

Motivating Factors for Seeking Oral Health Care at a Teaching Dental Hospital in South India: A Cross-sectional Study

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ABSTRACT

Background: Utilization of dental services is influenced by a complex set of behavioral, sociodemographic, and culturally related factors that contribute to people's decision in choosing dental health care providers as well as utilization of dental services. So the objectives of the study are to elicit reasons for dental visit and to know reasons for the utilization of dental services in a teaching dental hospital.

Materials and methods: A descriptive cross-sectional study was carried out on 300 patients visiting the outpatient department of a teaching dental hospital for dental services. Data were analyzed by using Statistical Package for the Social Science (SPSS) 20 version. Descriptive analysis was done by using chi-square test.

Results: Out of 300 patients, 46.7% (140) were males and 53.3% (160) were females. The mean age of the study population was 35.08±16.21 years. The availability of good quality of treatment is the main reason behind people choosing the teaching dental hospital for utilization of services and 48.7% visited the dentist for the cause of dental pain. The distribution of study subjects based on education, occupation, and income with regard to reasons for visiting the teaching hospital is statistically significant ($p < 0.05$).

Conclusion: This study reveals that there is a need to inculcate preventive-oriented health-seeking behavior, which by itself reduces the burden of dental treatments.

Keywords: Dental services, Sociodemographic factors, Teaching dental hospital, Utilization.

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INTRODUCTION

General health cannot be attained or maintained without oral health. The mouth is regarded as a mirror and the gateway to health.^{1,2} The dental health of the general population in developed countries has improved over the past four decades, but people from developing countries continue to have high levels of dental disease. In developing countries like India, evidence repeatedly shows suboptimal utilization of dental services.³ Preventive dental visits help in the early detection and treatment of oral diseases.⁴ But the provision of preventive dental care for adults depends on the individual patient's initiatives in utilizing dental care. Utilization is the actual attendance by the members of the public at health care facilities to receive care.^{5,6} Utilization of dental services is influenced by a complex set of factors.^{7,8} Behavioral, sociodemographic, and culturally related factors contribute to people's decision in choosing dental health care providers as well as utilization of dental services. In order to improve oral health outcomes, an adequate knowledge of the individuals' use of health services and the factors predictive of this behavior is essential. The socio-demographic background of an individual is an important variable predictive of dental services use.⁷

There are 301 dental colleges in India, which exceeds the number of dental institutions in the United States, Brazil, and the whole of Europe. It is apparent that there is unequal distribution of dental colleges in India across its states, but this could be anticipated in a vast country like India with its huge cultural and economic diversity. The residual state of Andhra Pradesh, a south Indian state after bifurcation, has 13 dental institutions with the population of the state being near to 4.9 crores according to the 2011 census. There is unequal distribution of dental colleges across the 13 administrative areas (districts) of the state with no dental colleges in Vizianagaram, Prakasam, and Ananthapur districts. Guntur district is 1 of the 13 districts of Andhra Pradesh located along the east coast of the Bay of Bengal, bearing a population of 4,889,230 according to the 2011 census with an area spreading over 11,391 km.⁹ There is only one teaching-based dental institution available for the dental care of population in Guntur

district. To calculate the proportion of the population seeking dental care at teaching-based dental hospitals, and to compare this with its complement, is beyond human efforts. Such attempts would yield inaccurate data at the least. But it is quite obvious that the attendance of patients to dental colleges is high. This created a keenness in us to find out the factors that drive patients toward seeking care at teaching-based dental institutions. Consequently, this study was done to find out the motives for utilization of services at a teaching dental hospital and to find the association between predefined socio-demographic factors and the utilization of dental services at teaching-based institutions.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted to find out the motives for utilization of dental services at a teaching dental hospital. The study was carried out in the outpatient department of a teaching dental institution. The time period set for the collection of data was 1 week and the sample was obtained by systematic random sampling with a sampling interval of 8. This yielded a sample of 298, which was rounded to 300 by including two more patients on the last day regardless of the sampling interval. Subjects were interviewed face to face with a specific structured questionnaire that was checked for validity and reliability. The validity of the questionnaire was checked by doing a pilot study. The data of the pilot study was not included in the main study and necessary modifications were made. The questionnaire included details on the patients' socio-demographic characteristics, reasons for dental visit, and utilization of services at the teaching dental hospital. Data was analyzed using Statistical Package for the Social Sciences (SPSS) 20 version. Descriptive analysis was done by using chi-square test. A p-value of 0.05 was considered the threshold for statistical significance.

