental knowledge.

The knowledge related to dental care such as at least twice daily brushing, use of daily floss, brushing after meals, and dental checkup at least twice a year was found to be poor among the pregnant women. Knowledge intervention in this area might be very necessary. In assessment with a postnatal survey conducted in Australia [15], 24.2% of pregnant women did not receive dental care at least twice yearly. Majority of the pregnant women (88.9%) agreed that women should have a dental checkup during pregnancy, but only 42% had done it for the present pregnancy. In the postnatal survey done in Australia, only 26.9% ($n=121$) of the women attended a dental clinic during pregnancy. Surveys have shown that, at most, half (35–50%) of pregnant women visit the dentist throughout pregnancy [16, 17], and only 34.7% receive dental treatment [16].

This increases serious concerns, as pregnant women may need extra oral and dental care due to susceptibility to gingival disease during pregnancy. Studies have shown that gum disease may contribute towards the birth of low birth weight babies and premature births [18-20]. The three most common perceived barriers against having a checkup as expressed by the 43.7% who have not had a check during the current pregnancy were; long waiting time at the government clinics (35%), distance from home to the clinics (15%) and negative attitudes of medical workers (9%), extra cost (33%), and others (15%). Other studies have reported the failure rate of attendance in dental clinics as 50%, mainly due to work commitment [21]. However, 88.2% of them had positive attitude towards having a checkup soon. This is in to a similar study done in Iran [22], were 70% ($n=224$) of pregnant women had negative attitude of having a dental check-up in the future.

In Figure 1 which shows the perceived barriers against dental check-up by the 41 women who have not had a dental checkup

for the recent pregnancy. Comparing the difference in knowledge of oral and dental treatment during pregnancy, persons with higher education expressed better knowledge. It is probable that social communication among them had influenced these increases in knowledge. Only 43.6% of pregnant women agreed that oral and dental treatment should not be avoided during pregnancy, while the rest either disagreed or were not sure. Women should not fear any dental intervention during pregnancy; indeed, specialists believe that common treatment during pregnancy is not harmful for pregnant women or the unborn baby [23].

Pregnancy is a moments when women might be more motivated to make health changes. Therefore good oral health maintaining during pregnancy is so important. It is apart from reducing the risk of adverse pregnancy outcomes and will improve general health of both the mother and her infants [8]. According to most of research during pregnancy condition first and third trimesters are so critical and sensitive stage in prescription of drug as it may causes damages to fetus.

Conclusion

Pregnant women are more predisposed to periodontal disease like gingivitis, periodontitis because of reproductive hormonal effects [24]. Although the women surveyed displayed acceptable levels of oral health knowledge and attitudes, the results highlighted important gaps in their oral health knowledge and practices. More concern treated of oral and dental health education in pregnancy could be lead to better-quality in oral and dental health, and eventually healthier pregnancy outcomes. Beside if teeth eruption is required we should be preventing causes of bleeding which is not acceptable during pregnancy. If the dental filling is required and metal rich cementing materials are prescribed it may causes metal leaching from mouth of mother to fetus.

Limitations: This research like any investigation has limitations too which could be as a following:

1. It is trusting on self-reported data and therefore is subject to bias.
2. It may do in multi center.
3. Furthermore the study was carried out in one clinic only; so the results may not be sufficient to conclude for the whole pregnant population.
4. Another limitation is the use of non-probability method in the selection of study participants.

Conflict of interest and Funding

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Table 1: Comparison between knowledge of oral health during pregnancy and age group

Variable	N	Disagree (%)	Agree N(%)	Not sure N (%)	$\chi^2(df)$	P-value
Total	450	67(14.8)	231(51.3)	152(33.7)		
Age(Year)						
16-30	273	38(13.9)	136(49.8)	99(36.3)	2.02(2)	.364
31-45	177	29(16.4)	95(53.6)	53(30)		
Education						
Primary and Sec	285	46(16.2)	114(40)	125(43.8)	43.66(2)	0.0001
Pre-U and higher	165	21(12.7)	117(70.8)	27(16.3)		
Job status						
Yes	105	14(13.3)	63(60)	28(26.7)	7.4(2)	0.025
No	368	53(14.4)	168(45.7)	147(39.9)		

Table 2: Comparison between knowledge and practice related to oral health care

Knowledge response	N	N (%) Practiced	N (%) Not Practiced	$\chi^2(df)$	P-value
Brushing at least twice daily					
Total	450	450(100)	0(0)		
Correct	450	450(100)	0(0)		
Incorrect	0	0(0)	0(0)		
Brushing after breakfast & dinner					
Total	450	140(31.1)	310(68.9)		
Correct	162	117(72.2)	45(27.8)	169.5(1)	0.0001
Incorrect	288	33(11.4)	255(88.5)		
Using floss daily					
Total	450	187(41.5)	263(58.4)		
Correct	342	181(53)	161(47)	75.89(1)	0.0001
Incorrect	108	6(5.5)	102(94.5)		

Figure 1: knowledge and practice related to 6 oral heaths care of 450 prenatal women.

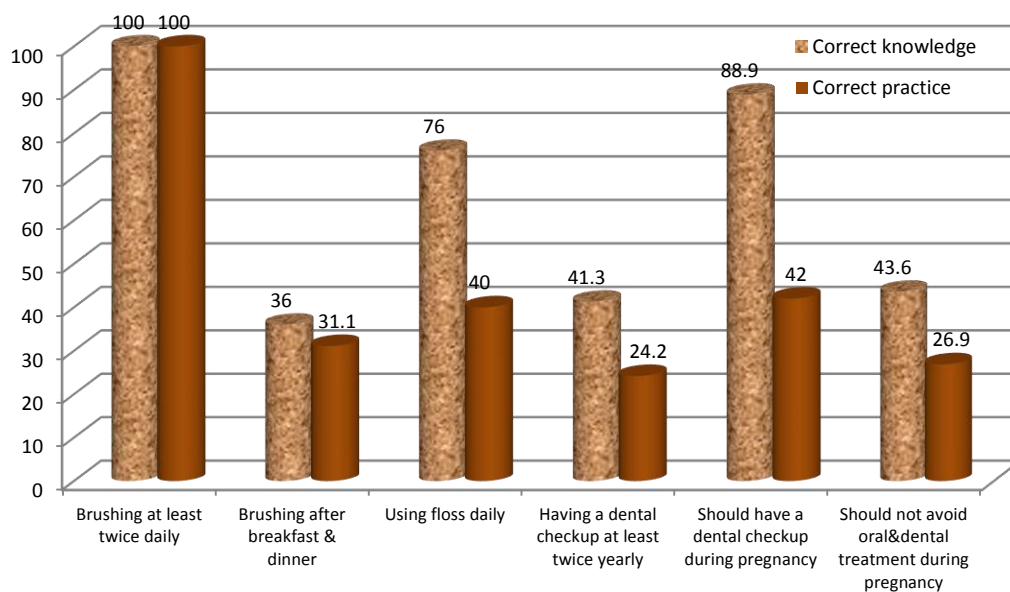


Figure 2: Perceived barriers to dental checkup (N=197)

