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Research Article

Oral and Dental Health Knowledge, Attitude and Practice among Pregnant Women

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Abstract: The objective of the study was to assess women's knowledge and attitude towards oral and dental health during pregnancy and to examine their self-care practices in relation to oral and dental health. This was a hospital base analytical study conducted in the Mahatma Gandhi Dental College and Hospital and Department of Obstetrics and Gynaecology, S. M. S. Medical College, Jaipur. The study group was comprised of 400 pregnant women attending the ANC clinic. Following written consent, a self-administered questionnaire assessed level of oral health knowledge, attitude and practices of pregnant women. Data were analyzed statistically. Mean age of women was 25.1 ± 4.3 years. Majority of the women were Hindu, illiterate, para 1 or 2 and from urban area. 83% believed that regular visit to dentist is necessary. Tooth ache was the driving factor for their dental visit for 27.7% women. 42.5% women brushed their teeth twice a day. 94.3% cleaned their tooth by toothbrush and toothpaste. About 25% used mouthwash, floss and toothpick as part of their oral hygiene. Only 22% pregnant women believed that pregnancy predisposes to dental or gum problems. 40.5.5% women were of the opinion that every painful tooth should be removed. In 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.
Keywords: Attitude, Knowledge, Oral health, Practices, Pregnant women

INTRODUCTION

Pregnancy is a special state for a woman, which is associated with a myriad of emotional and physiological changes in different parts of body including oral cavity and dental health.[1] These changes predispose women to dental caries and gingivitis.

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] Oral tissues are known to be affected by pregnancy with the most frequent and greatest changes occurring in the gingival tissue [3]. Pregnant women may be more susceptible to periodontal disease since higher concentrations of oestrogen and progesterone can induce hyperaemia, oedema and bleeding in periodontal tissues [4], increasing the risk of bacterial infections. Periodontal disease is both preventable and treatable. Controlling plaque by brushing, flossing and professional prophylaxis, including scaling and root planing, all help to achieve good dental health in pregnancy [5].

In recent times, the oral health of pregnant women has been gaining more interest because of the suspected association between periodontal diseases and adverse pregnancy outcomes such as premature birth, low birth weight and pre-eclampsia [6-8]. To date, research has focused on establishing the relationship between periodontitis and adverse pregnancy outcomes and the impact that periodontal treatment interventions have on reducing the risks. Studies have included retrospective and prospective analyses of pregnancy outcomes in women with and without periodontitis, while other studies have investigated the effectiveness of treating periodontitis and its effect on pregnancy outcomes. However, virtually no studies have investigated what knowledge pregnant women have about oral health and what barriers they experience to accessing proper oral health during pregnancy [6, 9-11].

The provision of routine antenatal care is aimed at ensuring general maternal well-being and the subsequent delivery of healthy babies. However, while oral health is now accepted as an important

component of general well being of pregnant women in developed countries it remains an underrated component in developing countries such as India. Prevention of oral and dental problems and their complications during pregnancy is possible through having pregnant women expressing appropriate knowledge, attitude and practice.

The objective of this study was to assess women's knowledge and attitude towards oral and dental health during pregnancy and to examine their self-care practices in relation to oral and dental health at the S.M.S. Medical College, Jaipur, Rajasthan.

MATERIALS AND METHOD

A self administered questionnaire based survey was conducted in the Mahatma Gandhi Dental College and Hospital and at the antenatal clinic in the Department of Obstetrics and Gynaecology, S.M.S. Medical College, Jaipur, between January and June 2014. Sample size is calculated at 95% confidence level taking maximum variance of 50% and relative allowable error of 10%.Thus, minimum 400 pregnant female are required as sample size. Questionnaires were administered to 400 consecutive consenting pregnant women who attended the antenatal clinic during the study period. The questionnaire contained four sections. The first section contained questions on the respondent's socio demographic characteristics such as age, parity, literacy and educational status. There were ten questions in the second section evaluating the oral health knowledge of the respondent. We constructed a "dental knowledge score" by counting the total number of acceptable answers given by the subjects, excluding responses like "do not know" and "no answer". Thus, the dental knowledge score was in an interval scale and ranged from 0 to 10, with a higher dental knowledge score indicating better dental knowledge. The knowledge scores were regrouped into 2 categories: those with good oral health knowledge and those with poor oral health knowledge. Thus a score of 6 and above was graded as good knowledge, while 5 and below was graded as poor knowledge. The third section contained questions related to attitude of pregnant women towards dental health. The fourth section contained questions assessing the respondent's oral health practices. Data collected were statistically evaluated.