RESULTS

The study results showed that out of 300 patients, 46.7% (140) were males and 53.3% (160) females. Majority of the patients visiting the teaching dental hospital belonged to the age group of 21 to 30 years (35%). Many of the patients visiting the dental hospital for care were illiterates (30.7%) and belonged to the 2nd category of income group, i.e., having an income of INR 1,601 to 4,089 according to the modified Kuppaswamy scale (2012).¹⁰ A total of 30.7% of these patients were unemployed. Toothache was the most common reason for seeking care (50.4%), followed by decayed tooth (14.7%). Regular dental check-ups (0.3%) were at the last end of the spectrum of reasons for dental visits (Table 1). Availability of good treatment was

found to be the major reason for seeking care at the dental institution (39.3%) (Table 2). The differences in distribution of study subjects based on education, occupation, and income with regard to the reasons for seeking care at the teaching hospital was statistically significant ($p < 0.05$). The main reason for choosing the institution for dental care among illiterates was availability of good treatment (38%), while the prime reason among literates was referral by someone (38.9%) (Table 3). While the availability of good treatment was the major reason for choosing the institution among unemployed patients (40.4%), the availability of specialists was the major reason among the professionals (66.7%) (Table 4). Availability of good treatment was the most common reason for choosing the dental hospital regardless of the income group the patient belonged to Table 5.

DISCUSSION

A descriptive cross-sectional study was done to analyze the motives in the utilization of services at a teaching

Table 1: Distribution of patients under different reasons for dental visit

<i>Reasons for dental visit</i>	<i>n</i>	<i>Percentage</i>
Regular dental check-up	1	0.3
Referred by medical professional	1	0.3
Gum diseases	22	7.4
Bad breath	9	3.0
Deposits on teeth and gingiva	27	9.0
Mobile teeth	18	6.0
Toothache	151	50.4
Sensitivity of teeth	18	6.0
Food lodgement	0	0
Tooth discoloration	1	0.3
Decayed tooth	44	14.7
Malocclusion	6	2.0
For replacement of teeth	29	9.7
Trauma due to road accidents	5	1.7
Inability to open mouth	0	0
Burning sensation	0	0
Ulcers in mouth	1	0.3
Facial swelling	1	0.3

Table 2: Distribution of patients under different reasons given for choosing teaching dental hospital

<i>Reason for choosing teaching dental hospital</i>	<i>Frequency</i>	<i>Percentage</i>
Cheaper	72	24.0
Availability of specialists in individual departments	7	2.3
Nearer to the place they stay	9	3.0
Referred by someone	93	31.0
By seeing advertisements	1	0.3
For giving good treatment	118	39.3
Total	300	100.0

Table 3: Distribution of the subjects based on their education and reasons for choosing a teaching dental hospital

