

Original Article

Oral Health Status and Practice of Pregnant Women Attending Antenatal Clinics

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Abstract

Objective: To determine the oral health status and knowledge of pregnant women attending antenatal clinics of Bilawal Medical College Hospital Kotri at LUMHS.

Methodology: This cross-sectional study was conducted at antenatal clinics of Bilawal Medical College and Hospital Kotri. Study duration was 6 months from March 2019 August 2019. All the pregnant women attending the antenatal OPD were included in the study. Women those having oral growth and those who were not willing to participate in the study were excluded. After taking informed consent women were clinically observed for oral health. Women were interviewed regarding oral health practice and knowledge regarding poor oral hygiene effects on mother and child health. All the data was recorded in self-made proforma and data was analyzed by using SPSS version 20.

Results: Total 120 pregnant women were interviewed regarding oral health status and most of the women 47.5% had age group of 26-35 years. Majority of the women 40.8% were illiterate. 34.2% women had dental caries, 19.2% had gingivitis, 10.0% had Periodontitis and 12.5% had multiple oral health problems, while 24.2% had good oral health status. 41.7% women brushing once a day, 16.7% twice a day, 16.7% women using miswak and 19.2% were without and dental health practice. On the knowledge regarding oral health and feto-maternal health association 46.6% women were agreed with that not cleaning teeth everyday had several harmful effects on mother and child health. 36.6% answered that oral health care very essential during pregnancy, 35.0% replied that it's necessary to brush teeth after every meal, 40.8% had knowledge as that there is a relationship between general body health and oral health.

Conclusion: It was concluded that most of women had poor oral health status and inadequate brushing habits. Dental caries, gingivitis and periodontal conditions were commonest and they have no idea that the poor oral health effects the feto-maternal health and these women were mostly illiterate.

Keywords: Pregnancy, oral health, knowledge

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Introduction

Pregnancy is indeed a complicated condition that encompasses complex physiological and physical transformations.¹ Pregnancy is itself a unique physiological condition marked by a number of

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transient functional and structural transitions in a body, resulting from increased generation of specific hormones. In Pakistan perinatal mortality is >10 times higher than in developing countries. It escalated due to severity of Parodontal disease.¹ Pregnant females are more vulnerable to gingival as well as parodontal disease. Thus, it is stated that various oral lesions seem to be normal in the course of pregnancy.² Hormonal fluctuations attributable to increased progesterone and estrogen concentration during pregnancy leave the female more vulnerable to infectious oral and gum diseases and such dental complications affect the feto-maternal health.^{3,4} Diverse oral lesions during pregnancy have been stated to be normal. In addition, there has also been recorded a raised incidence of dental modifications including erosions and caries.⁵ During pregnancy the virulence and composition of sub-gingival film modifications promotes growth of anaerobic gram-negative bacteria in buccal cavity. In addition to a dental plaque, local and systemic factors cause periodontal inflammation which could potentially influence the incidence and intensity of periodontitis. Pregnant females are vulnerable to gingival bleeding, swelling and redness, raised pocket depth if probing is done and mobility of tooth from the 2nd to 8th month of gestation.^{6,7} A recent research showed that 84 percent of expectant mothers neglected to have regular inspection of their teeth by the dentist. The teeth can be more easily affected all through pregnancy, requiring further research on the incidence of caries as well as parodontal infection in pregnant females.⁶ In developing countries oral health mostly ignored during pregnancy. Many expectant mothers, though, may be unaware regarding oral health as well as its impact on fetus. Recklessness in oral health in pregnancy is rather normal because of no awareness regarding oral hygiene as well as its impact on systemic wellbeing.⁸ Therefore this study has been conducted to evaluate the status of oral health and knowledge among pregnant females attending antenatal clinics of Bilawal Medical College Hospital Kotri.

