ORIGINAL PROF-959

ORAL HEALTH STATUS;
VERY LOW INCOME STRATA OF POPULATION

DR. MUHAMMAD PERVAIZ IQBAL, B.D.S., Ph.D.
Assistant Professor,
Operative Dentistry Dental Section,
Nishtar Medical College, Multan.

DR LUBNA KAUSAR, B.D.S.
Dental surgeon,
Department of Operative Dentistry, Dental Section,
Nishtar Medical College, Multan.

DR. MUKESH RAM B.D.S.
House Officer,
Department of Operative Dentistry,
Dental Section,
Nishtar Medical College, Multan.

ABSTRACT... www.brainassistant.org , doctorpervaiziqbal@yahoo.com. Oral health, although an important aspect of the general health, unfortunately is an ignored aspect, by almost all population strata. Poverty, lack of education and lack of public awareness programs add to the dilemma. **Aims & Objectives:** Evaluation of the oral health, tooth cleaning devices and at the top, awareness about such devices, among the most ignored and deprived group of population. The evaluation of oral hygiene of the poor railway coolies, was the objective of this study. **Materials & Methods:** A very simple proforma in Urdu was designed. It included some questions about personal data, tooth cleaning habits, the devices used for the purpose and the reasons for not using the tooth brush. DMFT and the periodontal conditions were then noted in the same proforma. About 120 coolies agreed to participate in the study. Examination was made in day light with a mirror and a blunt probe. **Results:** The age varied from 15-60 years. There was about 100% periodontal involvements, while DMFT increased with age (0.75 to 12.5). About 49.5 % used brush, 41.5% miswak, 5.3% tooth powder, while 3.5 % did not use any of these. Tooth brush users had least DMFT while powder users had the maximum. Of the non brush users 50.9% of people could not buy brush, 33.9% did not like it while 15.09% were ignorant of it. **Conclusion:** Poverty, illiteracy and lack of dental awareness are the major causes of dental / periodontal problems. The tooth brushing techniques must be taught to the public.

INTRODUCTION

We are living in a developing country. The literacy rate is very poor and about 1/3 of the population is living below poverty levels. Availability of funds for general public welfare is very scarce in general. Usually the available funds are utilized in big cities and towns, for a very specific area and specific people. Many of the people living even in the big cities are deprived of the basic facilities of the life. There is a general nutritional deficiency which in it self leads to many diseases and makes the person prone to many diseases. Generally the poor population is illiterate and ignorant. Diseases spread due to poverty, ignorance and due to careless behavior of the general population.

Oral health is perhaps one of the most ignored parts of the human health, as it usually does not pose a threat to life. The poor people of villages and towns, who visit the public sector hospitals usually, have a very poor oral health. A large number of carious teeth, lost teeth and severe gingival problems are common.

Evaluation of oral problems has been carried out in Pakistan by surveys conducted by some workers[1, 2, 3.] In all these surveys the school going children (usually of urban areas) were included. The adult population is usually ignored or at least not included. Dental and periodontal diseases have been explored in all the above studies. The DMFT scores are not very high but the periodontal conditions are really very alarming. Considering the lack of knowledge in general population along with the scarcity of expert treatment facilities in the country, it is supposed that the severity of disease would be at much higher level in adults as compared to that in children. Another factor is the poverty; the poor cannot buy different tools necessary for maintaining the general health including the oral health.

AIMS & OBJECTIVES

Keeping in view the above mentioned facts, this study has been planned to include the adult members of the poor population of the country. It shall explore the extent of dental and periodontal problems of this group of people.

MATERIALS & METHODS

A very simple proforma was designed in Urdu (attached). Railways coolies of different railway stations were included in this survey. Although it was very difficult to motivate them but the authors were able to find about 120 participants. Who varied in age from 15-60 years. The data was filled by an assistant. Questions were asked by the authors while "tick or cross" were made on the proforma by the assistant. Oral examination was made by the authors with the help of a mouth mirror and a blunt probe in day light while seating the volunteer on a bench facing towards the light. Entries were again made by the assistant. The caries were detected by the criteria given in "WHO Oral Health Survey 1981" while the gingivae were termed diseased, if inflammation or bleeding on gentle touch or tartar deposits were noted.

The results were analyzed by Student's t test.

