



Research article

## Evaluation of health seeking behaviour of patients with severe periodontitis visiting private dental college and hospital

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### ABSTRACT

Severe periodontal disease, which may result in tooth loss, was estimated to be the 11th most prevalent disease globally. Despite such high prevalence awareness regarding it is still very little. Understanding of health seeking behaviour is essential to provide need based health care services to the population and managing periodontal diseases. Hence the present research was carried out to identify the determinants of health seeking behaviour in patients visiting private dental college and hospital with severe periodontitis. A cross sectional study was conducted among the patients visiting private dental colleges and hospitals with severe periodontitis between the age group of 18 and above. Data was recorded by a self-administered, structured, pre-tested questionnaire based on items to determine health seeking behaviour of participants in this study. Study included 512 participants, 279 (54.5%) males and 233 (45.5%) females. It was observed that mobile tooth was the most common dental problem reported by 288 (56.3%) participants. Fear was the major reason for not visiting the dentist and constituted about 57 (33.7%) of the total influencing factors. It can be concluded that healthcare seeking behaviour among severe periodontitis patients was poor. So efforts must be made to bring a change in this scenario.

**Keywords:** Severe periodontitis, Response rate, Quality healthcare, Socioeconomic Status, Chronic disease prevention programmes

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### INTRODUCTION

Oral health is among the most critical aspects of general health and wellbeing. Oral health is defined as the absence of any prolonged oral infection or discomfort, as well as any other conditions that limit a person's overall performance like chewing, swallowing, smile, and talking) and psychological health [1]. Despite the fact that oral disorders affect a huge percentage of the population, they have been referred to as a neglected epidemic for many years [2].

There are numerous key drivers in the emergence of periodontitis and other oral ailments, mainly patient-related variables including aging, sexuality, family medical history, and practises for maintaining oral hygiene [3]. Socioeconomic Status (SES) is a key determinant of subsequent experiences with adverse health outcomes and behavioural variables, and it may well serve as a link connecting social inequities with health issues [4]. Periodontitis is among the two significant dental illnesses that affects humanity worldwide at

increasing prevalence, leading to this ignored epidemic [5]. Extensive periodontitis is the eleventh most frequent illness in the world, and it can lead to loss of teeth. In our country, the frequency of periodontal diseases has estimated to vary around 89.6% in the 35-44 age group to 79.9% throughout the 65-74 age group [6]. Periodontitis can indeed be treated successfully and regulated across time with continuous patient support, according to studies [7]. As a result, health-seeking behaviour can become a strong indicator of periodontal disease management. Health Seeking Behaviour (HSB) is defined as a judgment or activity carried out by a person in order to preserve, achieve, or restore good health and avoid illness [8].

The way a population pursues medical services determines how they use quality healthcare. The use of health services can be influenced by a variety of factors such as service charges, proximity to health centers, traditional views, and intellectual level [9]. The few

current studies show that in developing nations such as India, oral healthcare systems are underutilised and dental visits are only made for symptomatic causes<sup>[10]</sup>. People avoid seeing professionals quickly after being conscious of problems for a variety of reasons, including financial insecurity, a lack of knowledge about the implications of their symptoms for diseases of oral cavity, phobia of malignancy, or a lack of faith in healthcare services<sup>[11]</sup>.

The notion of needs has been evaluated as an indicator of outcome over the years<sup>[12]</sup>. According to a literature review, the most prevalent reasons for seeing a dentist are teeth pain and dental decay<sup>[13,14]</sup>. As a result, analyzing health-seeking behaviour is critical, particularly in the case of periodontitis, where individuals are expected to postpone treatment despite the disease's high frequency. As a result, the current study was done to determine the variables of health seeking behaviour in individuals with severe periodontitis who visited private dental colleges and hospitals.

## MATERIALS AND METHODS

After getting approved by the Institutional review Ethical Committee, cross-sectional research was conducted. The research was carried out at the Azamgarh Dental College. The current research was carried out between June 2019 and November 2019. Patients over the age of 18 who visited the Periodontics outpatient department suffering from severe periodontitis have been selected for the analysis. When two and more inter-proximal sites with Clinical attachment level equal or more than 6 mm (on more than one tooth) and one or more than one inter-proximal site with Periodontal depth of 5 mm or more were present, then it was classified as severe periodontitis<sup>[15]</sup>. Written consent, socio demographic characteristics, and a questionnaire were all part of a typical study proforma. Prior to the main survey, a pilot study on 25 patients verified the questionnaire. Cronbach's Alpha was used to determine the tool's validity, which was determined to be 0.88.

Before starting the survey, Author's estimated the sample size. Author asked around 800 patients to be the part of the study, with a 60 percent response rate projected. (The margin error was kept at 0.5, and the confidence level at 95 percent). The sample size was estimated to be 480 people. Since we can expect subjects to leave the study in between because of various reasons, so total sample taken was 540, out of which 512 completed the study.

The survey was self-administered and had a closed-ended format. The questionnaire was originally written in English and then translated into Hindi. The questionnaire included demographic questions as well as questions regarding participants' oral health practises and health-seeking behaviour. It included questions on any trips to the dentist, the frequency and reason for those appointments, dental hygiene routines, oral health difficulties, and harmful habits.

