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ORAL HYGIENE AWARENESS AND PRACTICE AMONGST PATIENTS VISITING THE DEPARTMENT OF PERIODONTOLOGY AT GOVERNMENT DENTAL COLLEGE AND HOSPITAL, JAMNAGAR

Dental Science

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ABSTRACT

Background: Oral diseases are a major public health concern owing to their high prevalence and their effects on the individual's quality of life. Although many studies have been carried out from time to time to assess the knowledge and behaviour of people about oral health, there is still a lack of awareness and practice regarding the same. **Aim:** To assess oral hygiene awareness among patients visiting the Department of Periodontology at Government Dental College and Hospital, Jamnagar **Materials & Methods:** A cross-sectional study was carried out among 500 patients visiting the Department of Periodontology at Government Dental College and Hospital, Jamnagar. Subjects were selected using a convenient sampling technique and were asked to fill a self-constructed questionnaire consisting questions regarding awareness and practices related to oral hygiene. Responses from the patients were evaluated in terms of numbers and percentages. **Results:** The results of the study showed an acute lack of oral hygiene awareness and limited knowledge of oral hygiene practices as well as effect of poor oral hygiene on systemic health. **Conclusion:** There is an urgent need for comprehensive educational programs to promote good oral hygiene and impart education about correct oral hygiene practices.

KEYWORDS

Oral hygiene, Awareness, Knowledge, Practice

1. INTRODUCTION

Oral diseases have been a persistent public health problem globally, owing to their high prevalence and their effects on the quality of life of an individual. [1] Various etiological factors are there which leads to these oral diseases such as genetic predispositions, developmental problems, poor oral hygiene and traumatic incidents. [2] Patients comply better with oral health care routines when encouraged and supportively reinforced. Lack of information is among the main reasons for not sticking to oral hygiene practices. Additionally, oral health attitude and beliefs are significant for oral health behaviour.[3]

Keeping a healthy oral status needs combined efforts in part of the dentist as well as the patient himself. An important factor that decides the oral health of a population is the approach of its people toward their dentition. [4]

Oral disease prevention can be accomplished by maintaining proper oral hygiene. Equal importance should be given for both oral health and systemic health. It is considered that there is link between oral health and systemic disease like diabetes mellitus, hypertension, cardio vascular disease, etc.[5]

Although many studies have been carried out from time to time to assess the knowledge and behaviour of people about oral health, there is still a dearth of education regarding the same in Indian population. [6] Therefore, the present study was conducted to determine the oral hygiene awareness and practices amongst patients visiting the Government Dental College and Hospital, Jamnagar.

2. MATERIALS AND METHODS

2.1. Study design and sample size:

The proposed study was conducted as a cross-sectional observational study to assess oral hygiene awareness and practice in a sample of patients seeking dental care. This study was carried out among patients visiting the Department of Periodontology, Government Dental College and Hospital, Jamnagar. The sample size was estimated by use of a sample size calculation for estimating a single proportion (α =0.05, the prevalence of adequate oral health awareness). A total of 500 subjects were included using a convenient sampling technique till the estimated sample size was reached and a questionnaire was given to them. Ethical committee approval was obtained from institutional ethics committee M.P. SHAH Govt. Medical College and Gurugobind Hospital, Jamnagar (Ministry of Health and Family Welfare Department of Health Research- EC/NEW/INST/2021/1896). The subjects were explained about the study and informed consent was obtained from every patient.

2.2. Data collection

A closed ended questionnaire written in English/ Hindi/ Gujarati language was given to each subject. Both educated and illiterate groups between 18 to 75 years of age were included. Illiterate individuals were assisted and questions were dictated to them so that they were able to fill it with ease. The questionnaire included information related to the patient's name, age, sex, education, occupation and residence. It further included 11 questions based on knowledge, awareness and practice related to oral health.

