ORIGINAL ARTICLE

ORAL HEALTH ASSESSMENT AND BARRIERS TO SEEK CARE IN INTERNALLY DISPLACED PERSONS FROM BAJAUR AGENCY, PAKISTAN

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ABSTRACT

The aim of the study was to assess the oral health status of internally displaced persons from Bajaur Agency living in Jalozai Internally Displaced Persons camp, in Pakistan and to identify the barriers leading to unmet treatment needs.

It was a descriptive analytical study, carried out at Jalozai Internally Displaced Persons camp. A total number of 400 individuals were studied. A WHO oral health assessment tool was modified and used while a separate questionnaire was developed to identify barriers to seek dental care.

Oral mucosal infections were present in 31.8% of the studied population with oral ulcerations being the commonest. Prevalence of periodontal infections was 69%. The DMFT value for the population was 3.92%. Majority of the population relied upon self treatment. Financial reasons were considered by 74.2% of the subjects to be the most common barrier for unmet treatment needs.

The high prevalence of caries, periodontal infections, oral mucosal infections as well as barriers to unmet oral health needs pose a significant threat to the overall health of the Internally Displaced Persons from Bajaur Agency.

Key words: *Oral Health, IDPs, DMFT, Fluorosis, dental caries, periodontal infection, oral ulcer*

INTRODUCTION

Although all persons affected by conflict and/or human rights violations suffer, displacement from one's place of residence may make the internally displaced particularly vulnerable.[4] It is well documented that vulnerable groups have less access to dental services, worse oral health, and bear a disproportionate burden of oral diseases.[5] The inaccessibility of prevention and treatment services directly impacts treatment options and costs, as diseases of the mouth are progressive.

Research has highlighted that barriers to accessing and accepting dental care are made up of psycho-social determinants. These affect the patient's attendance and have their roots in earlier times, usually in the patient's life experiences and histories. These provide the basis for the formation of obstacles to accepting and accessing dental care.[6]

Major barriers to oral health include socioeconomic factors, such as inability to pay out of pocket or problems of access that involve transportation and the need to take time off from work. Lack of fluoridated water supply also exacerbates oral health problems and people with disabilities and complex health problems face additional stumbling blocks. A major barrier to seeking and obtaining professional health is lack of

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public understanding and awareness of the importance of oral health. The perception of need is also closely related to the dental anxiety factor, with some people who will only attend the clinic when they are in severe pain because their anxiety has invariably influenced their perception of need.[7]

Although some studies have been conducted on the Pakistani population regarding oral health but due to the ongoing military operations and sparse security situation in the tribal agencies of Pakistan, not much is known about the oral health of the population living there. The oral health survey conducted by WHO in 2003 on Pakistani population also did not include the Federally Administered Tribal Agency region due to the security concerns.

METHODOLOGY

It was a descriptive analytical study, conducted from August 2010 to January 2011 at the J-2 facility Jalozai IDPs Camp, District Nowshera. The whole camp was divided into 6 facilities with 3 phases under each facility. The catchment area under J-2 Facility had a population of twenty thousand four hundred and fourteen individuals (20,414). This population was mainly from Bajaur tribal agency of Federally Administered Tribal Area (FATA) and was living in the camp for the past two and a half years. A sample size of four hundred (400) equal number of males and females between the ages of 35-44 years was drawn.

As there were no lists of families or tents available, therefore for females, the data collection team comprising only of female dental surgeons examined subjects from each phase i.e. 66 from phase 4, 66 from phase 5 and 68 from phase 6 of the J2 facility. The tents of the families were in close proximity, therefore the team visited every 2nd tent of the family in that vicinity till the required number of sample size was achieved.

Being a conservative close knitted society, male members of the team were not allowed to go towards the tents, therefore it was decided to take the help of community mobilizers working in that area. A day prior to data collection in a particular phase, the male team along with the community mobilizers met with the elders of that particular phase to inform all male adult individuals in that phase to gather at a particular point the next day for oral health assessment. Individuals with no IDP registration cards and those visiting the camp from other facilities were excluded. A questionnaire was developed having both open and closed ended questions to identify barriers in seeking oral health care. It included questions ranging from demographic details, oral hygiene, oral health issues, habits such as tobacco use and questions regarding oral health issues and reasons preventing them from seeking care. A separate form was made for oral health assessment, modifying WHO Oral Health Assessment tool 1997. Each questionnaire carried a consent form translated in Pashto language and every individual was briefed and written consent taken before examination. Permission for this study was taken from Institute of Public health and Social Sciences, KMU as well as from Base Incharge of Jalozai IDPs camp.

