

ASSESSMENT OF ORAL HEALTH STATUS AND ORAL HEALTH EDUCATION PROGRAMMED IN COMMUNITY LIVING IN RURAL AREA OF JAHANGIRABAAD OF MULTAN

Dr. Mustafa Sajid¹, Dr. Mohsin Javeed², Dr. Muhammad Jamil³, Dr. Mehwish Munawar⁴,
Dr. Awais Khan⁵, Dr. Reema Kouser⁶

1. House Officer Nishtar
Institute of Dentistry
2. House Officer Nishtar
Institute of Dentistry
3. .House Officer Nishtar
Institute of Dentistry
4. .House Officer Nishtar
Institute of Dentistry
5. .House Officer Nishtar
Institute of Dentistry
6. .House Officer Nishtar
Institute of Dentistry

ABSTRACT...OBJECTIVE: TO INVESTIGATE THE ROLE OF ORAL HEALTH EDUCATION PROGRAMME IN ORAL HEALTH STATUS IN PEOPLES LIVING IN RURAL AREAS OF MULTAN. **STUDY DESIGN:** STUDY DESIGN WAS CROSS SECTIONAL SURVEY. **PLACE AND DURATION:** THIS STUDY WAS DONE TO RECORD THE INITIAL ASSESSMENT OF ORAL HEALTH STATUS OF JAHANGIRABAD COMMUNITY IN MULTAN FROM NOVEMBER 1, 2014 TO DECEMBER 1, 2014. **METHODOLOGY: RESULTS:** THE RESULTS OF THE STUDY REVEALED THE OCCURRENCE OF DENTAL CARIES TO BE 53.1 %, WHILE MEAN DMFT WAS 1.5. THE RESULTS FROM RECORDING THE PERIODONTAL CONDITIONS SHOWED THAT ABOUT 50% OF THE SAMPLE POPULATION HAD HEALTHY GUMS, REFLECTING GOOD ORAL HYGIENE. IN TERM OF VIRULENCE, THE MEAN NUMBER OF HEALTHY SEXTANTS, BLEEDING AND CALCULUS, WERE 5.2, 0.4 AND 0.2 RESPECTIVELY. TOTAL OF 42.9% OF THE SAMPLE POPULATION HAD GINGIVAL BLEEDING AND CALCULUS. THE STUDY FOUND THAT THERE WAS A STATISTICALLY SIGNIFICANT ASSOCIATION BETWEEN HIGH EDUCATION AND BETTER ORAL HEALTH INDEX NAMELY DMFT AND CPITN [P-VALUES= 0.036 AND 0.012, RESPECTIVELY. IN THIS STUDY, NO SIGNIFICANT ASSOCIATION WAS FOUND BETWEEN AVERAGE MONTHLY INCOMES VERSUS ORAL HEALTH STATUS.

Correspondence Address:
pioneerseek@gmail.com

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INTRODUCTION

Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects (related to mouth), gum disease, tooth loss due to tooth decay and disorders that affect the oral cavity. The proper oral health is important in keeping healthy teeth. The simple way of brushing and flossing can help in maintaining oral health. Oral structures are not only the teeth but also involves the gums and their supporting structures, the palate, the lining of the mouth and throat, the tongue, the lips, the salivary glands, the chewing muscles, the nerves, and the bones of the upper and lower jaws. Recent research has indicated possible associations between chronic oral infections and diabetes, heart and lung disease, stroke, and low birth weight or premature births. In other words, oral health refers to the health of our mouth and, eventually, supports and reflects the health of the entire body¹.

The most common oral diseases are dental decays and periodontal (gum) disease. Severe periodontal (gum) problems, which may result in loss of tooth, is found in 5-20% of middle-aged adults; the rate differs across geographical regions. Traditional old therapeutic dental care is a significant economic problem for many high-income countries, where 5-10% of public health expenses relates to oral health. Oro-dental diseases are among the most widespread diseases around the globe. Although not a common cause of death, but these sometime put a very serious effect on health. Concerning with the urgent need, action is necessary in promoting sound oral health, prevention of tooth decay and periodontal (gums) diseases.

Baseline data about magnitude of problems and various epidemiological factors is required for the planning of national or regional health promotion programs, to prevent and treat oral health

Multivariable logistic regression was used to study the effect that the independent (X) variables have on the probability of obtaining a particular value of the dependent variable. This study was conducted during November 1, 2014 to December 1, 2014.

RESULTS

The results are presented in two parts. Part A describes Socio-demographic characteristics. Part two covers Oral health status of Dental caries (DMFT) and Oral health status of periodontal disease (CPITN).

Inferential statistics is demonstrating the relationship between independent variables and dependent variable oral health status with the following factors: Level of education, Monthly Income (table. 1). According to this table, the maximum number of patients visited hospital from Jahangirabad fell in the age bracket of 36-40 and are 26.3% of the total sample size. However, patients in the age bracket of 15-20 years were lowest in number and comprise 10.5% of the total sample size (Table. 2). For the educational level, 25% (95) did not had any kind of formal education, 21% (80) had been to primary school, 31% (120) graduated from secondary school, 10.5% (40) graduated from high school and 9.2% (35) graduated from college/university (Table. 3).

The percentage of population with dental caries is shown in table 1. About fifty three per cent of the population had caries in their permanent teeth. The mean number of teeth affected was 1.5 DMFT (Table. 4). As shown in table 2, 57.6 % of the population had maximum CPITN and 43.1% of the population had gingival bleeding and calculus.