Questionnaire

Name:
Age:
Sex: M/F
Occupation:
Address:
Educational status:

1. Do you clean your teeth?
□Yes □No

2. How do you clean your teeth?
□Toothbrush and toothpaste
□Toothbrush and powder
□Others (Datun, Finger, Charcoal powder)

3. How often do you brush your teeth each day?

□Once
□Twice
□More than twice
□Sometimes

4. What type of tooth brushing methods do you employ?
□Vertical
□Horizontal
□Combined

5. Which secondary methods for plaque control do you use?
□Dental floss
□Interdental brushes
□Toothpicks
□None

6. Do you clean your tongue?
□Yes □No

7. Have you ever noticed smell from your mouth?
□Yes □No

8. Do you know oral health is related to systemic health?
□Yes □No

9. How often do you visit a dentist?
□Only in problem
□Once in three months
□Once in 6 months
□Between 1 and 2 years

10. Do you think it is essential to meet a dentist after 6 months?
□Yes □No

11. Have you ever noticed bleeding from gums while brushing or chewing?
□Yes □No

The responses were obtained from the patients and the results were subjected to statistical analysis.

2.3. Data analysis

The data was first entered in **Microsoft Excel 2019 MSO (Version 2210)** and then the results were analysed by using SPSS statistical software in terms of percentages. Associations between discreet variables were tested using Chi-square test. In all the cases, $P \leq 0.05$ was considered significant.

4. RESULTS

A total of 500 patients participated in the study from age 18 to 75 years. The data related to gender and educational status is given in **Fig 1 and Fig 2**. Out of the 500 patients, females were more in number 55.2% as compared to males 44.8%.

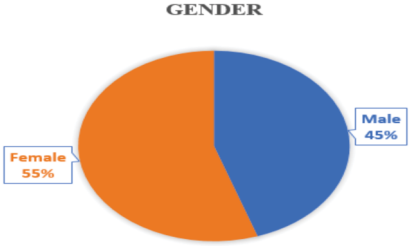

Fig. 1 Distribution of study population in terms of gender

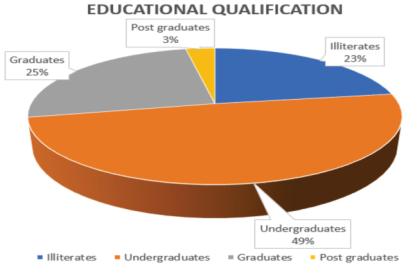

Fig. 1 Distribution of study population in terms of educational qualification

Oral hygiene practices

On assessing the oral hygiene practices among the study population **(Table 1),** majority of patients, both males and females preferred to use toothbrush and toothpaste as compared to other aids. Around 91% individuals clean their teeth and around 75.6% patients brush their teeth with toothbrush and toothpaste. However, a small percentage of patients do use toothpowder (10.2%), datun 6.8%) and finger (7.4%). Majority of the patients brush their teeth once a day (63.2%) and using horizontal method of brushing (62.4%).

Table 1: Responses of the participants

No.	Questions	%	n
1.	Teeth cleaning		
	Yes	91	456
	No	9	44
2.	Aids of cleaning		
	Toothpaste	75.60	378
	Toothpowder	10.20	51
	Datun	6.80	34
	Finger	7.40	37
3.	Frequency of tooth brushing		
	Once	63.20	316
	Twice	18.20	91
	More than twice	4	21
	Sometimes	14.60	72
4.	Method of brushing		
	Horizontal	62.40	312
	Vertical	9.60	48
	Combined	28	140
5.	Interdental aids		
	Toothpick	14	70
	Interdental brush	0.40	2
	Dental floss	2.40	12
	None	83.20	416
6.	Tongue cleaning		
	No	52.80	264
	Yes	47.20	236
7.	Halitosis		
	Yes	47.40	237
	No	52.60	263
8.	Systemic relation		
	Yes	27	135
	No	73	365
9.	Visits to dentist		
	Only in problem	76.20	381
	Once in 3 months	2.20	11
	Once in 6 months	9.80	49
	Between 1 to 2 years	11.80	59
10.	Knowledge about visiting dentist every 6 months		
	Yes	24.8	124
	No	75.2	376

In the study, it was seen that bleeding gums were more prevalent in individuals not maintaining their oral hygiene through proper toothbrushing **(Table 2)**. This result was statistically significant.

Chi square value= 183.65, p value= 0.001

Table 2: Association between toothbrushing and presence of bleeding from gums

Toothbrushing	Bleeding present	Bleeding absent	Total
Yes	21 (5.1%)	394 (94.9%)	415 (83%)
No	53 (62.3%)	32 (37.7%)	85 (17%)
Total	74	426	500

Halitosis was present in 47.2% of the study population **(Table 3).** It was observed that individuals who did not cleaned their tongue had more prevalence of halitosis than the individuals who does, which was statistically significant.