Education	Why only dental institution						Total (n%)
	Cheaper	Availability of specialists in individual departments	Nearer to the place they stay	Referred by someone	By seeing advertisements	Availability of good treatment	
Illiterate	23	1	3	30	0	35	92
	25.0%	1.1%	3.3%	32.6%	0.0%	38.0%	100.0%
Primary school	16	0	2	17	0	15	50
	32.0%	0.0%	4.0%	34.0%	0.0%	30.0%	100.0%
Middle school	11	0	0	13	0	16	40
	27.5%	0.0%	0.0%	32.5%	0.0%	40.0%	100.0%
High school	14	1	0	16	1	28	60
	23.3%	1.7%	0.0%	26.7%	1.7%	46.7%	100.0%
Intermediate/post-high school diploma	2	2	0	6	0	6	16
	12.5%	12.5%	0.0%	37.5%	0.0%	37.5%	100.0%
Graduate/postgraduate	4	0	1	4	0	15	24
	16.7%	0.0%	4.2%	16.7%	0.0%	62.5%	100.0%
Professional/honors	2	3	3	7	0	3	18
	11.1%	16.7%	16.7%	38.9%	0.0%	16.7%	100.0%
Total	72	7	9	93	1	118	300
	24.0%	2.3%	3.0%	31.0%	0.3%	39.3%	100.0%

p = 0.001 (significant)

Table 4: Distribution of the subjects based on their occupation and reasons for choosing a teaching dental hospital

Occupation	Why only dental institution?						Total (n%)
	Cheaper	Availability of specialists in individual departments	Nearer to the place they stay	Referred by someone	By seeing advertisements	Availability of good treatment	
Unemployed	30	3	6	41	1	55	136
	22.1%	2.2%	4.4%	30.1%	0.7%	40.4%	100.0%
Unskilled workers	25	1	0	25	0	24	75
	33.3%	1.3%	0.0%	33.3%	0.0%	32.0%	100.0%
Semiskilled workers	5	0	2	6	0	7	20
	25.0%	0.0%	10.0%	30.0%	0.0%	35.0%	100.0%
Skilled workers	2	0	0	6	0	8	16
	12.5%	0.0%	1%	37.5%	0.0%	50.0%	100.0%
Clerical, shop owners, farmers	9	1	1	12	0	20	43
	20.9%	2.3%	2.3%	27.9%	0.0%	46.5%	100.0%
Semi-professionals	1	0	0	3	0	3	7
	14.3%	0.0%	0.0%	42.9%	0.0%	42.9%	100.0%
Professionals	0	2	0	0	0	1	3
	0.0%	66.7%	0.0%	0.0%	0.0%	33.3%	100.0%
Total	72	7	9	93	1	118	300
	24.0%	2.3%	3.0%	31.0%	0.3%	39.3%	100.0%

p = 0.00 (highly significant)

dental hospital. The age of the study population ranged between 4 and 82 years, with the mean age being 35.08 ± 16.21 years. Females outnumbered males in the study sample. This may be because women have an esthetic focus and a desire to look attractive and hence pay more attention to the appearance of their teeth.¹¹ Women are more sensitive to pain when compared to men,^{12,13} so

their percentage of attendance in dental service utilization is more. Majority of the patients visiting the teaching dental hospital belonged to the age group 21 to 40 years (53.7%). The reasons for this could be that the people of this particular age group can come to hospital on their own without any assistance. Unemployed patients were more in the study sample compared to the employed,

Table 5: Distribution of the subjects based on their income and reasons for choosing a teaching dental hospital

Income	Why only dental institution?						Total (n%)
	Cheaper	Availability of specialists in individual departments	Nearer to the place they stay	Referred by someone	By seeing advertisements	Availability of good treatment	
< 1,600	18 25.7%	1 1.4%	3 4.3%	23 32.9%	0 0.0%	25 35.7%	70 100.0%
1,601–4,809	33 26.8%	1 0.8%	3 2.4%	41 33.3%	0 0.0%	45 36.6%	123 100.0%
4,810–8,009	12 20.7%	1 1.7%	1 1.7%	15 25.9%	1 1.7%	28 48.3%	58 100.0%
8,010–12,019	6 18.8%	0 0.0%	1 3.1%	11 34.4%	0 0.0%	14 43.8%	32 100.0%
12,019–16,020	1 25.0%	1 25.0%	0 0.0%	1 25.5%	0 0.0%	1 25.0%	4 100.0%
16,020–32,049	2 25.0%	2 25.0%	1 12.5%	1 12.5%	0 0.0%	2 25.0%	8 100.0%
≥ 32,050	0 0.0%	1 20.0%	0 0.0%	1 20.0%	0 0.0%	3 60.0%	5 100.0%
Total	72 24.0%	7 2.3%	9 3.0%	93 31.0%	1 0.3%	118 39.3%	300 100.0%

