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Assessment of oral health needs among health care workers in Udaipur, India

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Abstract

Background: Health care workers are a part of community that provides health care services. They facilitate people from primary preventions to complex treatment procedures. In the course they often neglect their own health prospects especially oral health. The attitude regarding oral health in health care workers in India is a cause of concern. The aim of the study is to assess the oral health needs of the health care workers in Udaipur, India and to utilize data to be used as a guideline for improvements in their oral health care and improving their quality of life.

Methodology: A written oral health case history format was prepared and was carefully examined on all willing participants for the study along with dental indices recording related to dental caries and tooth wear. The data was analyzed using IBM SPSS 21 software.

Results: 87.5% of the health care workers were suffering from dental caries. Also, 16.3% had root stumps in their oral cavity of the teeth which were lost due to caries. Also, 17.5% participants had grossly decayed teeth due to caries. Noticeably, attrition of teeth was also noticed in 65% of the participants. These findings can be attributed to the amount of sugar present in food, lack of oral hygiene and poor oral health habits.

Conclusion: Their knowledge regarding oral health care habits needs improvement. They are the people who can themselves apply and guide others to maintain good oral habits. Efforts should be established by caretakers to instill oral health education in health care workers.

Keywords: oral health needs, oral hygiene habits, dental caries, health care workers

Introduction

Knowledge of oral health is considered to be an essential pre-requisite for health related behaviour. The standard of health of the oral and related tissues enables an individual to eat, speak or socialize without active disease, discomfort or embarrassment and which contributes to overall well-being^[1, 2]. The non-teaching staff in dental college (staff nurses, receptionists laboratory technicians, attenders and the house keeping staff) are indirectly a part of the community based oral health awareness programmes. They act as a link between the dentist and the general population. They are frequently exposed to the dental procedures and dental materials by either being assistants or spectators. The awareness that they imbibe within the college premises can be shared among their family or in their locality. The patients are more comfortable in approaching the nursing staff to comprehend the instructions given by the dentist. Fearful and anxious patients often approach the same before having their consultation with the dentist. This gives them some basic knowledge regarding oral health and diseases. After the dental treatment the non-teaching staffs explain the after care in the local dialect which makes it easier for the patients to follow. Oral health care has been shown to have low priority in personnel with minimal education^[3].

Health care workers are the most important part of health care delivery system in India. They include from doctors to nurses, ward boys, Auxiliary nurse mid wives, Anganwadi workers, local dais etc. they play a pivotal role in delivering health care at every step of the society.

Oral health is an integral part of systemic health^[4]. It's a primary concern for all the health care workers to motivate and educate people related to oral hygiene. At the same time, they should be able to keep their oral cavity active. There is not much literature available on the oral health needs of health care workers in India. So, the aim of the study is to assess the oral

health needs of health care workers in Udaipur, India.

Methodology

Materials and Methods

Study Design and Population: A descriptive cross-sectional study was conducted among the health care workers from the entire Primary Health Centres of Udaipur city, Rajasthan, India, in the month of August 2021. All the employees of PHC's were invited from 2nd August to 7th August, 2021 in the Department of Public Health Dentistry, Darshan Dental College & Hospital, Loyara, Udaipur (Raj).

Ethical Approval, Official Permission and Informed Consent:

The Ethical Committee of Darshan Dental College and Hospital cleared the study protocol and granted ethical clearance. Official permission was taken from the authorities of concerned centres. Written informed consent was also obtained from the participants who were willing to participate. 125 participants were invited out of which 80 gave consent. Hence, they were included in the study.

A validated, self-administered, structured case history format was developed and tested all participants, who were interviewed to gain feedback on the overall acceptability of the format in terms of length and language clarity. Then complete case history and dental indices related to dental caries and tooth wear were recorded. Confidentiality and anonymity of the respondents were assured.

The case history included questions on

- General information of the patient
- History recording
- Examination of the patient
- Establishment of provisional diagnosis
- Necessary investigations
- Final diagnosis
- Comprehensive treatment planning

DMFT index was given by Henry T. Klein, Carrole E. Palmer and Knutson JW in 1938. It measures the irreversible changes caused by dental caries in mouth [5]. The Decayed Missing Filled Teeth (DMF) index has been in use for about 65 years, and is well established as the leading measure of caries experience in dental epidemiology [6]. We have taken the "D" component of DMFT index to record dental caries in participants.

Attrition is defined as the loss of tooth substance as a result of tooth to tooth contact during normal or parafunctional masticator activity. Smith and Knight introduced Tooth Wear Index in 1984 to record tooth wear findings in hard tissues of oral cavity [7]. We have recorded dental attrition using Smith and Knight Index.

Statistical analysis: The data was analysed using IBM SPSS version 21. Descriptive statistics were calculated and tables were prepared.

