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DENTAL CARIES EXPERIENCE, PERIODONTAL STATUS AND OHRQoL AMONG PITIABLE PART OF SOCIETY (BEGGARS): A CROSS SECTIONAL STUDY

Dental Science

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ABSTRACT

Introduction - Charity is the noblest cause of human virtues and due to these religious myths, begging became the traditional profession. Beggars are the people "asking passerby for money for themselves without offering anything in return". They are always undermined, humiliated and neglected in society.

Aim- To assess the dental caries experience, periodontal status and oral health related quality of life (OHRQoL) among Beggars in Western part of Uttar Pradesh, Modinagar.

Materials and Method- A cross-sectional study was conducted among 113 beggars in Western part of Uttar Pradesh i.e. Modinagar using modified WHO Oral Health Assessment Form (1997) and Oral Health Impact Profile-14 (OHIP-14) questionnaire to assess the dental caries experience, periodontal status and OHRQoL. Data were analyzed using Statistical Package for Social Sciences (SPSS) 18.0 (SPSS Inc., Chicago, IL, USA) and descriptive tests, including mean, standard deviation, and Spearman correlation coefficient were used.

Results- Among113 beggars, 63.7% of the studied population was having dental caries and 43.2% of population was having gingival bleeding with periodontal pockets depth of 4-5 mm. Significant correlation was found in between decayed teeth and functional limitation with p value of 0.01 as well as missing teeth with the physically handicapped with p value of 0.007.

Conclusion- The study showed high dental caries experience and periodontal diseases among the beggars with negative attitude towards oral health that lead to negative impact on the quality of life This may be due to their high level of unmet needs which highlights the need of establishing appropriate approaches for this population so as to improve their well being.

KEYWORDS

Dental caries, Disease, Oral Health, Quality Of Life.

INTRODUCTION

Poverty and begging are still the biggest social issues despite so much advancement in India which is difficult for government to tackle. India has uneven distribution of wealth because of one sided rapid economic growth.[1,2] There are around 500,000 i.e. half million beggars in India and among them all are not real.[2] Some people are begging as a profession to earn the money whereas some are having no choice except begging. Begging has created its own grave since its inception and imposes a larger burden on growing society.[3] In India charity is the noblest cause of human virtues and due to these religious myths, begging became the traditional profession. So, mostly beggars are found at religious and spiritual sites, important monuments, railway stations and shopping districts. [4] The Census of India (2011) defined beggars as vagrants, prostitutes and person having the unidentified source of income and those with the unspecified period called beggar.[5]Latest census of government of India (2011)said that majority of the beggars are in West Bengal and Uttar Pradesh. Not only in these two states even the Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, Maharashtra, Assam, and Orissa have also higher rate.. So there is need to control this menace of society through some legal efforts. Despite anti-begging laws in 22 states of India still there is no central law which penalizes begging because Supreme Court has not yet decided constitution of anti-begging legislations.[6,7] The only petition filed before the Court challenging the constitutionality of the Bombay (prevention of Begging) Act, 1959, was also withdrawn by the petitioner.[6]

Till now various measures have been taken by the governmental as well as non-governmental agencies to abolish begging. Most of the beggars are depriving from all the civil facilities from the country and categorized as stumpy people in the society.[6,8,9]As they are not in an affordable situation to receive the health care facilities.[8,10] So, regular and proper monitoring is required. Hence, an attempt was done to assess the dental caries experience, periodontal status and oral health related quality of life (OHRQoL) among Beggars in Western part of Uttar Pradesh, Modinagar.

METHODOLOGY

Study Setting-

A cross-sectional study was conducted to assess the Dental caries experience, periodontal status and OHRQoL among 113 beggars with the help of snow ball sampling technique in Western part of Uttar Pradesh i.e. Modinagar. in various religious places (Maha Maya Mandir, Sai Mandir, Modi Mandir and Gurdwara Sahib Modinagar), Railway station, Bus stand and other public places were visited for the data collection.

Data Collection -

Ethical approval was obtained from the Institutional Ethical Committee and Review board, D.J College of Dental Sciences and Research, Modinagar, Ghaziabad district, Uttar Pradesh, India and the informed consent was taken from all the study participants prior to the study. Data was collected by a trained assistant using a structured Perform and the data were collected over a period of 4 months from November2017 to February 2018.

