

## Utilization of Oral Health Care Services and Obstacles Encountered by the Patients Visiting CHC in Kanpur, Uttar Pradesh – A Cross Sectional Study

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### ABSTRACT

Primary Health Centers (PHCs) and Community Health Centers (CHCs) play a vital role in providing early diagnosis, treatment, dental health education, and preventive care, especially in remote areas. This study aimed to assess the utilization of dental healthcare services and identify barriers preventing patients from seeking dental care at community health centers, Kanpur. A cross-sectional study was conducted among 600 patients aged 20 years and above who visited 10 randomly selected CHCs in Kanpur District for the duration of one month. A multistage sampling method was used, and data were collected through a self-administered questionnaire. The data were entered and analyzed using IBM SPSS Statistics version 22 (Armonk, NY: IBM Corp), with statistical significance set at  $P < 0.05$ .

The results revealed that only 36% of participants had visited a dentist in the past year, with males (54%) seeking dental care more frequently than females (46%). The most common reason for visiting a dentist was pain or a dental emergency (71%), followed by restorative treatment (17%) and other reasons (12%). Several barriers to seeking dental care were identified, with the most frequently reported reasons being the belief that a dental visit is unnecessary unless experiencing pain (60%), the perception that dental diseases are not serious (51%), fear of dental procedures (48.6%), lack of time (45.6%), high cost of treatment (33.3%), and the long distance to the nearest dentist (26.8%).

These findings indicate that a significant portion of the population does not seek dental care regularly, with many believing that visiting a dentist is only necessary when experiencing

pain. Addressing these misconceptions and improving accessibility and affordability of dental services could help enhance dental health-seeking behavior in the community.

## INTRODUCTION

Health has been considered as a basic human right and it is also a wider social goal.<sup>[1]</sup> Oral health is critical but an overlooked component of overall health and well-being among children and adults.<sup>[2]</sup> According to WHO, oral health means more than just good teeth: It is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and

Dental diseases are generally not self-limiting. If untreated, dental conditions may affect the person's well-being and overall quality of life. Regular home oral care and a yearly dental checkup are the best means for saving one's own teeth.<sup>[1]</sup> Dental service use can be defined as an annual number of dental visits per person, or the proportion of persons visiting a dentist within a year or reported first dental visit within a series of visits or lack of dental visits within a specific period or aggregated expenditures for dental visits or routine versus emergency care.<sup>[4]</sup> This information will help in planning and implementation of oral health services in a community.

Oral health problems are emerging as a major public health problem in developing countries such as India. The community health centers (CHCs) constitute the secondary level of health care and are designed to provide referral as well as specialist healthcare to the rural population. According to the 11-year plan, there are about 4809 CHCs in India. Among them, only a few of them provide dental services.<sup>[5]</sup>

Few research have been conducted on the use of dental health care services and the obstacles that patients face when they visit CHCs in India. Therefore, the current study was conducted to evaluate the use of dental health care services and the obstacles that patients in Kanpur, Uttar Pradesh, face when they attend CHCs.

## MATERIAL AND METHODS

A cross-sectional study was conducted among patients visiting Community Health Centers (CHCs) in Kanpur District during last few months. Prior to the study, approval was obtained from the Institutional Ethics Committee, and permission was granted by the administrative medical officer of the CHCs. The study included patients aged 20 years and above who visited the CHCs, while individuals with special needs and those who were uncooperative were excluded. Participants were informed about the purpose of the survey, and their informed consent was obtained before data collection. The sample size was determined to be 600, based on the 2011 Kanpur population census, with an allowable error of 1%.

A multistage cluster sampling technique was employed. Kanpur District is divided into five administrative divisions, which are further subdivided into 46 mandals. Two mandals were randomly selected from each division, ensuring they had CHCs. Patients from these selected

mandals who visited the CHCs formed the study population, with each mandal considered a cluster.

Data collection was carried out using a self-administered, anonymous questionnaire written in the local language. The questionnaire gathered information on participants' sociodemographic characteristics, dental visit history, and reasons for not seeking dental care. The Kuppaswamy socioeconomic scale was used to categorize participants based on their sociodemographic status. The investigator was present during the data collection process to provide clarifications when needed. The reliability of the questionnaire was assessed through a pilot study involving 50 participants, yielding a Cronbach's alpha value of 0.87, indicating strong internal consistency. Over the one-month study period, a total of 600 completed questionnaires were collected.

## STATICAL ANALYSIS

The collected data were entered and analyzed using IBM SPSS Statistics version 22 (Armonk, NY: IBM Corp). Descriptive statistics were employed to summarize findings. The association between sociodemographic factors and dental healthcare utilization was assessed using the Chi-square test. Additionally, multiple logistic regression analysis was conducted, treating the identified barriers as independent variables. A P-value of less than 0.05 was considered statistically significant in determining associations.

## RESULT

This study was conducted on a total of 600 individuals, with a mean participant age of  $35 \pm 7.50$  years. Males accounted for 57.83% of the sample, while females made up 42.17%. The majority of participants (53.6%) belonged to the upper-lower socioeconomic class. Among the respondents, 216 (36%) had visited a dentist within the past 12 months. The most frequently cited reason for a dental visit was pain or a dental emergency (154 individuals, 71%), followed by restorative treatment (38 individuals, 17%), and other reasons such as oral prophylaxis or prosthesis (24 individuals, 12%).

