Original Article

Impact of Socioeconomic Status on Oral Health-Associated Quality of Life of Pregnant Women Visiting a Public Sector Hospital

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Abstract

Objectives: To evaluate impact of socio economic status on oral health associated quality of life among pregnant ladies

Methodology: This cross sectional study was conducted in Federal Govt. Services Hospital of Islamabad from April-June 2024. Pregnant women between 18-49 years of age coming for antenatal care visit, without any systemic illness were recruited via simple random sampling. Oral health-related quality of life amongst pregnant women was checked. Oral-clinical assessment of pregnant patients was done by using Oral health- impact profile questionnaire (OHIP-14). Approval from HSA ethical clearance committee & inform consent from patients was taken for this study. Chi-square test was applied to determine probable association b/w variables, with considering a p-value of 0.05 as significant.

Results: About one-third population of this study was bachelor degree holder or above. Almost one-third (30%) participants had a family income per month ranging between 31000 to 50000 rupees. There was no significance found between OHIP-14 scores with level of education and occupation where p-values were 0.256 & 0.075 respectively. The Oral Health Impact Profile (OHIP-14) is the most commonly used scale for measuring OHRQoL of pregnant women. Chi-Square test revealed statistical insignificance of OHIP-14 score with socioeconomic status/monthly income (p-value 0.79). Chi-Square test was applied to find significance between OHIP-14 score and area of living and 1st pregnancy where p-values were 0.514 & 0.479 respectively.

Conclusion: Socio-economic status do not has significant association and impact on oral health related quality of life of pregnant women. Providing dental services at a subsidized rate is the need of hour.

Key words: Dental health, Oral health- impact profile, Oral Health Related Quality of Life, pregnancy

Introduction

There is an association between socioeconomic status, oral health during pregnancy, and quality of life, as socio-economic status is inter-related with an oral health. Generally, it is believed that individuals of low socio-economic status have considerably worse general, oral health & poorer OHRQoL compared to those with high socio-economic status due to their lack of awareness, poor oral-hygiene practice, family status & improper food intake.[1,2] Over the course of one's life, socioeconomic status is a predictor of wide range of outcomes, including his/her physical & psychological health.[3,4] Similarly, 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 oral needs along with taking care of their overall health.[5]

These days, it is implied that dental health is extremely imperative for overall physical health.[6] Patients visiting dentists may complaint of hypersensitivity, pain or/and swelling [7-9]. One study revealed seventy-three per cent

prevalence of periodontal sickness among women.[10]

Periodontal infections are related strongly with adverse outcomes of pregnancy. Risk of severe health issues may be amplified by an existence of periodontal maladies in expecting women. During pregnancy oral health care is often misunderstood & avoided.[11]

Although there are several OHQoL instruments, the Oral Health Impact Profile (OHIP-14) is the most commonly used for pregnant women, as amongst Pakistani populace, it is valid & accurate instrument for estimating oral-HRQoL.[12] Presence of gum & dental diseases negatively affects pregnant women's self-perception of OHQoL, affecting their state of mind & ability to attain adequate nutrition. Pregnant women with low-incomes have a particularly high risk of contracting oral maladies & poor OHQoL.[13]

Similarly, OHRQoL of patients seeking treatment such as orthodontics or prosthodontics is also affected. Orthodontic patients suffering from the dental treatments might have greater risk to experience un-pleasant OHRQoL. Emotional well-being & OHRQoL of the orthodontic patients are of great concern.[14]

Literature showed association between socioeconomic status, quality of life, and oral health during pregnancy. There is a significant research gap in Pakistan on this topic. So it is a need of hour to conduct a study on this matter in this region, so that recommendations can be given and public policies aiming to lessen social inequalities are obligatory for better OHRQoL during the course of life. Objective of this study was to evaluate impact of socio economic status on oral health related quality of life among pregnant ladies.