The patients were asked what factors are crucial to them while choosing dental facilities. The investigator answered any questions that arose while filling out the questionnaires. The collected data was examined using the two scales. On a dichotomous scale, the yes and no questions were examined. The highest total score was 20, while the lowest was 9.

The patient's total score was divided into two categories, one was negative healthcare seeking behaviour (scores 9 to 14) and another was positive health seeking behaviour (scores 15 to 20). A total of 512 people took part in the study. The investigator gave each participant up to ten minutes to respond to the questions. Before completing out the questionnaire, all of the respondents completed an informed consent form. A single researcher gathered the data who has been previously trained. Data was collected and entered into MS Excel (MS Office version 2007). The chi-square test was used for the analysis using SPSS 21 software.

## RESULTS AND DISCUSSION

Table 2 shows the distribution of total males and females included in the study and the distribution of study participants according to various age groups. Study included 279 (54.5%) of males and 233 (45.5%) of females.

**Table 1:** Descriptive statistics on habits, oral hygiene of study participants based on gender

Variable	N	%	P value	
Adverse habits	Smokeless tobacco	281	54.8	0.02*
	Smoke tobacco	66	12.8	
	Betel nut	104	20.3	
	No habits	61	12.1	
How do you clean your teeth?	Brush	269	52.5	0.04*
	Fingers	199	38.8	
	Twig	44	8.5	
What material do you use to clean your teeth?	Toothpaste	205	40	0.04*
	Snuff	135	19.3	
	Powder	147	28.7	
	Others	25	4.8	
What method do you follow for cleaning the teeth?	Horizontal	163	31.8	0.74
	Vertical	153	29.9	
	Both	196	38.3	
How often do you change your tooth brush?	Three months	36	13.4	0.02*
	Six months	80	29.7	
	One year	153	56.9	
How many times do you clean your teeth?	Once daily	429	83.7	0.545
	Twice daily	66	12.8	
	Not daily	17	3.5	
Are you aware of any inter-dental aids?	Yes	133	25.9	0.01*
	No	379	74.1	
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	No	379	74.1	

\*p<0.05; significant

**Table 1:** Descriptive statistics on demographic characteristics of study participants

Variable		N	%
Gender	Male	279	54.5%
	Female	233	45.5%
Age	20 and below	28	5.6%
	21-40	246	48%
	41-60	194	37.8%
	61 and above	44	8.6%
Total		512	100%

**Table 3:** Differences in responses of oral health problems among study participants

Variable	n	%	p value	
For what dental problem did you visit dental clinic?	1. Toothache	91	17.7	0.01*
	2. Bleeding gums	63	12.3	
	3. Mobile teeth	288	56.3	
	Halitosis	70	13.6	
Span of dental problem	1. Less than one year	135	26.4	<0.001*
	2. More than one year	377	73.6	
Any family member suffering from same disease?	Yes	259	49.6	0.93
	No	253	49.4	
Have you ever visited dentist?	Yes	372	72.6	<0.001*
	No	140	27.4	
Last dental visit in 12 months	Yes	203	39.7	<0.001*
	No	309	60.3	

\*p&lt;0.05; significant

Table 3 depicts that the significantly common dental problem was mobile teeth among 288 (56.3%) participants (p<0.05). Out of the 72.6% who visited the dentist, majority had the chief complaint of mobility of tooth (43.2%). Majority of the participants visited dentist only if there was any symptom (77.9%).

**Table 4:** Differences in responses about receiving oral health care among study participants

Variable	n	%	p value	
Who has advised you to visit dental clinic?	1. Neighbors	291	56.8	0.03*
	2. Relatives	136	26.6	
	3. Colleagues	55	10.7	
	4. No one	30	5.9	
Do you have any dentist nearby your place?	Yes	332	64.8	0.03*
	No	180	35.2	
Have you ever received any dental treatment?	Yes	343	67	<0.001*
	No	169	33	
Where did you go for dental treatment	1. Government hospital	92	24.7	0.01*
	2. Private dental institute	137	36.8	
	3. Medical store	95	25.5	
	4. Private dental clinic	19	5.2	
	5. Not undergone any T/t	29	7.8	
	6. Other	0	0	
Reasons for preferring particular centre	1. Others advice	70	18.8	0.54
	2. Accessibility	128	34.4	
	3. Less expenditure	164	44.1	
	4. Quality treatment	10	2.7	
Reasons for not receiving any dental treatment	1. Fear	57	33.7	0.37
	2. Expensive	46	27.2	
	3. No time	38	22.4	
	4. Lack of knowledge	18	10.6	
	5. Don't think important	10	6	

\*p&lt;0.05; significant

Table 4 shows that Private dental institute was the place of choice for dental treatment. Accessibility was the next reason for choosing the health care source among 34.4% participants. It was found that fear was the major reason among 33.7% of participants for not receiving dental treatment followed by expenses of treatment for

27.2% of participants.

