



DENTAL CARIES ASSESSMENT OF RURAL POPULATION OF SINDH BY DMFT (DECAYED MISSING AND FILLED TEETH) INDEX.

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ABSTRACT: Dental caries is known as an infectious disease of microbiologic origin. Streptococcus mutans is established to be the main causative agent, which leads to localized dissolution and destruction of the calcified tissues. It is the most prevalent oral disease which shows an inevitable geographic dissimilarity, socioeconomic patterns and severity around the globe. The role of Fluoride in Caries prevention is extremely imperative as it is substance which relates strongly in the caries process and favours remineralisation of the affected tooth after the bacterial attack has ceased. **Objectives:** The objective of this study was to record dental caries experience in rural population of district Matiari Sindh. **Study Design:** Descriptive Cross Sectional. **Setting:** Camp of Taluka Hospital Matiari. **Period:** From the period of one year from Jan-Dec 2018. **Material & Methods:** A total of 102 visitants of camp were included in the study with caries evaluation of around 2569 teeth. Dental Caries status was checked by using DMFT index as recommended by WHO for oral health surveys. **Results:** Mean DMFT was found to be $0.07 \pm .146$ (5.75%) teeth were found decayed, 43 (1.7%) were found missing due to caries, No tooth was found restored while 2378 (92.6%) were found to be in sound condition. **Conclusion:** Access to Oral and Dental healthcare services found to be minimal may be due to inadequate Dental facilities and lack of Dental professionals in rural areas of Sindh province.

Key words: DMFT, Dental Caries, Experience.

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INTRODUCTION

Oral health has being recognized as essential part of general health. It is imperative to improve the oral health status which will lead to enhanced quality of life of the community¹ Dental caries is known as an infectious disease of microbiologic origin. Streptococcus mutans is established to be the main causative agent, which leads to localized dissolution and destruction of the calcified tissues.^{2,3,4,5} It is the most prevalent oral disease which shows a inevitable geographic dissimilarity, socioeconomic patterns and severity around the globe.^{5,6}

Over the years many studies being conducted to evaluate the status of dental caries in the Pakistani population. In Pakistan, access to dental health services has increased in the urban areas during the past decade, with a resulting decrease in the

prevalence of dental caries. On contrary rural population is still deprived of Dental curative services, government hospitals are major service provider for dental services for rural population because of nominal cost.

The role of Fluoride in Caries prevention is extremely imperative as it is substance which relates strongly in the caries process and favours remineralisation of the affected tooth after the bacterial attack has ceased. Limited amount of data is available regarding rural areas of Pakistan particularly of Sindh.

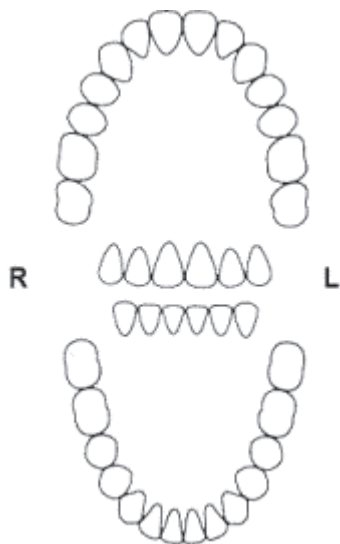
The study will help the concerned authorities and planners to take corrective measures to reorient their priorities to improve the oral health of the rural deprived population to prevent them from dental caries. This study was conducted

during the medical and dental camp organized at the celebration of world mental health day by Liaquat University of Medical and Health sciences Jamshoro in government high school Khyber District Matiari. The objective of this study was to record the Dental Caries Experience of Rural population of district Matiari Sindh.

METHODOLOGY

A total of 102 visitants of camp were included in the study with caries evaluation of around 2569 teeth. The study design was Descriptive Cross sectional with Non probability (Convenience) sampling technique. Duration was single day for collection of data. Age ranges from 18 to 75 years with both male and female subjects were included in the study. Dental Caries status was checked by using DMFT index as recommended by W.H.O for oral health surveys.