Regarding barriers to dental care, the most common reason for not visiting a dentist in the past year was the perception that a visit was unnecessary unless pain was present, reported by 360 individuals (60%), with no significant gender difference. Additionally, 304 individuals (51%) believed that dental diseases were not serious, while 235 individuals (45.8%) cited a lack of time, a reason more commonly reported by males ( $P < 0.05$ ). Fear of dental treatment was noted by 290 individuals (48.6%), with this concern being more prevalent among females ( $P < 0.05$ ). Furthermore, 33.3% of participants perceived dental treatment as expensive, and 26.3% considered the distance to the dentist a barrier to seeking care.

Logistic regression analysis identified the most influential factors for not visiting a dentist as the belief that a visit was unnecessary unless experiencing pain (odds ratio: 1.95, confidence interval: 1.71–2.22), lack of time (1.64; 1.39–1.89), and fear of dental procedures (1.51; 1.27–1.78). Additionally, individuals aged 35–45 years, females, those with a higher socioeconomic status, and those with only basic education were less likely to have visited a dentist within the past year.

## DISCUSSION

The present study offers valuable insights into the patterns of dental service utilization and the barriers faced by patients visiting the Community Health Center (CHC) in Kanpur, Uttar Pradesh.

Findings revealed that dental service utilization among these patients was notably low, aligning with similar studies conducted both in India and internationally. For instance, utilization rates were reported as 20% in China and 34.3% in Spain. In contrast, developed nations exhibited significantly higher rates, such as Denmark (61%), the UK (47%), Finland (56%), and Singapore (43%). A key factor contributing to this disparity is the availability of health insurance covering dental services in these countries, a provision largely absent in India. Introducing insurance schemes at both micro and macro levels could help improve access to dental care.

A notable trend observed in this study was that younger individuals were more likely to visit the dentist compared to older age groups, likely due to greater awareness and fewer perceived barriers. This aligns with findings from other studies. However, some research from India and other countries suggests that older adults with natural teeth tend to seek dental care more regularly than younger individuals.

Gender differences were also evident, with females exhibiting higher levels of dental anxiety—a factor that may contribute to lower dental visit rates among women. In many households, decisions regarding healthcare, including dental visits, are often made by other family members, which could further restrict access for women. However, some studies have reported an opposite trend, where females utilize dental services more frequently than males.

Education level also played a role in dental service utilization, with individuals who had higher education levels making more frequent dental visits. This could be attributed to greater health awareness, leading to proactive preventive care, a pattern consistent with other studies.

Oral hygiene habits were another factor influencing dental visits. In this study, only 25% of participants reported brushing their teeth twice daily. There was a positive correlation between brushing frequency and dental service utilization, reinforcing the importance of promoting good oral hygiene practices.

The primary reasons for seeking dental care were tooth extractions or treatment for acute symptoms (71%), followed by restorative procedures (17%) and other treatments (12%). This pattern was consistent with findings from other studies, where extractions, restorations, and dental prostheses were the most commonly received treatments. The tendency for patients to visit a dentist primarily in response to pain or emergencies, rather than for preventive care, highlights the need for increased awareness about the benefits of routine dental checkups.

The most commonly cited barrier to seeking dental care was the belief that a visit was unnecessary unless pain was present, a perception supported by other research. Many participants also considered dental issues to be minor health concerns. Additionally, dental anxiety was a significant deterrent, particularly among females. Interestingly, some studies have suggested that despite higher dental fear, women tend to visit the dentist more frequently than men, possibly due to a stronger belief in the benefits of dental care.

Cost was another significant barrier identified in this study, a challenge echoed in prior research. Addressing this issue through free dental camps and referral programs could help improve access, particularly for underserved populations.

Distance to dental facilities also impacted utilization rates, as seen in other studies. Establishing comprehensive oral health services within rural health centers could help reduce travel burdens for patients. Time constraints were another frequently mentioned barrier, further emphasizing the need for convenient and accessible dental care services.

Although this study provides valuable insights, it has some limitations. The reliance on self-reported data may introduce recall bias, as participants might not accurately remember their dental visits. However, prior research suggests that self-reported utilization remains a reasonably valid method for addressing key research questions.

To improve oral health awareness and encourage preventive care, individuals should be educated on essential hygiene practices such as proper tooth brushing, using fluoridated toothpaste, and rinsing the mouth after meals. Awareness campaigns should also emphasize the effects of sugary food consumption and promote regular dental visits. Dentists play a crucial role in fostering a positive attitude toward oral health, motivating individuals

## CONCLUSION

Only 36% of the population reported visiting a dentist in the past year. The most frequently cited reason for not seeking dental care was the belief that a visit was unnecessary unless experiencing pain, highlighting a low perceived need for dental treatment. Additionally, the cost of care, fear of dental procedures, and reliance on self-care methods were identified as key barriers to utilizing dental services.

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