Methodology

This cross-sectional research was conducted in the Federal Govt. Services Hospital Islamabad from April-June 2024. Informed consent from all partakers was taken after an approval from HSA ethical committee. Sample size was calculated by using following formula, $n=z^2p(1-p)/d2$. P is a prevalence (taken as 50%) of oral ailments. Where, z is the statistics of 95% CI (1.96).and d is 5% margin of error. Sample size came out to be 384, addition of almost five-per cent inflated for non-responses, thus 415 was our ultimate sample size. Simple random sampling via fish bowl technique was used for 1st case. Then systematic random sampling was done by nth number, that was every 3rd woman was selected.

WHO defined oral health "the state of being free from facial & mouth pain, throat & oral cancer, oral sores & infection, periodontal malady, tooth loss or 0decay, and other ailments that limit a person's capacity in chewing, speaking, smiling, biting, and psychosocial well-being".[15] Oral Health-Related Quality of Life (OHRQoL) is defined as "a subjective assessment that reflects a person's comfort during the activities for instance sleeping, eating, engaging in the social inter-actions; their self esteem; & their satisfaction with a respect to dental health".[14]. Socioeconomic status is defined as "complex concept which involves income, education, and over-all financial security, living conditions, occupation, resources, & opportunities afforded to populace within society".[16]

Inclusion criteria was those pregnant women b/w 18-49 years' age for ante-natal care visit in public hospital, without any systemic or mental illness & have domicile of Islamabad district. Exclusion criteria were those pregnant women who weren't willing to contribute in this study or/and those who had associated systemic maladies. Oral health associated quality of life of these (both seeking ortho-dontics or prosthodontic treatment or none) women was checked. After clinical assessment, oral health- impact profile questionnaire (OHIP-14) was filled, which is commonly used to check OHRQoL. Options of questionnaire ranges from 0-4. Thus, final score ranges from 0-56 points.

All participants were selected on basis of inclusion criteria. For clinical assessment, a chair, torch light, flat mouth mirror and WHO probe was available. Then guided-questionnaire consisted of sociodemographic, oral health status, and OHIP-14 guideline tool[17] was used and structured questions were asked from individuals. This guided questionnaire was translated in local language for better understanding of participants. Two Dental surgeons were trained for data collection and monitored by researcher.

Before starting the study, contributors were explained about the purpose of the research. Verbal and written consent was acquired from all participants. Participants were reassured about the confidentiality and anonymity and serial numbers were used for participants instead of names

Data entry and analysis was done on SPSS version-21. Results were displayed in the form of tables and figure by percentages & frequencies. Chi-square test was used to determine any probable association b/w the variables, considering p-value of 0.05 as a significant.

Results

Questionnaire comprised of questions relating to monthly household income in Pkr, occupation, frequency of dental visits, referral for dental visits by gynecologists, in addition to OHIP-14 questions. It was observed that 69.6% women were housewives while 30.4% women were employed. Almost one-third (30%) participants had a family income per month ranging between 31000 to 50000 rupees or more than 50000 while 20% participants had a family income per month ranging between 21000 to 30000 rupees and 19.8% participants said that their income was upto 20000. One-fourth participants never visited dentists, while only 14.9% participants regularly saw dentists. Ninety-five percent women said that they weren't referred for dental visits by gynecologists. As shown in table I.

Table I: Sociodemographic of the respondents.

Variables		N	%
Occupation	House wife	289	69.6%
	Employed	126	30.4%
Income	1000-20000	82	19.8%
	21000-30000	83	20%
	31000-50000	125	30.1%
	>50000	125	30.1%
Dental visits	Regular	62	14.9%
	Irregular	250	60.2%
	Never	103	24.8%
Referred for dental visits by gynecologists	Yes	21	5.1%
	No	394	94.9%

Oral health- impact profile questionnaire (OHIP-14), which is commonly used to check OHRQoL was developed with main purpose of giving a broader extent of self-reported discomfort, dysfunction, and disability attributed to oral environments. OHIP questionnaire contained seven domains, each domain having 2 questions, hence total of 14 questions. Respondents were asked to point-out how frequently they experienced each issue on a five-point Likert scale. Response categories: Never-0, Hardly ever-1, Occasionally-2, Fairly often- 3, Very Fairly-4. Final scores thus range from 0-56 points. OHIP of partakers is shown in table II.