Chi square value=6.187, p value= 0.01

Table 3: Association between tongue cleaning and presence of halitosis

Tongue cleaning	Halitosis present	Halitosis absent	Total
Yes	98 (41.5%)	138 (58.5%)	236 (47.20%)

No	139 (52.7%)	125 (47.3%)	264 (52.80%)
Total	237	263	500

It was also observed that there was association of frequency of tooth brushing with presence of halitosis and bleeding from gums **(Table 4).** It was reported that patients who brushed their teeth occasionally or once a day presented with more halitosis. Also bleeding from gums while brushing or chewing was more in patients who brushed their teeth occasionally **(Table 5)**.

Table 4: Association between frequency of tooth brushing and presence of halitosis

Frequency	Halitosis present	Halitosis absent	Total
Once	144 (45.6%)	172 (54.4%)	316 (63.20%)
Twice	38 (41.8%)	53 (58.2%)	91 (18.20%)
More than twice	14 (66.7%)	7 (33.3%)	21 (4.2%)
Occasionally	41 (56.9%)	31 (43.1%)	72 (14.60%)
Total	237	263	500

Chi square value = 7.344, p value= 0.06

Table 5: Association between frequency of tooth brushing and presence of bleeding from gums

Frequency	Bleeding present	Bleeding absent	Total
Once	32 (10.1%)	284 (89.9%)	316 (63.20%)
Twice	6 (6.6%)	85 (93.4%)	91 (18.20%)
More than twice	4 (19%)	17 (81%)	21 (4%)
Occasionally	32 (44.4%)	40 (55.6%)	72 (14.60%)
Total	74	426	500

Chi square – 60.81, p value- 0.001

5. DISCUSSION

The study aimed at assessing the oral hygiene awareness and practices among the study population. The study pointed that oral hygiene practice is still ignored and given not much of the importance. There is lack of awareness and knowledge among the population regarding the same. Our study depicted that female patients have utilized the dental services more than the male patients similar to the study done by Venta et al.,[7] which is in contrast to the higher rate of utilization by male patients reported in Kapoor et al. [8] It has also been evaluated that educated patients have availed the dental services which shows that education plays an important role in oral health awareness. Brushing is the most common and efficient method for tooth cleaning. Majority of patients cleaned their teeth (91%), however still there were individuals who did not even brush their teeth. Also in this study, 18.2 % individuals brushed their teeth twice daily which is a very low percentage compared to a study in United States in which 90% of the study group brushed their teeth twice daily. [9] Use of interdental aids is still not a common practice among the general population. In our study, only few patients uses dental floss (2.4%) and interdental brushes (0.4%) which shows quite similar results with that of study done in Saudi Arabia in 2001 [10].

Bad breath was experienced by 47.4% of the patients in the present study which is in contrast to the study results of an epidemiologic survey of the general population of Japan where 24% of the individuals examined complained about bad breath.[11] Tongue cleaning was done by 47.2% of the patients in the present study which is in contrast with the study done by Jain et al. in which only 20% of the studied population cleaned their tongue.[12] This basic and simple method of maintaining oral hygiene is not very much popular among the population which shows lack of oral health awareness.

Knowledge regarding the effect of oral health on systemic health and vice versa is still lacking among general population. Majority of the study subjects i.e. 73% were unaware about the relationship between the oral health and systemic health which is shows similar results as a study done by Kapoor et al 2014 [8].

Knowledge and awareness are the key factor for availing dental facilities. Still patients are visiting dentists only in problems, and not routinely. In the present study, 76.2% of the total population visit the dentist only in problem while only 9.8% of the patients visit the dentist on regular basis once in 6 months. In this study, there it was observed that patients who brushed teeth occasionally did present complain of halitosis and bleeding gums. Also, patients who do not clean their tongue experienced bad breath.

6. CONCLUSION

The results of the study suggested that there is a definite lack in the oral hygiene practices and awareness among the population. Furthermore, the people are not much aware about the relationship between oral health and systemic health. Therefore, there is need to increase the awareness among the general population and educate them to proper oral care. There a need to spread knowledge about how the oral problems is a burden to society and how we can prevent diseases just by maintaining proper oral hygiene.

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