Methodology

This cross-sectional study was conducted at antenatal clinics of Bilawal Medical College and Hospital Kotri. Study duration was 6 months from March 2019 August 2019. All the pregnant women attending the antenatal OPD were included in the study. Women those having oral growth and those who were not willing to participate in the study were excluded. After taking

informed consent women were clinically observed for oral health. Before a clinical examination, demographic information regarding age, education, occupation, socioeconomic status, and residence were obtained from the participants. Dental caries and gingivitis were defined according to the World Health Organization criteria; newly developed cavity (dental caries), gingival bleeding on probing (gingivitis) and gums inflammation (periodontitis). Women were interviewed regarding oral health practice and knowledge regarding poor oral hygiene effects on mother and child health. A self-made questioner was used to observe the oral health status and knowledge of the women regarding it. All the data was recorded in self-made proforma and data was analyzed by using SPSS version 20.

Results

Total 120 pregnant women were interviewed regarding oral health status and most of the women 47.5% had age group of 26-35 years, 30.0% had age group of 18-25 years and 22.5 were with age of >35 years. Majority of the women 40.8% were illiterate, 34.2% were primary passed, 15.8% were metric passed and only 9.2% were graduate. 51.7% women of rural areas and 48.3% of urban areas. Most of the women 60.8% were house wives, 13.3% were teachers, 17.5% were laborer and 8.3% were students. 55.0% women were poor socioeconomically. Tabel.1

According to the oral health status 34.2% women had dental caries, 19.2% had gingivitis, 10.0% had Periodontitis and 12.5% had multiple oral health problems, while 24.2% had good oral health status. Tabel.2

According to the oral health practice 41.7% women brushing once a day, 16.7% twice a day, 16.7% women using miswak and 19.2% were without and dental health practice. On the knowledge regarding oral health and feto-maternal health association 46.6% women were agreed with that not cleaning teeth everyday had several harmful effects on mother and child health. 36.6% answered that oral health care very essential during pregnancy, 35.0% replied that it's necessary to brush teeth After every meal, 50.0% known regarding regular tooth brushing is essential for mother and fetus, 40.8% had knowledge as that there is a relationship between general body health and oral health. Table III

Variable	Frequency	%
Age groups		
18-25 years	36	30.0

26-35 years	57	47.5
35-45 years	27	22.5
Total	120	100.0
Educational status		
Illiterate	49	40.8
Primary education	41	34.2
Matric passed	19	15.8
Graduate	11	09.2
Total	120	100.0
Residential status		
Rural	62	51.7
Urban	58	48.3
Total	120	100.0
Occupational status		
House wives	73	60.8
Teachers	16	13.3
Labour	21	17.5
Students	10	08.3
Others	120	100.0
Socioeconomic status		
Poor	66	55.0
Middle	41	34.2
Upper	13	10.8
Total	120	100.0

Table II: Oral health problems of women n=120

Oral health problems	Frequency	(%)
Normal	29	24.2
Dental caries	41	34.2
Gingivitis	23	19.2
Periodontitis	12	10.0
Multiple problems	15	12.5
Total	120	100.0

Table III: Oral health practice and knowledge of women n=120

Variables	Frequency	(%)
Practice		
Brushing once a day	50	41.7
Brushing twice a day	20	16.7
Brushing more than twice a day	7	05.8
Miswak	20	16.7
Nothing	23	19.2
Knowledge		
Do you Know not cleaning teeth everyday can cause of several harmful for mother and child	56	46.6
Do you think oral health care very essential	44	36.6
Do you know it's necessary to brush teeth After every meal	42	35.0
Do you Know that consuming too much sweaty food causes caries	30	25.0
Do you know that regular tooth brushing is essential for mother and fetus	60	50.0
Do you Know that general body health has relationship with oral health	49	40.8

Discussion

This study evaluated the oral hygiene practice and knowledge regarding it among pregnant females but these practices and knowledge were found to be low among the study subjects and the findings were contradictory to the results of different studies. This could be attributed to variation in sample size and different study settings.

In our study most of the females were illiterate and aged 26-35 years, while 55.0% females were socioeconomically poor. Similar findings of Thomas NJ et al 9, suggest that >50% of female respondents were aged above 30 years (n = 219; 56%). There was a significant correlation of dental practices and knowledge with both educational status and socio-economic status (SES). Less educated females and the females with lower SES were more expected to carry higher risk of poor periodontal hygiene than those with greater educational levels and higher SES. Hormonal changes and dietary fluctuations remain among the major source of poor maternal oral hygiene that put pregnant females exposed to high risks of suffering from various dental issues.¹⁰ Therefore, pregnant females are found to have a higher incidence of dental issues than the general populace. "periodontal and gum diseases can be prevented by balanced diet regimen" was a conviction among females due to the lack of knowledge, which in the bivariate analysis significantly contributed to self-reported gum bleeding upon tooth brushing.

