Original Article

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Perception of Oral Health Related Quality of Life Among Pregnant Women Attending the Tertiary Care Hospital, Islamabad

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[1,3]*Substantial contributions to the conception or design of the work or the acquisition, methodology, analysis, Final approval of the version to be published.* [2,4,5]*Active Participation in active,* [6,7]*Drafting the work or revising it critically for important intellectual content* *Funding Source: None* *Conflict of Interest: None* *Received: May 05, 2024* *Accepted: June 06, 2024* **Address of Correspondent** *Dr. Ahsan Ullah* *Assistant Professor, School of Dentistry, SZABMU Islamabad* *ahsan_rush@hotmail.com*	**Objective:** To assess oral hygiene of pregnant females and its impact on daily life. **Methodology:** This was cross-sectional survey in which 415 interviews were done to check the oral and dental health and its association with quality of life in women during pregnancy in Federal Govt Services Hospital, PGMI, Islamabad. Assessment was done using Oral Health Impact Profile Questionnaire (OHIP-14). Each individual was clinically assessed on DMFT and CPITN index. Data was collected by dental surgeons and then entered and analyzed, using SPSS version 21. Results were displayed in tables and graphs by Percentages and frequencies. A Chi square test is applied to determine possible association between variables, with a p value of 0.05 considered as significant. **Results:** 15.2% of pregnant women had 1 and 2 (DMFT) score respectively. Highest DMFT score observed in the study was 8.0, among 14.9% of total sample population. Women of age between 18-26years were most common (47.7%). Majority, 247 (59.5%) participants had a DMFT score of 4 or above which indicates poor oral hygiene. Almost 55.2% respondents do not feel relax while 74.7% participants were occasionally feeling pain while eating due to problem with their teeth or mouth. Chi-Square test revealed statistically significant association of OHIP-14 score with DMFT (p-value 0.000) **Conclusion:** The results of study suggests that poor oral health has negative impact on quality of life during pregnancy. **Key Words:** Caries, Dental Health, Gingival Bleeding, Periodontitis, Pregnancy, Quality of Life.

Introduction

A key component of social, economical and personal growth is desirable and adequate oral and dental health. Promoting oral health by targeting different population within communities is the most innovative, less costly and more profitable way to achieve oral health related good health.[1] General health as well as Oral health are essential and integral part of a good quality of life and cannot be separated from each other.[2]

Since the last decade, the importance of oral and dental health in pregnant women has gained the interest of oral health care providers, clinicians and policymakers who deal with children and pregnant women. [1,3] Nonetheless, the studies revealed that bodily functions, perceptions and understanding of a woman about her health in last trimesters of pregnancy decreases as compared to the duration of pre pregnancy.[4]

Women in pregnancy who belong to low socioeconomic

background are more prone to behavior rand psychological issues, so they will not be able to cater their dental treatment needs along with taking care of their overall health.[5] During pregnancy, it's essential to prioritize proper oral health care, which is often neglected but holds a significant importance. In the course of being pregnant, taking care of oral health appropriately is very crucial but often overlooked component. In pregnancy, preventive care of oral cavity should be increased. However, in this era with very poor hygiene of mouth and emotional distress of pregnant women, the impact of oral disorders on quality of life suggests a more concentrated and greater requirement for oral health care activities.[6] Periodontal infections during pregnancy are strongly linked to premature labor and poor birth weight. Periodontal infection is strongly linked with adverse pregnancy outcome.[7, 8]

Dental surgeons can treat the pregnant patient in second trimester which is considered safe.[9, 10] During the first trimester of pregnancy, proper safety measures should be taken not only when there is a need of radiation exposure but also during the treatment of patients.

Commonly occurring oral cavity related diseases along with signs and symptoms have been studied in the time period of pregnancy, and it was concluded that, for oral cavity problems pregnancy itself is not independent single factor, but there are many other reasons too e.g. decay in teeth and periodontal diseases. Oral cavity examinations and regular checkups during prenatal care is necessary, and it is well understood that already present diseases may intensified by hormonal changes in pregnancy. Hormones and dietary imbalances while pregnancy alter immune reactivity and inflammatory mediators, which has been proven to be the source of oral cavity related diseases, primarily gingival and periodontal infections.[11,12] Pregnancy gingivitis can appear in a variety of ways, ranging from subclinical mucosal redness to severe instances marked by gum bleeding, tissue discomfort and abscess formation. In well developed nations, this illness may affect ranging from 30% to 100% of pregnant women. [13, 14] The objective of the study was to assess oral hygiene of pregnant females and its impact on daily life.