- D. Decayed
- M. Missing
- F. Filled
- O. sound



RESULTS

A total of 102 subjects were recorded for Dental Caries experience out of 62 (61%) were males and 39 (39%) were female. A total of 2569 teeth were examined out which 146 (5.75%) were found decayed, 43 (1.7%) were found missing due to caries, No tooth was found restored while 2378

(92.6%) were found to be in sound condition. Mean DMFT was found to be 0.07.

Dental Caries Status	No. of Teeth (%)
Decayed	146 (5.7%)
Missing due to Caries	43 (1.7%)
Filled	00 (00%)
Sound	2378 (92.6%)

Table-I

DISCUSSION

This study was conducted in medical and Dental camp organized in rural area of district Matiari. It was found that caries experienced was found to be very low as Mean DMFT was 0.7. The possible reasons for having low DMFT would be the use of Ground water for drinking which can be riched in Fluoride as many areas of rural Sindh are being identified as Fluorotic belt.

The results of current studies are somehow favouring the World health organization world oral health report 2003 in which it shows low Mean DMFT i.e 1.7 in developing countries.^{7,8} According to this report the trend of caries prevalence was on downward direction in developed countries and in upward direction in developing countries. This mainly is because of preventive care programs, Fluoride exposures and improved self-care practices in developed world and lacking in developing countries.

The results of this study also favours the findings of only conducted nationwide pathfinder survey named as Oral Health in Pakistan A situation Analysis.it classified Pakistan as a Low caries country. It includes the findings of Khan at el 1990 Maher1991 which shows that 97% of caries lesions were found untreated, as in this study not even a single tooth was found treated or restored due to caries. There has been no pathfinder survey being conducted since 1988 for dental diseases particularly in rural areas which provides nationwide picture of Dental caries Prevalence.⁹

Another comparison is made with study yasmin¹⁰ et al conducted in Rural population of Indian Punjab. The mean DMFT was found to be very

high i.e 5.8 as compare to this study. The probable reason of this immense disparity is because of difference of socioeconomic condition of people, as rural Sindh is quite economically deprived area. Caries is diet linked disease; in lesser privileged populations its prevalence is found to be low because of non-affordability of caries favourable diet i.e refined sugars, between meal snacking, citrus and soft drinks etc. Somehow there is consistency on number of teeth found filled in both studies. This highlights the lack of access of restorative care services in rural areas of developing countries. As in Pakistani and Indian rural areas the main Dental services providers are Government Hospitals and Dentists appointed by government.

Another survey was done in deprived areas of Karachi named as talha^{11s} et al showing variations in mean DMFT as it is found to be around 4 in rural population. Again there is a reason of socioeconomic condition of two different regions. Karachi is the largest city of Pakistan that's why economic opportunities are more than interior Sindh. Again the same findings of very minimal amount were present about number of teeth filled due to caries.

CONCLUSION

It is quite apparent that the study community has very low utilization and access of Oral and Dental healthcare services may be due to inadequate Dental facilities and lack of Dental professionals in rural areas of Sindh province. Alongwith government should take steps to alleviate the poverty so that rural population can overcome the problem of starvation and malnutrition.

RECOMMENDATIONS

Findings of this study shows that Dental caries prevalence was quite low in this rural population. It paved the way for finding out reasons for such low level of caries prevalence. More extensive studies must be conducted in this region to find out the reasons of low caries rate. In this regard two areas are being identified for further research, which are found to be the probable factors; they are evaluation of level of Fluoride in drinking ground water in this population, other

one is the study of dietary patterns in relation with socioeconomic condition. Further Intervention is needed to bring this population under Dental curative services particularly under restorative care.

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Rise above the **storm** and you will find the **sunshine**.



“Mario Fernandez”

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Naveed Irfan	Concept and data collection.	
2	Khurram Anwar	Write up.	
3	Agha Taimoor	Write up.	
4	Mowaffaq Abdullmomen Al Absi	Data collection.	
5	Mudassar Iqbal Arain	English Proof.	
6	Saira Shahnaz	English Proof.	