Questionnaire-

A self-administered questionnaire was used in this study which consisted of two parts. The first part included the participants' demographic data and the second part had 14 questions related to oral health related quality of life (OHRQoL) and the study participants were requested to complete the questionnaire. The questionnaire was in their local language i.e. Hindi and the questions were verbally asked by the investigator.

Training and Calibration-

The standardization and calibration of the data collection method were done through a two-day training sessions which was organized in the Department of Public Health Dentistry. The training session consisted of a revaluation of the criteria outlined, followed by an examination of adult patients based on simulation of field technique for reliability.

Statistical Analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) 18.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics such as mean and standard deviation were used. The Spearman correlation coefficient was used to measure the correlation between components of DMFT, gingival bleeding and pocket with depth of more than 4-5 mm with OHIP-14.

RESULTS

The present cross sectional study was carried out among 113 beggars to assess the dental caries experience, periodontal status and OHRQoL in western part of Uttar Pradesh i.e. Modinagar Table 1 shows the socio demographic characteristics of the studied population. Among 113 beggars, 71(62.8%) were males and 42(37.2%) were females.

Table 2 shows that 63.7% of studied population had dental caries experience with 60.2 % were having missing teeth. It was found that only 10.6% of population had filled teeth. However, it was clearly seen that most of the participants i.e. 42.5% were having periodontal disease and 69% of individuals were having LOA score 1.

Table 3 shows oral health related quality of life which was measured by OHIP-14.The highest mean score i.e.3.226±0.453 was seen for the dimension psychological disability followed by handicap i.e. 3.03±0.16 and least was for physical disability i.e.2.33±0.569.

Table 4 shows Correlation between the variables of oral health status and OHIP-14. DT was found to be significantly correlated with the functional limitation and physical pain with p value of 0.01 and .005 respectively and MT was also significant with the physically handicapped with p value of 0.007. FT was significant with Psychological disability having p value of 0.02. Gingival bleeding and loss of attachment was not significant with the any of the dimensions of OHIP-14. The highest correlation was found between physical pain and DT.

DISCUSSION

Oral health is an important constituent of general health and quality of life. However, poor oral health affects one's physical, psychological, and social well-being, as well as one's quality of life.[11]Beggars is often forced to live the life of destitute and despair due to lack of access to resources essentially housing, education, health care services and employment opportunities. This often predisposes this vulnerable section of society to increased health risks and poor oral health.[12,13]

As such there is no published literature available on the beggars regarding oral health related quality of life. So this study was undertaken with initiative to assess the dental caries experience and periodontal status and OHRQoL among the beggars of Western part of Uttar Pradesh i.e. Modinagar. In our work it was found that 63.7 % of dental caries were seen among the studied population which may be due to their poor oral hygiene habits.

In the present study42.5% subjects were having gingival bleeding with the pocket depth of 4-5mm (CPI score 3). It was also seen that 69% of individuals were having LOA01 score(loss of attachment). This may be due to their low level of awareness regarding oral hygiene practices. Their low socio economic status with less or no utilization of dental health services is another factor to be considered for pitiable oral health status

OHRQoL was also assessed by using OHIP-14 domains and correlated with components of DMFT, gingival bleeding and pocket with depth of more than 4-5 mm. A statistically significant correlation was found between the domains of the OHIP-14 such as functional limitation, physical pain and psychological discomfort with the components of DMFT. This might be due to the fact that decayed teeth leads to pain, food lodgment, interference with mastication and the daily routine activity, which is perceived by the patient as functional limitation, physical pain and psychological discomfort.

The Painful aching was reported among 97.4% of the studied population which leads to limited food choices, trouble in biting and chewing food with speech problems. This may be due to their negative attitude of living with the pain and accepting it at greater level with dysfunction.

Overall we can say that lack of proper knowledge with negative attitude and negligence towards oral health has a negative impact on the quality of life which will further lead to functional as well as physical disability. So it is equally essential to lay stress upon improving their attitude so that they could reduce the negative impact on their quality of life.

LIMITATIONS

Till date very few of the studies have been carried out among the homeless individuals and none of them were on beggars. Therefore, there was not much literature available for comparison of this study which proved a major limitation. Hence it is suggested that further studies should be undertaken.