**Table 5:** Differences in responses about health care seeking behaviour among study participants:

Variable	n	%	p value	
Have you tried home remedies for dental problem?	Yes	391	76.1	0.03*
	No	121	23.9	
What kind of home remedies?	1. Clove oil	207	52.9	0.63
	2. Balm	155	39.6	
	3. Other	29	7.4	
Opinion on your state of teeth	1. Above average	87	16.9	0.09
	2. Average	276	53.9	
	3. Below average	149	29.1	
Opinion on your state of gums	1. Above average	49	9.5	<0.001*
	2. Average	75	14.6	
	3. Below average	388	75.9	
Do you think there is a need to improve your oral health?	Yes	489	95.5	<0.001*
	No	23	4.5	
What step you will take to improve it?	1. Start visiting dentist	390	79.7	<0.001*
	2. Use of proper brushing method and material	99	20.3	
Do you feel the need to improve dental facilities	Yes	324	63.3	0.01*
	No	188	36.7	
Suggestions to improve dental facilities around you	1. Less cost	149	46	0.04*
	2. Free treatment	83	25.6	
	3. Dentist nearby	47	14.5	
	4. Dentist camp nearby	45	13.9	

\*p&lt;0.05; significant

Table 5 represents that 391(76.1%) of respondents tried home remedies for curing their dental problem, clove oil application (52.9%) being the most commonly used home remedy.

**Table 6:** Association of Health seeking behaviour towards common oral diseases and demographic variables:

Sample characteristics	Variables	Health seeking behavior		P value
		Negative n (%)	Positive n (%)	
Age in years	20 and below	19 (67.8%)	9 (32.2%)	0.71
	21-40	107 (55.2%)	87 (44.8%)	
	41-60	176 (71.5%)	70 (28.5%)	
	61 and above	27 (61.4%)	17 (38.6%)	
Gender	Male	181 (64.9%)	98 (35.1%)	0.73
	Female	163 (69.9%)	70 (30.1%)	

\*p&lt;0.05; significant

Oral health entails more than just having healthy teeth; scientific proof dentistry has demonstrated the correlation among oral health and overall health. It has been proven in the literature that serious chronic periodontitis, for example, is linked to systemic disorders such as heart disease as well as diabetes. The factors influencing the use of oral healthcare system by individuals with severe periodontal problems in developing nations are poorly understood [2]. The preponderance of periodontitis patients was between the ages of 41 and 60, which was comparable to Yaacob M et al [16].

A loose tooth (56.3 percent) has been the most frequent cause for requesting treatment of diseases of oral cavity in this research, whereas tooth ache was the most frequent source in research by Bommireddy et al [17]. And edentulous arch was the most prevalent concern in research by Bader K. Alzarea et al [18]. This

could have been attributed to the research population's differences, which were countryside and elderly populations, respectively. In average, all of the individuals went to the dentist primarily when they had a symptom.

Our data suggest that 60% of respondents still hadn't attended a dental professional in the previous year, a finding that has similarly been observed in some other Indian population<sup>[13]</sup>. Another probable cause is that some of the participants included into our research were still on their follow-up visit. As a result, individuals may have received periodontitis education during their previous dental appointment. The understanding of periodontal problems improved after attending a specialist periodontist, according to a study of periodontitis patients<sup>[19]</sup>.

Additionally, the interviewees indicated that one of the major reasons they chose the hospital where they sought care was because of the low cost (44.1 percent). This shows that the participants' selection of institution was mostly determined by their financial situation. This is highlighted by the fact that rehabilitation at commercial dental clinics is more expensive than therapy at government or private dental institutions.

This was inconsistent with the findings of Bommireddy et al and Bader K. Alzarea et al, who found that convenience was a factor in deciding where to get dental management<sup>[18-19]</sup>. Anxiety (33.7 percent) and the expense of treatment (27.2 percent) were the main two variables that influence oral health care usage, according to our research. The findings of Gupta S et al match those of the current investigation<sup>[10]</sup>.

This is an acknowledged fact that severe periodontitis contributes to tooth loss, which has an unintended impact on oral health affected to quality of life. Advancements in periodontal health can be accomplished with greater management of chronic conditions, such as diabetes mellitus, and cigarette cessation attempts.

Chronic disease prevention programmes can effectively use the same health promotion methods and monitoring concepts for evaluating periodontal disease progression, as stressed by the World Oral Health Report 2003 on lowering risks and encouraging healthy lifestyles<sup>[20]</sup>. This has the potential to significantly enhance dental health.

This study has certain limitations also. Participants who attended to an oral health care institution were required to have severe periodontitis in order to be chosen as the target population. As a result, caution should be used when extrapolating the study's findings. Furthermore, due to the small sample size, research from a single organization cannot be generalised.

## CONCLUSIONS

The behaviour of those with severe periodontitis in terms of seeking medical help was poor. The population's perceptions toward

the significance and understanding of oral health were negative, indicating that actions need to be taken to rectify this situation. To promote dental treatment utilisation and, as a result, oral health status, services should be supplied based on the population's perceived needs.

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## Competing interest

All the authors declare no competing interests among the authors

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