RESULTS

A total of 120 coolies were examined but only 113 proformas were complete. The results have been calculated from these 113 proformas. The results are presented in Tables I to V.

Table-I. Tooth Cleaning Frequency & the Diseases

	No. of pts	DMFT	Periodontal involvement
Total no of patients surveyed	113	5.87	99.11%
Those who clean teeth	109	5.44	99.08%
Those who do not clean teeth	04	17.51	100%

The DMFT of the two groups is significant statistically ($p < 0.05$). The two groups have no difference in periodontal involvement.

Table-II. Tooth Cleaning Devices & the Diseases

Type of tooth cleaning device	No. of pts	DMFT	Periodontal involvement
Brush	56	4.8	98.2%
Miswak	47	6.2	100%
Powder	6	9.3	100%

The DMFT of all the groups is different and Significant statistically ($p < 0.05$)

Table-III. Reasons for not using brush

Reason	No. of Patients
Cannot buy	27
Don't know	08
Don't like	18

The differences of DMFT of different age groups are

statistically significant ($p < 0.05$).

Most of the participants claimed the use of one or the other tooth cleaning device. Only four of them did not use any cleaning device. The DMFT and periodontal status are presented in Table I. The Table II presents different methods, (devices) used by the participants to clean their teeth. Brush was at the top (N: 56), Miswak (almost same N: 47) the second while only a few (N: 06) used tooth powder. DMFT and periodontal status are also given (of all three groups). It is evident that those using brush have the least (4.8) DMFT. Those using Miswak had 6.2 while those using tooth powder had 9.3 score. There was only one participant from the brush group who had healthy gums. All the other groups had all the participants with diseased gums. Table III presents the reasons why the people do not use the tooth brush. 27 of the total 53 non brush user group were financially unable to buy the brush. 18 did not like the use of brush while 08 were unaware of the device.

Table-IV. Age Wise Distribution of Disease

Age in years	No. of pts	DMFT	Periodontal involvement
15-20	4	0.75	100%
21-30	26	2.69	96.15%
31-40	34	4.41	100%
41-50	45	5.17	100%
51-60	4	12.50	100%

Table-V. Age and the Type of Tooth Cleaning Devices

Age	No. of pts	Brush	Miswak	Powder	Nothing
15-20	4	-	4	-	-
21-30	26	11	14	1	-
31-40	34	20	11	3	-
41-50	45	24	17	2	2
51-60	4	1	1	-	2

Table IV is again interesting and important. The DMFT increases with the increase in age. It ranges from 0.75 in 15-20 years age to as high as 12.50 at the age of 51-60 years. The periodontal statue is same for all the groups which is the maximum possible. Table V gives the distribution of the participants who use different type of cleaning devices according to the age group. Another important finding not given in the table is that the authors did not find any filled tooth in any of the participant.

DISCUSSION

This survey is the first of its kind in Pakistan. People from very low income group, usually ignored by general public as well as the government, who come from illiterate families, have been included. This group of people is usually concerned with making their livings. They have got no time to think about their health specially the oral health.

People of our country are mostly Muslims and cleaning of teeth is a priority at religious level. Unfortunately people do not practice the religion in true sense. Miswak is used for tooth cleaning but without any positive outcome. Some of the people oppose the use of tooth brushes. The factual position is that the gingival health as well as the dental health deteriorates with the increasing age in the population. In the present study, in spite of the claim of cleaning teeth with one or the other devices, it was observed that the DMFT increased with increasing age due to perhaps some natural limitations but mostly due to lack of proper cleaning of teeth and gums. Lack of expert preventive and curative health facilities add to the

poor health of the poor people. Present study is an evidence of this fact. The oral problems are increasing with the increasing age.

The survey can be divided into different parts. First part was concerned with the attitude of surveyed population towards cleaning of teeth. Answer was positive, more than expected. About 97% of the participant claimed using some tooth cleaning device. It reveals that people of this, so called ignorant strata are conscious about their teeth and try to keep them clean.

Second part was about the devices of cleaning teeth. Brush was used by the majority (51.3%), Miswak was the second most common (43.1%), while tooth powder was used by very few (5.5%). Inspite of the fact that almost everybody claimed to use something for tooth cleaning, there was almost 100% periodontal involvement and the DMFT increased with age.