Methodology

This cross-sectional survey was conducted in Federal Govt Services Hospital, PGMI, Islamabad from April-May 2024, after Ethical Review Board approval. After taking written informed consent, a total of 415 interviews were conducted to check the oral health related quality of life among pregnant women. Pregnant women of 18-49 years came for antenatal care visit in public hospital were selected as study population. Socio demographic characteristics, oral clinical assessment of patients was done. Oral health impact profile questionnaire (OHIP-14) was used. Simple random sampling was done in order to achieve the desired sample size.

Sample size was calculated by using formula, $n=z^2p$ (1-p)/d2. P is the prevalence of oral diseases 50% taken. Where d is margin of error being 5% (0.5) and z is the statistics of 95% CI (1.96). Sample size came out to be 384, adding about 5% inflated for non-response, so final sample size was 415. For assessment of oral health status of the population, general indicator used was Decayed Missing Filled Teeth (DMFT) score. Each individual was clinically assessed for DMFT index.

Person's individual DMFT score can range from 0 to 32, in whole numbers. For assessment, one need a chair, torch light, flat mouth mirror and CPITN probe. Two Dental surgeons were trained for data collection and monitored by the researcher. Data was collected by dental surgeons and then entered and analyzed, using SPSS version 21. Results were displayed in tables and graphs by Percentages and frequencies. A Chi square test is applied to determine possible association between variables, with a p value of 0.05 considered as significant.

Results

A total of 415 pregnant women were included in this study. Mean age of study population was 29.901 ± 9.350. Among study participants age group of 18-26years was most common with 47.7%, 27-35 years old women were 25.3% and remaining 36-49 years old women were 27.0%, as shown in Table I. 15.2% of pregnant women had 1 and 2 DMFT score which means major chunk of population had decayed, missing or filled teeth. The highest DMFT score was 8.0 with 14.9% of total sample population. The score for total number of decayed, missing and filled teeth are represented in Figure 1.

Table I: Socio demographics of the respondents.

Variables		Frequency	Percentage
Age	18-26 years	198	47.7%
	27-35 years	105	25.3%
	36 & above	112	27%

The Oral Health Impact Profile (OHIP-14) was used to assess impact that oral/dental health issues can have on one's life, giving a broad extent of self-reported dysfunction, discomfort and disability attributed to oral

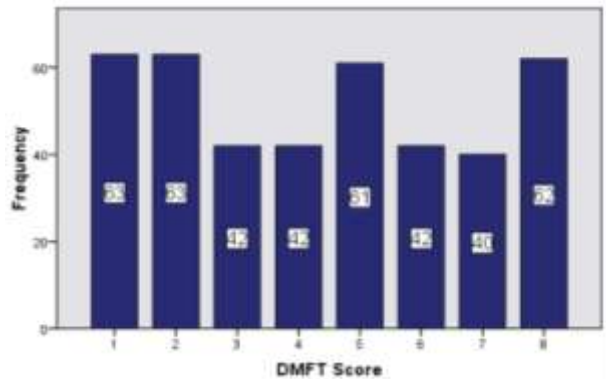conditions. Final scores thus range from 0-56 points.

Figure 1. Represents the score for total number of decayed, missing and filled teeth in study population.

About 74.7% participant were occasionally feeling pain while eating due to problem with their teeth or mouth. Almost 55.2% respond were occasionally not feeling relax due to problem with their teeth or mouth. Half (49.4%) of the study participants were tensed. (Table II). Chi-Square test revealed statistically significant association between OHIP-14 score and DMFT score (p-value 0.000) Table III.

quality of life enhancement has also become an objective of the good health practices. For good quality of life oral health cannot be dissociated from general health. Globally, oral ailments lead to stern health & economic burden, resulting in significant reduction in the quality of life.[15] Research among the general population has publicized that oral health status is linked with Oral health related quality of life (OHRQoL).[16]

The main findings of the study indicate a significant impact on the quality of life across various aspects of health for pregnant women. It demonstrates that women experience a diminished health status as evidenced by low OHIP14 scores, which aligns with medical examinations conducted globally. The mean of Oral Health Index Profile 14 in this study is 10.6, which is more than that of Chinese women who had (7.9), pregnant women in India had (7.0) and pregnant women in Brazil had (3.8).[17-19]

Method which was used for weighing oral health condition is intra oral examination. However, thereby mitigating how important factors affect the mouth and in turn affect

Table II: OHIP Score of the participants.

