



## BARRIERS TO UTILIZATION OF DENTAL CARE SERVICES IN RURAL AREA OF PANCHKULA DISTRICT, HARYANA, INDIA

### Dental Science

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### ABSTRACT

**Background:** The primary purpose of dental care services is to provide good dental health. It has been observed that even when the services are available, utilization is inadequate

**Objectives:** To determine the barriers that prevents regular dental check-ups in rural population.

**Methods:** Total of 545 subjects in the age group of 18- 44 years were included in the study. The information regarding past dental visits along with perceived importance of dental health was collected. Student-t test was used to assess the association between the variables and statistical significance was set at  $P < 0.05$ .

**Results:** Amongst the non visitors the major barriers identified were financial constraints (42.2%), lack of transportation facility (23.9%), non availability of dentist (5.9%), Lack of time (79.2%), Lack of symptoms (82.1%) and anxiety towards dental procedures (63.8%).

**Conclusion:** The present study revealed that 24.1% of the subjects never visited a dentist for which various barriers identified were financial constraints, lack of transportation facility, non availability of dentist, Lack of time, Lack of symptoms, and anxiety towards dental procedures.

### KEYWORDS

Barriers, Utilization Dental health, Dental care services, rural

### Introduction

The primary purpose of dental care services is to provide good dental health. An improvement in dental health is an important indicator of the overall performance of the dental care system. The changes in dental health have an impact on the demand as well as utilization of dental services. In turn, utilization influences the dental health of the individual. Both individuals and service providers can substantially influence demand for and utilization of dental care services.<sup>1</sup>

The utilization of health care is considered as a process consisting of a patient initiated stage and a physician-generated stage.<sup>2</sup> Demand is the initial stage of the utilization process where the patient as the sole actor determines the demand for health care. Utilization refers to the entire process, i.e. the sum of both stages, being the amount of care received as a result of decisions jointly made by the patient and the physician. If the relationship is perfect, then demand and utilization are identical.

Studies have shown high prevalence of dental diseases in our country.<sup>3-5</sup> In spite of the existing need for treatment, less than half the adult population visit the dentist in a year.<sup>6</sup> This has aroused the interest of researchers in developing models explaining the utilization of dental services.

Behavioral Model of Health Services, which has been used extensively, classified the determinants for the use of health care service as predisposing, enabling and need characteristics. Predisposing factors are an individual's characteristics such as age, sex, education, which reflect their propensity to use health services. Enabling determinants are those which affect an individual's ability to access the healthcare system, such factors are health insurance coverage, income, and access related to transportation and information. Need variables are those which might reflect a perceived or professionally assessed illness level, such as number of teeth, dentures, and perceived oral health problems and need.<sup>7</sup>

India is one of the largest democracies with second highest population in the world. 80% of this population lives in rural areas where only 20% of the dentists are serving, thus leading to non availability of dental health services to large population.<sup>8</sup> It has been observed that even when the services are available, utilization is inadequate. Thus the present study was undertaken to determine the barriers that prevent regular dental check-ups in rural population.

### Material and Methods

A cross-sectional study was conducted in Panchkula district of Haryana using multistage random sampling. The district Panchkula is divided into four blocks out of which two blocks were randomly selected. Then one village from each block was picked up randomly.

This was followed by house to house survey in order to enroll the desired sample. The sample size was determined on the basis of a pilot study. All the individuals in the age group of 18-44 years agreeing to participate in the study were considered. The consent was obtained prior to the commencement of the study.

After obtaining the ethical clearance, the data was collected using a pre-tested questionnaire which was designed in the local language. The data collection was done in presence of the investigator during house to house visit. The demographic data collected included information about age, sex, educational qualification. Information regarding past dental visits and reason for visiting and not visiting was taken along with perceived important of dental health.

The data was analyzed using SPSS version 19.0 and both descriptive as well as analytical statistics was used to summaries the results. Student-t test was used to assess the association between the variables and statistical significance was set at  $P < 0.05$ .

### Results

Total of 545 individuals in the age group of 18-44 years were included in the study, amongst whom 59.3% (323) were males and rest 40.7% (221) were females. The mean age of the subjects was found to be 29.7 years. The distribution of subjects according to the educational qualification showed 11.0 % (60) graduates or above, 19.8% (108) higher secondary, 28.6% (156) high school and 12.3% (67) were primary school passed and rest 28.2% (154) were illiterate.