Table 6 & 7 showed the comparison between oral health index and socio-demographic factors. It was found that there was statistically significant association among education group and oral health index namely DMFT and CPITN with P-value = 0.036 and 0.012, respectively. It was interesting that the group with highest education i.e. education more than secondary level had highest proportion of good oral health status with 64% (36) had good DMFT and 80% (50) had healthy gum. However, there was no significant association between income and oral health indices.

Table-1
Number and percentage of patients classified by age

Number and percentage of patients classified by age		
Age of patient (yr)	Number (N=380)	Percentage
15-20	40	10.5
21-25	70	18.4
26-30	90	23.6
31-35	80	21.0
36-40	100	26.3

Table-2
Number and percentage of patients classified by patients classified by Socio-demographic characteristics

Socio-demographic characteristics	Number (380)	Percentage
Education		
No education	95	25
Primary school	80	21.0
Secondary school	120	31.6
High school	40	10.5
College/university	35	9.2
	10	2.6
Income (PKR) /month		
<10,000	85	22.3
10,000-30,000	178	46.7
30,000-50,000	69	18.2
>50,000	48	12.8

(Income were asked from sample and accordingly tabulated in levels)

Table-3
The prevalence proportion rate and the mean dental caries experience (DMFT)

	Total % (N= 380)
PP (permanent teeth)	53.1
D (decay)- Teeth	1.02
M (missing)- Teeth	0.13
F (filling)- Teeth	0.34
DMF- T: mean	1.5
(DMFT: Min, Max)	0---8.0

Table-4

The percentage with CPITN index for assessment of gingival health

Total (N = 380)	CPITN index		
	Score	Score	Score
	0	1	2
	(Healthy gum) %	(Bleeding gum) %	(Calculus gum) %
	57	26	17
	216	99	65

Score 0: Healthy gum

Score 1: Bleeding gum (Unhealthy gum)

Score 2: Calculus gum (Unhealthy gum)

Table-5

Association between oral health status (DMFT) and socio demographic factors

	DMFT				Total	X ² df P- Value
	Good Oral Health DMFT=0		Poor Oral Health DMFT≥1			
	N	%	N	%		
Education						
-	69	36.7	105	64.9	174	6.62
Secondary	47	39.1	92	60.2	139	2
>Secondary	36	64	31	36	67	0.036
Income (PKR) /month						
<20,000	98	43.4	122	56.7	220	1.466
≥20,000	68	25	92	65	160	1

Table-6

:Association between oral health status (CPITN) and socio demographic factors

	CPITN				Total	X ² df P- Value
	Healthy (Score 0)		Unhealthy (Score 1, 2)			
	N	%	N	%		
Education						
≥Primary	85	50	91	50	176	8.872
Secondary	58	62.3	61	37.6	119	2
>Secondary	50	80	35	20	85	0.012
Income (PKR) /month						
<20,000	127	60.1	97	39.8	224	1.673
≥20,000	79	51.2	77	48.7	156	1

DISCUSSION

In this study the occurrence of dental caries is found as 53.1 % while the results from national oral health survey and Pakistan Medical research council survey are found as 64% and 76% respectively 10. As these three studies were different on many parameters therefore the findings are different to each other's. For mean DMFT 1.5 was lower than the National Oral Health Survey of Pakistan 2004 which was 1.9.

In another study in Pakistan DMFT is 1.38 which is less than that of this study where DMFT is 1.9 The reasons for the substantial difference of this local survey from National Oral Health Survey of Pakistan 2004 might be due to different characteristics of sample. In 2004 survey, the samples covered the cities and rural population separately. Which was carried out in the area near Multan city; samples were more of a sub urban population. The results from recording of the periodontal conditions show that more than half of the sample population had healthy gums, reflecting good oral hygiene 11.

The three kinds of socioeconomic status generally interrelate to each other. People who were in the highly educated mostly had high income and social level. In fact the upper social level made proportionally more use of health facility than lower social level 12. subsequently; they had more knowledge to practice for their health. There was a statistically significant association between high education and better oral health index namely DMFT and CPITN [p-values= 0.036 and 0.012, respectively]. Vano also claimed that increased CPITN scores and DMFT values were significantly correlated with lower level of education . Subjects of high educational status showed significantly better oral hygiene habits4.

Saddique studied caries rate in Karachi rural areas. He stated that 220 out of 500 patients had carious teeth. In this study caries rate is slightly higher than that of siddique 13.

Severe periodontal (gum) disease, is found in 15–20% of middle-aged (35-44 years) adults 2 which is comparable to this study where score is 17%.

This study has DMFT score 1.5 while in 2014 according to WHO score was 1.6 in Pakistan 14 and in Karachi DMFT score was 1.4.15

The result shows that most of respondents had income less than 30,000 PKR per month (22.3% + 46.8%) and most of them graduated from secondary school, high school and college/university. In this study, there was no significant association between average monthly income and oral health status.

CONCLUSION

Community related factors (included reinforcing factors from family, teachers and dental health personnel of School based dental program) should be used to improve the knowledge and perception on oral health. The dental health personnel should emphasize on area in the periodontal disease through health education and promotion.

The results of this study might help to evaluate the efficacy of public education programs in the future.

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