OHIP-14	Never 0 n(%)	Hardly ever 1 n(%)	Occasionally 2 n(%)	Fairly often 3 n(%)	Very often 4n(%)
Trouble in pronunciation	190(45.8%)	42(10.1%)	163(39.3%)	21(5.1%)	20(4.8%)
Sense of taste	232(55.9%)	42(10.1%)	120(28.9%)	21(5.1%)	1(2%)
Painful aching	42(10.1%)	84(20.2%)	105(25.3%)	142(34.2%)	42(10.1%)
Eating	21(5.1%)	21(51%)	310(74.7%)	62(14.9%)	1(2%)
Self-conscious	210(50.6%)	39(9.4%)	43(10.4%)	84(20.2%)	39(9.4%)
Felt tense	21(5.1%)	84(20.2%)	205(49.4%)	84(20.2%)	21(5.1%)
Unsatisfactory diet	147(35.4%)	144(34.7%)	102(24.6%)	22(5.3%)	39(9.4%)
Interrupted meal	228(54.9%)	62(14.9%)	103(24.8%)	22(5.3%)	1(2%)
Relax	84(20.2%)	81(19.5%)	229(55.2%)	21(5.1%)	20(4.8%)
Embarrassed	126(30.4%)	63(15.2%)	123(29.6%)	102(24.6%)	1(2%)
Irritable	270(65.1%)	21(5.1%)	40(9.6%)	63(15.2%)	21(5.1%)
Usual work	250(60.2%)	21(5.1%)	124(29.9%)	20(4.8%)	1(2%)
Less satisfied	189(45.5%)	81(19.5%)	81(19.5%)	62(14.9%)	2 (1.7%)
Unable to work	372(89.6%)	21(5.1%)	20(9.8%)	0 (0.0%)	0 (0.0%)

Table III: Relationship of OHIP-14 score with DMFT score.

DMFT score	OHIP SCORE		P Value
	Good	Poor	
1.00	60	03	
2.00	61	02	
3.00	35	07	0.000
4.00	29	13	
5.00	11	50	
6.00	05	37	
7.00	06	34	
8.00	03	59	
Total	210	205	415

Discussion

The notion of "quality of life" has been expanded in recent times. For health campaigns and preclusion of disease

the person's daily life or meet. For better care of patients, it is indispensable that the oral health attitude be used to develop the person's explicit necessities and to rule out individuals' specific needs and wants subjective indicators of oral health needed.[20]

Our study findings revealed that the influence of oral health on quality of life, as imitated by the Oral Health Impact Profile 14 scores, was expressively not as good as for those patients who also had clinical issues as OHIP-14 show strong association with DMFT score (P value 0.00). This is in accordance with the other researches [4, 21, 17] Due to the state of life and health, it is well-known fact that the quality of life of the child is directly impacted by quality of life and health of child's mother. [22]

Growing age, multiple pregnancies, DMFT index, carious painful teeth, missing teeth, treatment need and dental prosthesis were concomitant with subordinate influence on the women's quality of life. [4, 23] Caries also have an impact of greater magnitude on quality of life. The DMFT show association with all spheres of the OHIP. Caries and missing teeth were the main source of pain, which resulted in the woman to be reserved by her oral health problems and restricting her social life with families, friends, and associates.[24] Past research showed that there is a high need to take care of pregnant women's oral cavity. Given that dental pathology in pregnant women impacts both the fetus' growth and the child's health, this is an especially crucial issue. [25]

The main objective of public health initiatives is to improve the oral and dental health of expecting mothers so that they are free from illness.[26,27] Together, doctors and dentists must assist pregnant and postpartum women in starting and maintaining their dental health care.[28] It is critical to improve and extend the provision of dental care in order to promote oral and general well-being of mothers and children.[29, 30] The dental personnel should stress on health promotion and education. [31]

A key component of creating efficient health policies is comprehending the community's dental needs and preferences. Utilizing individual-centered viewpoints, ideas, and recommendations, such as using the OHIP14 questionnaire and doing clinical tests, might help achieve this, and healthcare providers may get a thorough grasp of a person's oral health requirements. Further studies with a larger sample size are required in future.

Limitations: The main shortcoming of this study was the small sample size. Another limitation linked to research design, as this research was cross-sectional and may have resulted in additional biases, especially memory-related recall biases or discrimination on the basis of social contacts.

Conclusion

These findings indicate that poor oral health association have a significant adverse impact on the quality of life during pregnancy. Prioritizing high risk group within the health care system is critical for improving both oral and general health of pregnant women. This ensures that pregnant women receive the necessary treatment and improvements in their oral health. To improve oral hygiene, policies & programs must be executed and knowledge of oral hygiene must be enhanced among the women during pregnancy.

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