Third part was concerned with the exploration of the reason for not using the brush. 27 of 53 were unable to buy the brush, while 18 of 53 did not like the brush. Only 8 of 53 told that they did not know about the brush. The authors were of the opinion that the participants, who do not use the tooth brush, do not like the brush or they are ignorant about brush. Surprisingly the surveyed population was using brushes and those who do not use brush do it due to their inability to buy it. A few do not like the brush.

Fourth part was the detection of DMFT and periodontal involvement. Overall DMFT was 5.87, range being 0.75 in 15-20 years (N: 4) to 12.5 in 51-60 years olds (N: 4). the people of 41-50 years (N: 45) had DMFT 5.17. In a study from China[4], the group of 35-44 years age had DMFT 2.1 while the group of 65-74 years had DMFT 12.4. The results of the present study reveal higher figures. The Chinese study was a very comprehensive study and included people of all walks of life while in present study, people of deprived and ignorant population have been included.

Another study[5] conducted to observe the oral health status of prisoners of 60 years and more reveal that the DMFT was 22.5. It is a high score. Authors feel that the results are comparable to the results of present study. The prisoners have fewer facilities and they perhaps may not be having a positive attitude towards their oral health due to the stress of being jailed. On the other hand the populations of present study are in the jail of daily tough and disgracing life. A study[6] carried out in South Pacific reveals that the DMFT of 35-44 years old population was 18 in 1999. The figures are much higher as compared to results of present study.

The estimation of periodontal involvement in present study was almost 100 % as only one of the total 113 people examined had healthy gums. Authors feel that poverty, preoccupation of the studied population as well as lack of facilities are important contributing factors but the conditions are not very good in some other countries, of the people from privileged class.

A survey conducted in Catholic Louvain[7], reveals that only one of 35-65 years old people studied, had no bleeding gums. 41.4 % had the pockets while 28.5 % needed scaling. This situation is with, so to say, highly qualified and well to do people. The condition of the deprived people of present study can be well imagined.

In a study conducted in USA[8], it was found that 90 % of 20-79 years old population needed scaling. 3 % needed complicated treatment while only 5 % did not need any treatment or prophylaxis. The results of present study do not seem to be very bad with regards to peridontium when we compare the results with this study. The people of USA had got this much high periodontal involvement.

No previous study of Pakistan for periodontal involvement of the age group examined in present study is available for comparison. The result present in the literature[1, 2,3] are not very encouraging.

CONCLUSION

It is felt that a bit of counseling and education, provision of tooth cleaning devices and a bit of motivation can change the attitude of the common people. The brushing techniques are to be taught to everybody. Provision of better dental care in public sector may also help to

improve the oral health status.

REFERENCES

1. Khan, AA; Almas, K; Mirza, YB; **Prevalence of Dental diseases and Oral Hygiene habits of school children in Punjab.** Pak. J. Med. Res. 30(3)151-154: 1991.

2. Iqbal, MP; Hamid, MW: **Oral Health survey of five religious schools in Multan.** Pak. Oral Dent. J. 12(2): 38 – 48, 1992.

3. Iqbal, MP; Ram, M: **Oral health status of the 12-15 year olds in a remote area of Pakistan;** J. Pak. Dent. Assoc: 13(1)22-24.

4. Wany, HY; Paul, EP; Jian-Yau, B; Bo-Xue, Z: **The second national survey of Oral health status of children and adult in China.** Int. Dent. J: 52(4): 283-9; 2002.

5. Megrath, C: **Oral health behind bars: a study of oral diseases and its impact of life quality of an older prison population:** Gerodontology: 19(2)109-14:2002.

6. Cutren, TW: **Changed oral conditions between 1963 and 1991 in population of Tokelau adults of South Pacific:** N.Z. Dent. J. 97(430)132-6. 2001.

7. Berey, P; Mevrisse, JB; Lambert, ML; et al. **Periodontal health and care need in a sample of Belgium population.** Rev. Belge. Med. Dent: 57(3)206-14:2002.

8. Dye, BA; Vagas, CM: **The use of modified CPITN approach to estimate periodontal needs among adults 20 – 79 years by socio-demographic characteristics in United States 1988-94.** Community Dent. Health: 19(4) 215-23, 2002.