Oral examination was performed using sterilized instruments packed safely in an airtight sterilization pouches. The instruments included a standard mouth mirror, tweezer and a WHO recommended periodontal probe. Data analysis was done using SPSS version 17. DMFT values were calculated using online SIC calculator available on WHO Oral Health country area profile program (Capp) website.[8] Chi square test was used to find statistical significance between variables.

RESULTS

Results compiled from this study showed that the mean age of the study sample population was 38.8. Majority of male population used miswak (roots of the shrub Salvadora persica) to clean their teeth (83.9%) while (16.1%) used tooth brush. In comparison instrument of choice for female was dandasa (bark of the walnut tree) i.e. (61%). A large number of male population (83.4%) used snuff, (8.5%) used cigarette while (4.5%) used both cigarette and snuff. Regarding oral health issues, (46%) of males responded that they had oral health issues as compared to (26.5%) of females with a statistically significant difference (P-value <0.05) Majority of the population (42.2%) relied upon self treatment for their dental needs while (26.8%) went to private dental clinics. Non off the IDPs responded positively to the question regarding receiving any lecture or demonstration on oral hygiene.

Major barriers preventing them from seeking dental care are mentioned in Figure 1, with financial issues being the most common in both male and female

population. Chi square test revealed a significant association i.e. P-value <0.05.

Oral ulceration was found to be the most common oral mucosal infection present in (31.8%) of the subjects with slightly more in males (32%) as compared to female population (27%). Only (2.8%) of the individuals studied showed mild dental fluorosis.

The prevalence of periodontal disease among the general population was 69%. Periodontal disease was high in both male (75%) as well as female population (63%) and the difference was statistically significant (Table 1). Figure 2 shows different levels of periodontal conditions as well as the comparison between male and female population with calculus being the most common periodontal problem (33%).

The overall prevalence of caries in the population was 88%. In comparison, male population had higher prevalence of dental caries as compared to female i.e. 89% and 67% respectively. Chi square test revealed that this association was statistically significant i.e. (P value = 0.000).

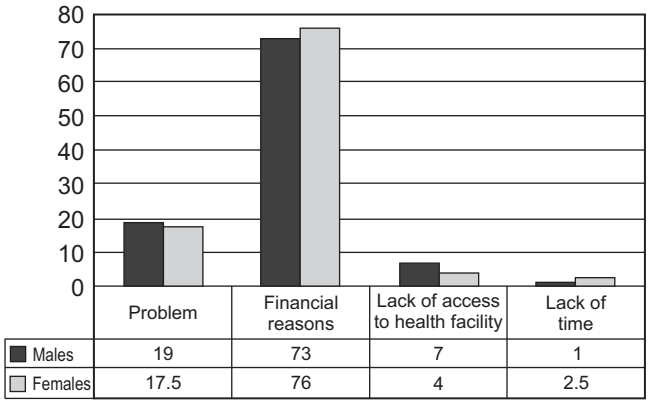

Fig 1: What prevents you from visiting a dentist?

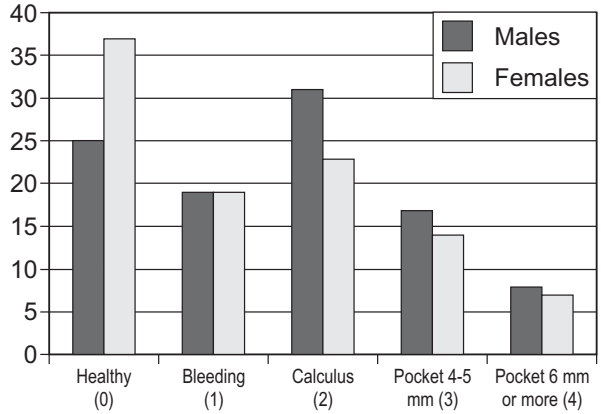

Fig 2: Community periodontal index

TABLE 1: ASSOCIATION OF PERIODONTAL DISEASE WITH GENDER IN IDPs

	Periodontal Disease			
	Yes	No	Total	
Male	150	50	200	P value =
Female	74	126	200	0.000
Total	224	176	400	

TABLE 2: MEAN DMFT OF THE IDPs

Age (35-44 years)	Decayed	Missing	Filled	DMFT
General	2.23	1.57	0.1	3.92
Male	2.66	1.31	0.1	4.07
Female	2.52	1.19	0.21	3.92

The mean DMFT of the population was 3.92 with males having a DMFT of (4.07) and females (3.92). Individual DMFT values of male and female subjects are shown in Table 2.