RESULTS

Demographic characteristics of the participants

A total of 400 pregnant women were surveyed, of which a majority of them (80%) were between 20 – 30 years of age. The women below 20 years were 7% and those above 30 years were 13%. The age of the expectant mothers were in the range of 18 – 40 years, with a mean of 25.1 years and a standard deviation of 0.86. 30% women were in their first pregnancy while surprisingly, 13% were in their fourth or fifth pregnancy. Majority of them belonged to urban area (71%) and Hindu (63.5%). 39% of the women were illiterate, while 9.5% had finished their graduation or postgraduation degree (Distribution showed in Table 1).

Knowledge of dental health practices

50.5% women had good knowledge of dental health (Table 2), with 92% women agreeing brushing their teeth would help in preventing gum disease. Likewise, most women understood consuming too much sweet would cause dental caries (98%). Only 61% of the women surveyed knew that fluoride helped to prevent tooth decay.

Attitude of women towards dental health

65.8% considered oral health should be a priority. Majority of the pregnant women (83%) agreed that women should have a dental checkup during pregnancy and 48% agreed that it should be every 6 months but during the previous twelve months only 11.8% women surveyed had attended the dentist (Table 3).

Current dental practices

Majority of the subjects (54%) clean their teeth only once daily and only 3.5% subjects clean their teeth after every meal. Toothbrush was the cleansing aid used by majority of them (94.3%), followed by finger (3.5%) and neemstick (2.2%). Tongue cleaning was done regularly only by 22.3% of the subjects, while 77.7% of the women never had the habit of tongue cleaning. Only 3.8% used dental floss weekly or more, 12.3% of women said that they used mouthwash more than once a month. 24% of the subjects were not aware of the availability of fluoridated toothpaste and 14% did not use fluoridated toothpaste in spite of being aware of it, 62% of women used fluoridated toothpaste. Majority of women (92.8%) spent 1minute or more on tooth brushing. 32.3% women changed their tooth brush in one to three months, 20.3% once in 4 to 6 months, 25.7% once in 7 to 9 months and 21.7% once in10 to 12 months (Table 4).

Food consuming practices

86.8% women used to have sweets once or more than once per day only 13.2% women said that they never consumed sweets. 33.5 % women never consumed aerated drinks (Table 5).

Table 1: Sociodemographic profile of women

Variables	No	%
Age		
15 – 20	28	7
20 – 25	202	50.5
25 – 30	118	29.5
≥ 30	52	13
Parity		
Nil	120	30
Para 1	130	32.5
Para 2	98	24.5
≥ Para 3	52	13
Residence		
Rural	116	29
Urban	284	71
Religion		
Hindu	254	63.5
Muslim	146	36.5
Literacy		
Illiterate	156	39
Primary	64	16
Secondary	142	35.5
Undergraduate	24	6
Postgraduate	14	3.5
Economic		
Lower	218	54.5
Middle	106	26.5
Upper	76	19

Table: 2 Score of Knowledge about dental health among pregnant women

Score	Number	Percentage
≤ 6	198	49.5
≥ 6	202	50.5

Table 3: Attitude of women towards dental health

Variables	Number	Percentage
Regular visit to dentist is necessary		
Yes	332	83
No	68	17
Frequency of dental visit		
Regularly every 6 month	192	48
Only at the time of dental Pain	111	27.7
Never	97	24.3
Last dental visit		
< 6 months	28	7
6 months – 1 year	19	4.8
1year – 2 years	96	24
2year – 5 years	147	36.8
> 5 years	110	27.4
Consider oral health as priority		
Yes	263	65.8
No	137	34.2