RECOMMENDATIONS:

1. Government of India should come up with certain laws which should be legislated with immediate action to vanish this social issue.
2. India has various religious myths regarding the charity which makes this begging a more powerful. There is need to educate those people so that they should not give them money as charity is just a little single time help to them.
3. Government has to build work-housesalong with training sessions in order to keep these people busy with work.
4. Increase in the political commitment and financial allocations in support for effective health care facilities with emphasis on oral care.
5. Providing supportive environment for improving their quality of life by the establishment of schools especially for the deaf, dumb and blind people. Instead of individual charity and donation, people should collectively raise the funds on large and organized scale.

CONCLUSION

Among manifold evils of India begging is the one of the most critical and social issue. The study highlighted the high dental caries experience and periodontal disease among the beggars with negative attitude towards their oral health. Though India is democratic country and promising a bright future .But still the problem of beggars has not been solved. Hence Indian government has to take the valiant and vigorous steps to eradicate the beggary by the provision of food, shelter and health care facilities.

Table1: Demographic Characteristics of studying individuals

Demographic Characteristics	Number (%)	Mean ±SD
Age distribution of study subjects		
a) 1 (10-30)	47(41.6%)	1.74±0.753
b) 2 (31-50)	51(45.1%)	
c) 3 (51-70)	12(10.6%)	
d) 4 (71-90)	03(2.7%)	
Gender distribution of Study Subjects		1.37±0.046
a) Male	71(62.8 %)	
b) Female	42(37.2 %)	
Educational Status of Study Subjects		1.51±0.049
a)Illiterate	56(49.6%)	
b)Primary school	56(49.6%)	
c)High school	1(0.9%)	
Cleansing agent -		2.79±.118
1) Toothbrush	13(11.5%)	
2) Finger	49 (43.4%)	
3) Charcoal	14(12.4%)	
4) Chewing twigs	23(20.4%)	
5) Other	14(12.4%)	
Interdental aids		3.50±0.106
a. Wooden toothpicks	19(16.8%)	
b. Plastic toothpicks	0(0%)	
c. Thread	0(0%)	
d. Nothing	94(83.2%)	
Tooth paste		1.40±0.047
a. Yes	58(51.3%)	
b. No	55(48.7%)	
Brushing method		
a. Horizontal	63(55.8%)	2.33±0.141
b. Vertical	0(0%)	
c. Circular	0(0%)	
d. Other	50(44.2%)	
Duration		4.98±0.096
a. Never	0(0%)	
b. Once a month	0(0%)	
c. 2.3times/ month	16(14.2%)	
d. Once a week	11(9.7%)	
e. 2-4 times/week	45(39.8%)	
f. Once a day	41(36.3%)	
g. Twice a day	0(0%)	
Combination		2.72±0.100
a. Tooth brush /paste	59(52.2%)	
b. Finger/ paste	54(47.2)	
c. Charcoal/finger		
d. Other		
Alcohol history	35(31%)	1.48±0.047
a. Yes	21(18.6%)	
b. No	38(33.6%)	
	19(16.8%)	

Tobacco history			2.36±0.106
a.	Smoking	35(31%)	
b.	Smokeless	21(18.6%)	
c.	Both	38(33.6%)	
d.	None	19(16.8%)	

Table2: Dental caries experience and periodontal status of studied individuals

Oral health condition	Yes	No	Mean ±SD
No. of individuals with decayed teeth	72 (63.7%)	41 (36.3%)	1.80±1.85
No. of individuals with missing teeth	68 (60.2%)	45 (39.8%)	5.51±9.40
No. of individuals with filled teeth	12 (10.6%)	101 (89.4%)	0.16±0.49
No. of individuals with CPI score 3	48 (42.5%)	65 (57.5%)	1.73±2.67
No. of individuals with CPI score 4	26 (23%)	87 (77%)	1.05±2.55
No. of individuals with HLOA	88 (77.9%)	25 (22.1%)	1.39±1.04
No. of individuals with LOA score 0	54 (47.8%)	59 (52.2%)	1.84±2.37
No. of individuals with LOA score 1	78 (69%)	35 (31%)	2.52±2.04
No. of individuals with LOA score 2	46 (40.7%)	67 (59.3%)	1.19±1.57
No. of individuals with LOA score 3	21 (18.6%)	92 (81.4%)	0.43±0.953
No. of individuals with LOA score 4	01 (0.9%)	112 (99.9%)	0.02±0.18