DISCUSSION

The result of this study showed that this vulnerable population from Bajaur tribal agency, living in Jalozai IDPs camp had poor oral health and lacked facilitations for their unmet oral health needs. Although a number of studies have been done in Pakistan on the oral carcinomas and other precancerous conditions of the oral mucosa but so far no comprehensive study has been done on the prevalence of various diseases of oral mucosa. Nevertheless, studies done in other countries have suggested high prevalence of oral mucosal infections. Campisi et al. identified various oral mucosal lesions in 81.3% of their study patients.[9] This study showed that 31.8% of the total population showed oral mucosal lesions, more common in males (42%) as compared to the female population (28.5%). It is important to mention that the results of the present study also revealed that almost 83.4% of the male population was using snuff (naswar) along with 8.5% using cigarettes smoking. 4% amongst the males used both snuff and cigarette. The relatively high prevalence of oral mucosal infections in males can perhaps be attributed to the use of snuff and tobacco smoking.[10]

According to the fluoride map of Pakistan, the water supply of Pakistan is predominantly low in fluoride content.[11] The result of this study showed that very mild dental fluorosis was detected in 2.8% of the

population, with 2.5% in males and 3% in females, however the difference was not statistically significant. Oral health assessment in Pakistan (2003) measured the dental fluorosis in the province of Khyber Pakhtoonkhwa to 7%. The prevalence of dental fluorosis at the national level by the same study was found to be relatively very high i.e. 31%.[12] Thus the subjects studied in this study showed lower levels of dental fluorosis as compared to the provincial as well as national levels.

It is becoming increasingly evident that periodontal infections can influence systemic health in many ways.[13] Studies in animals and humans have linked oral infection in mothers to pre-term low birth weight (PLBW) babies.[14,15] Prospective studies have found an association between periodontal disease, diabetes and heart disease.[16] These infections have also been linked to stroke, aspiration pneumonia in the elderly and those with chronic respiratory disease.[17,18]

The current study depicts that 69% of the population had periodontal infections. It was also interesting to note that 63% of the females had periodontal infections as compared to 75% of the male population but the difference was not statistically significant. The data revealed that 33% of the general population had calculus, followed by bleeding (20%). 12% had pocket depths ranging from 4-5mm and 4% showed pocket depths of 6mm or more.

Periodontal status of males showed that a staggering 62% had calculus, followed by bleeding 39%. 33% showed moderate periodontitis while 16 % had severe periodontitis. In comparison to males, females had 45% of calculus followed by bleeding in 39%. 28% showed moderate periodontitis while 14% had severe periodontitis.

It is important to mention here that the age group of female studied in this research was of child bearing age. Mothers with gum disease have six times greater risk of delivering preterm low-birth-weight babies[19,20] as the bacteria from the mother's mouth travels through the bloodstream to the placenta and fetus, possibly stimulating pre-term labor.[21]

Dental caries is a major dental disease affecting the lives of a large proportion of the inhabitants of this world and is the predominant cause of tooth loss in children and young adults.[22] This report found a mean DMFT value of 3.92 in the general population. Male DMFT value was found to be slightly higher i.e. 4.07 as compared to 3.92 in females. According to WHO, in 1991 DMFT (decayed, missing or filled teeth) in Pakistani population of age group 34-44 years of age was 4.6 which have risen significantly to 8.02 in oral health assessment of 2003.[23]

This relatively lower value of DMFT in the studied IDPs may be explained by the fact that this particular population is a religious society and cleaning of the teeth has been strongly advocated in the religion. This survey found that 98% of the IDPs clean their teeth, which is consistent with the finding of oral health assessment in Pakistan survey in 2003 by AA Khan which showed that 90% of the population clean their teeth.[9] However F (filled) was the lowest index (0.1) among all the IDPs which reflects lack of attention to treating decayed teeth, in these socioeconomically deprived and vulnerable individuals.

In response to the question regarding barriers preventing them to seek dental care, 74.2% mentioned financial reasons for their unmet oral health needs. 5.5% pointed out at lack of access to health facility while 2% said they do not have time to get themselves treated. Both males and females had more or less similar reasons for their unmet oral health needs, financial reasons being the foremost cause. 2.5% women responded that lack of time is the hindrance for their unmet oral health needs as they had to take care of their kids. The oral health pathfinder survey in 2003 by AA Khan reported almost similar findings.[9]

CONCLUSION

Results of this study revealed that the prevalence of dental caries and periodontal infections is high among the IDPs from Bajaur Agency. The high prevalence of periodontal infections, oral mucosal infections and barriers to unmet oral health needs pose a significant threat to the overall health of these disadvantaged and vulnerable individuals. It is also unfortunate to mention that despite the presence of foreign Non Government Organizations, World Health Organization and Government supervision, oral health is being ignored completely. Therefore, the capacity for addressing oral health is dilute and not integrated with other health programs.

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