Table 4: Tooth brushing Practices followed by pregnant women

Variables	Number	Percentage
Type of toothpaste used		
Fluoridated	248	62
Non- Fluoridated	56	14
Do not know	96	24
Frequency of tooth brushing		
Once a day	216	54
Twice a day	170	42.5
More than twice a day	14	3.5
Time spent for brushing		
<1 minute	29	7.2
1 minute	124	31
2 minutes	134	33.5
>2 minutes	113	28.3
Cleansing aid used		
Toothbrush	377	94.3
Finger	14	3.5
Neemstick	9	2.2
Cleansing material used		
Mouthwash	49	12.3
Toothpick	38	9.5
Dental floss	15	3.8
Frequency of changing toothbrush (n=377)		
1 – 3 months	129	34.3
4 – 6 months	81	21.4
7– 9 months	80	21.2
10 – 12 months	87	23.1

Table 5: Consumption of sweets and aerated drinks

Variables	Number	Percentage
Frequency of eating sweets per day		
Never	53	**13.2**
Once a day	235	**58.8**
Twice a day	77	**19.3**
Three times a day	21	**5.2**
≥4 times a day	14	**3.5**
Frequency of consuming aerated drinks		
Never	134	**33.5**
Once a day	97	**24.3**
Twice a day	65	**16.3**
Three times a day	83	**20.7**
≥4 times a day	21	**5.2**

Table 6: Knowledge about pregnancy and dental health

Variables	Agree		Disagree		Do not know	
	No.	%	No.	%	No.	%
Pregnancy is a cause of gum problems	88	22	282	70.5	30	7.5
Pregnancy predisposes to tooth loss	56	14	308	77	36	69
Dental visits are unnecessary during pregnancy	224	56	156	39	20	5
Every painful tooth should be removed	162	40.5	220	55	18	4.5
Visits to the dentist are always unpleasant	128	32	262	65.5	10	2.5
Fruits & vegetables have no effect on teeth & gums	141	35.2	245	61.3	14	3.5

DISCUSSION

In this survey of recently pregnant mothers, most were knowledgeable about dental health. Mean age of the pregnant women in our study was 25.1 ± 0.86 years and only 30% of them were in their first pregnancy rest were multiparous while in the study done by Yolanda Martínez-Beneytoa *et al*. [12] mean age was 30 years and 57.7% were expecting their first child. Similar results were observed by Adeniyi Abiola *et al*. [1]. This may be because of early marriage and early childbearing in our country. Level of literacy was lower in our study where 39% were illiterate and 61% were literate as compared to the study done by Adeniyi Abiola *et al*. [1] where 97.7% were literate.

88.2% women surveyed revealed they did not attend the dentist during the previous twelve months, and only 7% attended during their most recent pregnancy. The majority indicated they required a dental check-up at the time of dental pain. The results from this survey are consistent with study conducted in Australia where more than 50% of pregnant women did not receive dental care during their most recent pregnancy [12, 13], while findings are contrary to the study done by Hullah E *et al*. [14] where 33% of the English women visited the dentist during pregnancy and 50% of the Kuwait pregnant women [15] had visited a dentist during pregnancy. We can say that the dental knowledge and oral health practices are much better in foreign countries when compared with that in India.

Overall, most of the women included displayed positive attitudes to oral health. However, the good knowledge and attitudes displayed were not fully reflected in the women's oral health practices.

Christensen LB *et al*. [16] did a study on the oral health of Danish women during pregnancy and reported that 96% brushed their teeth atleast twice a day. Similarly, a study was done by Hullah E *et al*. [14] on the oral hygiene habits in pregnant women of North London, in which it was reported that 73.7% of the subjects brushed their teeth twice daily. A study done by Mansour KA and Khalid M [17] on the Saudi pregnant women showed that 77% of the women brushed their teeth twice daily. Similarly in a study done by Honkala S and Al Ansari J [15] on the oral hygiene habits and dental attendance of Kuwait Pregnant women where 66% of the subjects brushed their teeth twice daily however, in our study we see that only 42.5% of the subjects brushed their teeth twice daily.

40.5% of the respondents agreed that every painful tooth should be removed and a third of the respondents agreed that fruits and vegetable have no impact on the dental tissues. These views are contrary to the principles of achieving good oral health. Similar results were observed in a study conducted in Nigerian teaching hospital [1].

CONCLUSION

From this study, we can conclude that there is an important gap in dental knowledge and practices related to oral and dental healthcare among pregnant women. Educating and motivating women to maintain good oral hygiene and providing affordable dental health care is fundamental in reducing dental disease. Apart from the benefit to the health of the women, mothers play a crucial role in transferring and demonstrating health habits to their children therefore pregnant women should be educated about oral health.

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