Table III: Relationship of OHIP-14 score with different variables.

	OHIP score			P value
		Good	poor	
Occupation	House wife	139	150	0.075
	Employed	71	55	
Socioeconomic status	1000-20000	20	62	0.79
	21000-30000	28	55	
	31000-50000	79	46	
	>50000	83	42	
Dental visits	Regular	36	26	0.178
	Irregular	129	121	
	Never	45	58	
Referred for dental visits by gynecologists	Yes	12	09	0.349
	No	198	196	

In order to find statistical significance of OHIP-14 score with different variables, chi-Square test was applied. There was no significance found between OHIP-14 scores with occupation where p-value was 0.075. Chi-Square test revealed statistical insignificance of OHIP-14 score with socioeconomic status/monthly income (p-value 0.79).

OHIP-14 score showed no statistically significant association with frequency of dental visits & referral by gynecologists, where p-values were 0.178 & 0.349 respectively. Table III depicted relationship of OHIP-14 score with different variables.

Discussion

Dental & oral health is established by the maintenance of appropriate & adequate hygiene of mouth [18]. SES

Table II: OHIP of study participants.

OHIP-14	Never 0 n(%)	Hardly ever 1 n(%)	Occasionally 2 n(%)	Fairly often 3 n(%)	Very often 4 n(%)
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%)

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specially monthly income could play a vital role in availing facilities from public sector hospital [19]. Understanding the association b/w quality of life, an emotional distress, & orthodontic treatment is indispensable for offering better care to these patients. Psychological distress has a negative impact on treatment outcomes as well as management. OHRQoL and emotional stress in the orthodontic patients influence/affect each other.[14]

In this survey, 69.6% women were housewives while 30.4% women were employed. This is comparable to another research, where 50% women were working [20]. It is stated that earnings of individuals and educational level also impact their attitude & behavior toward dental care, as people mostly ignore their preliminary stages of ailment due to lack of affordability. [20-22] Medical staff should be encouraged to provide higher quality-care to all patients.[23]

OHRQoL is commonly checked through OHIP-14. In this research, statistical insignificant relationship of socioeconomic status/monthly income (p-value 0.79) with OHIP-14 was revealed. This is similar to another research where oral health status was not associated with monthly income. [24] This is not in harmony with another survey, where p-value was 0.024. [25]

During pregnancy, awareness about dental hygiene must be heightened jointly at non-governmental & governmental level for betterment of quality of life of this populace. [26-28] Dental care staffs should stress on health-education & promotion. [29]

In this survey, 14.9% patients visited dentists regularly, which is comparable to another study where majority of patients utilized the dental services only when they had issue of pain. Regular checkups are vital. Anxiety among dental patients can also be lessened by regular dental visits & checkups only.[30] Physicians don't advise their patients routinely to seek oro-dental care during the pregnancy. 5.1% women of this survey were referred for dental visits by gynecologists, which is far less than noticed by another researcher where 85% subjects were advised to visit dentist during pregnancy.[31]

In this research, no significant relationship of occupation with OHIP-14 was established (p-value 0.075), which is similar to other investigations, where p-value were 0.384 [32] & 3.67 [33] respectively.

Oral health's education campaign for women is suggested, where oral diseases are detected at early stage, emphasizing an importance of public health initiatives. [34] Dearth of health information hinder young people. [35] Pregnant ladies & their partners ought to be educated about benefits of the good oral-health practices.[36]

Limitations: Shorter duration & smaller sample size were main limitations. Participant's responses might have resulted in recall bias.

Conclusion

Socio-economic status is not statistically associated with OHRQoL, but it has an impact on maternal OHRQoL, depicting an importance of considering this factor in the implementation of maternally targeted preventive dental programs. Providing dental services at a subsidized rate is the need of hour.

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