The information about past dental visit revealed that only 4% (22) of subjects visited a dentist in past one year (2.2% males and 1.8% females), 29% (158) visited between one to two years (16.3% males and 12.7% females) and 43% (234) visited more than two years back (21.9% males and 21.1% females). The difference between males and females was statistically insignificant. The subjects who never visited a dentist were 24.1% (131) (9.5% males and 14.6% females). The difference between males and females, who never visited a dentist, was statistically significant ( $p < 0.05$ ). (Table 1)

The reasons for utilizing dental care services, amongst 75.9% (414) subjects, were the pain (43%), bleeding gums (12.3%), decayed teeth (4.6%), bad breath (1.2%), dirty teeth (10.6%), replacement of teeth and traumatic injury (23.2%), routine checkup (5.1%). (Table 2) The reason for never visiting a dentist, amongst 24.1% (131) of subjects, were financial constraints (42.0%), lack of transportation facility (23.7%), non availability of dentist (6.1%), Lack of time (79.4%), Lack of symptoms (82.4%), anxiety towards dental procedures (64.1%). (Table 3) More than one response was marked by most of the subject.

The response for question enquiring about the importance of dental health revealed that 21.4% subjects (9% males and 12.4% females) did not consider it important and difference between males and females was statistically significant ( $p < 0.05$ ). Amongst these respondents 12.5% were illiterate and rest 8.9% were educated and difference was statistically significant ( $p < 0.05$ ).

### Discussion

The present study was carried on individuals in the age group of 18-44 year so as to avoid the older population with dentures and younger individuals who could not access the health care services without the consent of guardian or parent. The data collection was done during the evenings so that maximum individuals could be contacted.

The analysis revealed that the past dental visits were higher in males (40.4%) compared to females (35.6%) which is contradictory to other studies.<sup>9-11</sup> It could be because of social stigma of females being dependent on males for outside works. However difference was not significant which could be because of small sample size.

The subjects never visiting a dentist showed higher percentage of females which is an important finding as attitude and practices of a female affect the younger individuals in the family, thus affecting the whole community and the country.

It has been seen that 66.9% of the subjects visited a dentist for one or the other problem which shows that felt need is an important determinant for utilization of dental care services. The subjects who have never utilized dental care service revealed lack of symptoms (82.1%) as the most common response which reflects the tendency of people in rural areas, visiting a dentist only when they have problem which may be due to lack of awareness about importance of regular dental checkup.<sup>12</sup>

Transportation facilities as well as its affordability are necessary for making the dental care facilities accessible to one and all which is a primary motive of health care services. Hence it has been found to be one of the constraints for regular dental visit in the present study as has been recognized by other studies.<sup>13,14</sup>

Lack of time was given a reason which prevented subjects to access the dental care services. People in this area are mostly daily wagers because of which going to a dentist means financial loss, incurred due loss of income and payment to dentist in lieu of consultation and treatment. So there should be provision which enables people to consult a dentist during working hours without the loss of income to the individual.

Income is an important predictor for utilization of dental care services.<sup>15</sup> So, as the main occupation of the people in the present study is laborers and out of pocket payment has to be made for consulting a dentist, thus leading to under utilization of services. Health insurance is one of the enabling factors consistently associated with dental care utilization.<sup>16,17</sup> Thus, there should be some dental insurance schemes be introduced for this social class so that equity in dental health care could be brought about.

Dental anxiety had been answered, by 63.8% of subjects, as one of the reasons preventing dental checkups. The underlying construct of which is multi-factorial. It has been suggested that adverse past experience is a major contributor and also it reflects the need for awareness regarding dentists and dental procedures; and care needs to be taken that patients experience during his appointment is such that it does not have negative influence over his behavior.<sup>18-22</sup>

21.4% of subjects did not consider dental health to be important which reflects their negative attitude. The females were found to be more ignorant than males. Hence, there is need to find the reason for this negative attitude so that efforts are made to improve the situation.

Thus it can be inferred that all the three factors- predisposing, enabling as well as need characteristics together influence the health related behavior. Amongst these, enabling factors should be targeted and also attitude towards dental health should be changed. The results of the present study are not conclusive as sample size was small and it was localized so, there is need to conduct further studies.

### Conclusion

The present study revealed that 24.1% of the subjects never visited a

dentist for which various barriers identified were financial constraints, lack of transportation facility, non availability of dentist, lack of time, lack of symptoms, and anxiety towards dental procedures. 21.4% of the subjects did not consider dental health to be important. Thus need to increase the awareness regarding dental health, along with enabling factors, has been identified.

**Table 1: Information on Past dental visits**

TIME OF VISIT	NUMBER	PERCENTAGE
Less than one year	22	4
One to years	158	29
More than two years	234	43
Non visitors	131	24
Total	545	100

**Table 2: Reasons for utilising dental care services**

REASON	NUMBER	PERCENTAGE
Pain	178	43
Bleeding gums	51	12.3
Decayed teeth	19	4.6
Bad breath	5	1.2
Dirty teeth	44	10.6
Replacement of teeth and traumatic injury	96	23.2
Routine checkup	21	5.1
Total	414	100

**TABLE 3: Reason for never utilizing dental care services**

REASON	NUMBER	PERCENTAGE
Financial constraints	55	42
Lack of transportation facility	31	23.7
Non availability of dentist	8	6.1
Lack of time	104	79.4
Lack of symptoms	108	82.4
Anxiety towards dental procedures	84	64.1

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