p = 0.01 (significant)

the reasons for which could be found in the timings of the dental college, which are more convenient for the unemployed.

The findings of the study show that “toothache” (50.4%) is the main reason for visiting a dentist, and this is in accordance with the results from previous studies done by Fotedar et al, Umashankar Gangadhariah Kadaluru et al, Devaraj et al, Sijan Poudyal et al, Benoit Varenne et al, and Oswal KC.^{3,7,8,14-16} Dental pain adversely affects the quality of life, normal functioning, and daily living of people,^{17,18} and most dental visits are aimed at immediate relief of pain. It could be inferred from the above finding that there may exist a belief among a majority of population that dental visit is elective unless there is pain. It indicates that people have inadequate awareness of the importance of oral health care. Other common reasons for dental visits in the present study are tooth decay and replacement of teeth. The percentage of people visiting the institution for regular dental check-ups was very low, though biannual dental visits are recommended by most of the dentists. Dentistry is perceived to be a useful service only when necessary but not as a crucial part of overall health. Motivation is needed for people to use the services available, so that they can lead a socially and economically productive life.

The encouraging factors in choosing and utilizing services at the teaching dental hospital are availability of good quality of treatment and referred by someone, as in the study done by AJ Al-Hussyeen.¹⁹ Surprisingly, the availability of good treatment was the major reported reason for choosing dental institutions for oral health

care even in low-income groups outclassing the reduced costs of treatment. In the teaching hospital, there was availability of specialists in individual departments; this may be the reason for availability of good quality of treatment. Negligible percentage of the patients visited the dental institution by seeing advertisements, which enunciates the need for promotional activities by dental colleges. One of the limitations in our study is we have not segregated first-time visitors and those who had availed the services twice or more. There might be some differences between these two groups in terms of why they had chosen a teaching-based dental institution. A total of 39.3% of the participants responded that provision of good treatment was the reason for choosing a teaching-based hospital for care, while 31% responded that availability of good treatment could be a reason for their previous experience from the teaching-based dental hospital; there is a good possibility that these participants would pass on the information in their communities and refer new patients to the institution.

Other limitations of this study are that these results could not be extrapolated to other institutions as each individual institution is different in its own way. However, it could not be ruled out that most teaching-based dental institutions share a variety of common characteristics like geographic location and charges for the treatment provided. The questionnaire used in the main study had only close-ended questions that could have refrained the patients from choosing the exact reason, but the best of the provided choices. Knowing trends is not only important for documentation and maintenance

of a comprehensive database, but also helps in making the people concerned about the possible consequences of those trends and motivating them for better. The utilization patterns observed in this study could be used to identify the vulnerable groups that often do not seek care and to bring a change in their attitudes toward oral health-seeking behavior. One of the positive inferences that could be drawn from this study is the availability of quality oral health services at teaching-based dental hospitals. This has to be taken to general public so that they would avail good quality, cheaper care without apprehension. Services at teaching-based hospitals were highly regarded in the study. This gives us a heads-up that these institutions when given support could be of immense help in bringing a change in the oral health status of the country's population toward the better.

CONCLUSION

This study reveals that most of the people have the belief of getting good treatment in a teaching dental hospital and majority of the people are "problem oriented" visitors rather than "prevention oriented." Hence, there is a need to inculcate prevention-oriented health-seeking behavior and to reduce the growing burden of oral diseases in the communities.

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