In our study, in terms of oral hygiene status; 34.2% females had dental caries, 19.2% had gingivitis, 10.0% had Periodontitis and 12.5% had multiple oral health issues, while 24.2% had good oral hygiene status. Pregnant females were found to be significantly more expected to undergo gum bleeding upon tooth brushing, and this could be due to the inflammatory reaction of the gingival that result from the hormonal variations besides the poor oral hygiene.^{11,12} Findings from a similar study in India revealed that around 33% of the respondent pregnant females underwent gums bleeding during pregnancy, and slightly below 25% of respondents neglected the practice of teeth brushing upon experiencing gum bleeding, instead, they practiced using fingers to clean their teeth.¹³ Oral diseases ranging from cavities to oral cancers result in pain and ill health among a million of Americans. The effects of these diseases go beyond the teeth and mouth. Increasing scientific evidence has connected oral health, specifically periodontal condition, to a

number of chronic conditions such as diabetes and cardiovascular disease. In expectant mothers, poor oral hygiene has even been linked to low birth weight and premature births.¹⁴⁻¹⁷ These oral conditions can possibly be avoided partially by regularly visiting the dentists.

In our study, in terms of association between awareness regarding fetomaternal health and oral health, 46.6% females agreed that not cleaning teeth everyday adversely affects the mother and child health. In contrast, Ozen B et al¹⁸ reported that 75% females had heard regarding possible association between pregnancy outcome and oral health, and 47% out of 151 respondents believed that pregnancy outcome could be affected by periodontal issues. However, 73% out of 151 respondents still thought that developing baby will draw out the calcium from their teeth, and 43% out of 151 respondents believed that the statement 'A tooth for a baby' is correct. 68.7% out of 151 respondents had undergone oral health issues during pregnancy; though, just 13.7% out of 151 respondents had visited the dentist throughout their pregnancy. George A et al¹⁹ reported in their study that 59.3% of respondents reported dental issues in the course of their pregnancy, 30.5% had visited the dentist during last 6 months, however, only 10% of respondents had received any awareness regarding perinatal oral hygiene and >50% were not aware of the likely effect of poor maternal oral hygiene on infant outcomes and pregnancy.

In our study, in terms of oral health practices; 41.7% females had brushed their teeth once a day, 16.7% twice a day, 16.7% females were using miswak and 19.2% were not involved in any dental health practice. 36.6% answered that oral health care is very essential during pregnancy, 35.0% replied that it is necessary to brush teeth after every meal. In contrast, awareness regarding cleansing aids practiced by study respondents has been found in only 2 out of 7 studies.^{20,21} Nearly 90% of respondents in all of the three studies had been using toothpaste and toothbrush for cleaning their teeth. In contrast, in the findings of Amit et al²², 3.5% of the respondents were cleaning their teeth by finger. Though, educational status showed no impact on the oral health practices among respondents in both of the studies ($P > 0.05$). Similar findings were noted in the study of Hajikazemi ES et al²³, where, 5.6% of the respondents had high knowledge of dental hygiene, while 28.4% and 65.9% of the females had low and moderate level of

knowledge respectively. Additionally, 30% of the respondents showed positive attitude towards dental care, while the most (70%) of respondents showed negative attitude. In terms of performance in dental and oral care, just 34.4% of respondents showed good practice. According to the results of variance analysis, there was a positive correlation between awareness and attitude, awareness and practice and finally attitude and practice of the subjects ($P=0.000$).

Conclusion

It was concluded that most of the females had poor knowledge in terms of oral health correlation with fetomaternal health and these females were mostly illiterate and belong to rural areas. Women had no concern towards oral health even some females were addicted to supari and smokeless tobacco like Gutka, maipuri, and snuff. Obstetricians & Gynecologists should concern towards maternal oral health and they must counsel the patients in order to decrease morbidity and to improve fetomaternal health.

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