Table3: Distribution of responses and mean scores for the OHIP-14

Dimensions	ITEMS	Never (0)	Hardly ever(1)	Occasionally (2)	Fairly often (3)	Very often (4)	Mean ±SD
FUNCTIONAL LIMITATION	Trouble pronouncing words	6 (5.3%)	64 (56.6%)	2 (1.8%)	0 (0%)	41 (36.3%)	2.606±1.17
	Felt sense of taste worsened	0 (0%)	18 (56.6%)	18 (15.9%)	6 (5.3%)	71 (62.8%)	
PHYSICAL PAIN	Had painful aching in mouth	3 (2.7%)	63 (55.8%)	6 (5.3%)	0 (0%)	41 (36.3%)	2.637±1.16
	Uncomfortable to eat foods	0 (0%)	18 (56.6%)	18 (15.9%)	6 (5.3%)	71 (62.8%)	
PSYCHOLOGICAL-DISCOMFORT	Been self-conscious	6 (5.3%)	64 (56.6)	2 (1.8%)	9 (8%)	32 (28.3%)	2.332±0.569
	Felt tense because of problem	0 (0%)	18 (15.9%)	20 (17.7%)	21 (18.6)	54 (47.8%)	
PHYSICAL DISABILITY	Diet been unsatisfactory	0 (0%)	30 (26.5)	58 (51.3%)	25 (22.1%)	0 (0%)	3.226±0.453
	Had to interrupt meals	0 (0%)	0 (0%)	51 (45.1%)	44 (38.9%)	18 (15.9%)	
PSYCHOLOGICAL DISABILITY	Found it difficult to relax	0 (0%)	0 (0%)	1 (0.9%)	74 (65.5%)	38 (33.6%)	2.487±1.09
	Been a bit embarrassed	0 (0%)	0 (0%)	19 (16.8%)	61 (54.4%)	33 (29.2%)	
SOCIAL HANDICAP	Been a bit irritable with other people	0 (0%)	20 (17.7%)	59 (52.2%)	34 (30.1%)	0 (0%)	2.774 ±0.467
	Had difficulty doing usual jobs	0 (0%)	0 (0%)	65 (57.5%)	48 (42.5%)	0 (0%)	
HANDICAP	Felt life in general was less satisfying	0 (0%)	0 (0%)	28 (24.8%)	53 (46.9%)	32 (28.3%)	3.03±0.516
	Been totally unable to function	0 (0%)	0 (0%)	19 (16.8%)	73 (64.6%)	21 (18.6%)	

TABLE 4: Correlation between the dental caries experience and periodontal status and OHIP-14

OHIP-14		Decayed	Missing	Filled	CPI score 3	CPI score 4	H LOA	LOA SCORE 0	LOA score 1	LOA score 2	LOA score 3	LOA score 4
FL	Pearson Correlation	.232*	.119	-.031	-.002	.160	-.007	.030	-.020	-.062	.044	.130
	Sig. (2-tailed)	.013	.208	.741	.981	.091	.939	.755	.836	.517	.644	.169
PP	Pearson Correlation	.260**	.131	-.001	.074	.168	.032	-.041	.019	-.006	.051	.110
	Sig. (2-tailed)	.005	.167	.988	.434	.075	.735	.665	.842	.947	.591	.248
PHD	Pearson Correlation	.162	.252**	-.015	.092	.083	.021	.033	-.077	-.020	.094	.111
	Sig. (2-tailed)	.087	.007	.874	.330	.383	.826	.730	.415	.836	.320	.240
PSD	Pearson Correlation	.023	-.146	.218*	.026	-.060	-.017	-.041	.113	-.041	-.043	-.152
	Sig. (2-tailed)	.807	.123	.021	.787	.525	.854	.667	.234	.670	.655	.108
PD	Pearson Correlation	-.067	.123	-.046	.035	.120	-.034	-.025	.085	-.061	-.046	.131
	Sig. (2-tailed)	.479	.193	.630	.710	.206	.718	.794	.370	.523	.630	.166

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