Results

A Total of 110 participants were taken into consideration out of which 80 health workers participated in the study, minimum age of the participants was 22 years and maximum age was 48years. The mean of participants was 38.7 years [Table-1]. Demographic data showed that majority of the respondents were male (68.7%) as compared to female (31.3%) [Table-2]. Majority of the health workers

agreed that oral health is integral part of the general health. Prevalence of dental caries was found to be among 87.5% of the participants. Root stumps were found among 16.3% of participants, mainly in posterior teeth. Attrition of teeth was found among 65% of participants. Grossly decayed teeth were found among 17.5% of participants [Table-3]

Table 1: Distribution of participants according to age

| | N | Minimum | Maximum |
|----------------|----|---------|---------|
| Age (in years) | 80 | 22 | 48 |

Table 2: Distribution of participants according to gender

| | | Frequency | Percentage |
|--------|--------|-----------|------------|
| Gender | Female | 25 | 31.3 |
| | Male | 55 | 68.7 |
| | Total | 80 | |

Table 3: Distribution of participants according to oral health needs

| Clinical findings | | Frequency | Percentage |
|-------------------|-----|-----------|------------|
| Dental caries | No | 10 | 12.5 |
| | Yes | 70 | 87.5 |
| Root stumps | No | 67 | 83.8 |
| | Yes | 13 | 16.3 |
| Attrition | No | 28 | 35 |
| | Yes | 52 | 65 |
| Grossly decayed | No | 66 | 82.5 |
| | Yes | 14 | 17.5 |

Discussion

Our aim of the study was the assess the oral health needs of all the health care workers in Udaipur, India. They were given a formal invitation to attend the oral screening and check-up program in the hospital campus. It was conducted over a period of 6 days with extensive oral health check-up modalities. We have correlated our findings with various similar group professionals.

Fotedar S *et al.* in 2018 [8] conducted a study among primary health care workers in Shimla. Their mean age of participants was 48.4 years which is in correspondence with the mean age of participants in our study which is 38.7 years. This can be attributed to the fact that index age group recommended by WHO which has the highest tendency of dental caries is 35-44 years.

The number of males participated in our study was 68.7%. This can be correlated with a study conducted by Baishya B *et al.* in 2019 [9] where 62.5% of participants were males.

Dental caries is one of the most prevalent diseases across the world. It affects people of all age. Pre disposing factors can increase the chances of dental caries in population. In our study we found 87.5% of the population was suffering from dental caries as per the finding with DMFT index. This is in accordance with the findings of Aggnur M *et al.* in 2014 [10] who found that almost all participants (97.2%) had dental caries. Also the findings by Kumar S *et al.* in 2014 [11] found high prevalence of dental caries in their target group of factory workers (D= 5.8) which is significantly higher in any occupational group workers.

On the contrary, Singh M *et al.* in 2015 [12] found the oral health of workers to be comparatively better with dental caries in only 46.5% of the participants.

In our study, the percentage of root stumps and decayed teeth were 16.3% and 17.5% respectively. This contributes to the lack of oral health awareness among health care

workers in India. This is in synergism with the findings of Aggnur M *et al.* in 2014^[10] who found that the prevalence of decayed teeth and prosthetic needs was among 20.2% of health care workers of Ambala, India.

A dedicated health care worker is one of the most important elements in the recovery or stability of a patient's health. All HCWs carry a tremendous responsibility to assist and provide for the best possible outcomes for the patient. Control of various communicable diseases is also one of the tasks of these workers. Due to the high degree of responsibility involved, the health of these workers is also of utmost concern^[10].

The impact of oral disease on people's every-day lives is subtle and pervasive, influencing eating, sleeping, work and social roles. The prevalence and recurrences of these impacts constitutes a silent epidemic.

Conclusion

The intention of this cross-sectional study was to provide systematic information on the oral health needs of health care workers in Udaipur, India as it will help in promoting a healthy lifestyle by incorporating healthy oral habits and transferring the same to the people they serve.

Some of the results of the present study are compared with other population groups as a limited number of studies have been conducted on oral health of HCWs. We invited all the health care workers of the vicinity. The reasons for few people opting out of the study can be lack of awareness, dental fear and anxiety, lack of time and acceptability of dental treatments.

A lot of work needs to be done still among health care workers regarding oral health education, training about hygiene practices, detection of early lesions and diseases, referrals and follow ups.

In view of the findings, we would recommend:

- Regular dental check-ups of all the health care workers at their respective health care facilities or nearby dental facilities.
- Health education should be given to all the health workers to enhance their awareness, knowledge and practices toward oral health care and maintenance and to increase their screening capacity for the common dental problem which will serve the community in the long way
- Government should make some oral health policies for their employees to bear their expenses for dental treatment.
- There is an urgent need for further studies and research in this area as very limited previous data is available.

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