

Factors affecting dental service utilisation among older adults

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ABSTRACT

Background:

In most countries regular utilization of dental healthcare services by older adults (≥ 50 years) is a matter of concern as they seem to use the services less than any other age group. In order to improve the utilisation of dental services in terms of regular dental attendance and regular dental services for older adult patients it would be imperative to look into issues pertaining to lack of utilization of essential dental services by older adults. Therefore this study hopes to look at the factors affecting regular utilization of dental healthcare services among older adults

Materials and method:

It is a questionnaire based study. The survey was conducted among 100 adults of age group 50 years and above from a private dental hospital from Chennai. The results were obtained and statistically analysed through SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant.

Results:

The main factor affecting the dental service utilisation is dental anxiety, bad perception of dental disease and lack of time. The association between the gender and reason for not utilising the dental service was found to be statistically significant ($p=0.006$).

Conclusion:

The study demonstrates low rate of usage of oral health services among the older adults especially those with poor oral health status, economic status, partially edentulous pointing to major inequities to be faced.

Keywords:

Older adults, dental services, factors, age group, innovative analysis

INTRODUCTION:

Health services in India have not appropriately met the needs of the elderly population. Specifically in the field of oral health, assistance and attention to the elderly adults requires specialised and expensive treatment for their oral health rehabilitation [1]. In most countries utilization of dental healthcare services by older adults (≥ 50 years) is a matter of concern as they seem to use the services less. In order to improve the utilisation of dental services in terms of regular dental attendance and regular dental services for older adult patients it would be important to look into issues leading to lack of utilization of dental services by older adults [2]. Access to a healthcare service also means getting the required service at the right time to enhance their health [3]. Regular dental visits by older adults in many countries is a matter of concern as this age group is mostly overburdened with other medical ailments and hardly seem it necessary to visit their dentist as a part of their overall medical care [3–5]

Access to and use of health care services require the combination of several factors such as external environmental factors, predisposing factors such as socio cultural characteristics, availability factors (income, health insurance, regular access to health services), factors related to the need for treatment, factors related to the oral health care systems (oral health policies and resources), personal practices such as oral hygiene and poor oral health behaviours and self assessed oral health [6].

Poor oral health is a major public health concern in India, with approximately 80% and 64% of the population suffering from caries and periodontitis, respectively [7,8]. One of the most important measures to maintain good oral health is regular dental visits, as it allows the dentist to assess the risk of oral health problems, and provide preventive and restorative care [9]. A national health survey in 2018 estimated that 96% of India citizens did not visit a dentist within the past year [10]. Several factors that influence dental service utilisation have been identified in other countries, such as age, gender, marital status, residential area, education, income, health insurance and individual health needs, including dental pain and self-perceived oral health [11].

Previous literature suggests that dental care utilisation is low among older people, particularly among the socio economically disadvantaged population due to significant barriers [12]. Dental care cost, shortage of professionals and lack of awareness with regards to services provided and location of facilities have been an important barrier to the utilisation of dental services [13]. Oral health literacy and knowledge, lack of perceived need for care, dental fear plays an important factor influencing dental visits by the elderly population [14].

Economic status is a major predictor affecting the oral health status in Indian population. Another barrier which is frequently cited in the literature is low priority allocated to oral health by national health authorities [15]. Although there have been many studies on dental service utilisation worldwide, research conducted in India is still scarce. Moreover, most of the existing studies have only addressed individual factors. A major challenge for dental professionals is ensuring the older adults with their widely variable social status have appropriate access to dental services [16].

Our team has extensive knowledge and research experience that has translate into high quality publications [17–25], [26], [27], [28,29], [30], [31], [32–36]

Hence, the aim of this study is to understand the factors affecting dental care utilisation among the factors affecting dental care utilization among older adults from Chennai.

MATERIALS AND METHOD:

Survey to evaluate the factors affecting dental service utilisation among older adults from Chennai. A total of 100 older adults of age group 50 and above were included in the study. Convenient sampling methodology was used to select the samples. This survey was a questionnaire based study and an interviewer administered questionnaire was used. The questionnaire consisted of the factors affecting dental service utilisation among older adults. The survey was taken by 100 older adults from a private dental college in Chennai. All data was entered in an excel sheet. Data was analysed using SPSS software version 20, Chi square test was used to find an association between the study variables. p value less than or equal to 0.005 was taken statistically significant. Inference of the study is given below.

RESULTS:

This study estimates the factors affecting the dental service utilisation by the older adults by means of subjective evaluation of the response of the patient on a questionnaire. Out of 100 adults the gender distribution was reported as 46% of males and females have reported higher in percentage (54%) [figure1]. The frequency distribution of age as illustrated in figure 2 infers that around 40% of the participants are between the age group of 60 to 70 years [figure 2].

It is inferred that the majority of the participants have a perception that dental disease doesn't have a serious impact on their health (44%) which is the main reason for not visiting the dental services. The most common reason for visiting a dentist is pain(36%) followed by sensitivity (28%) , restoration (22%) and other reasons (14%) [figure 3]. 78% of the participants reported they have dental anxiety and it's an important factor affecting the dental service utilisation by the older adults [Figure 4]. As a result, the final study sample comprised 100 elderly adults who predominantly had secondary level of education (32%) with 1 to 9 total teeth present (36%) and not using any prosthesis for their missing teeth. The most reported barriers associated with dentist and dental treatment are long waiting hours (48%) and the least reported barrier is lack of understanding of the scientific terms and treatment options explained by the dentist (12%).

Figure 6 shows the association between gender and the reason for not utilising the dental services. It is inferred females have reported a higher percentage(24%) of having a perception that dental disease is not a serious one. Pearson's correlation to assess the association between gender and reasons for not utilising the dental service was found to be highly significant (p=0.006).

Figure 7 shows the association between age groups and the reason for not utilising the dental services. It is inferred 60 to 70 have reported a higher percentage(33%) of having a perception that dental disease is not a serious one. Pearson's correlation to assess the association between gender and reasons for not utilising the dental service was found to be significant (p=0.03).

Figure 1: Pie chart shows distribution of gender. Green denotes males and blue denotes females. Majority of the patients reported to study were females (54%) compared to Males (46%).

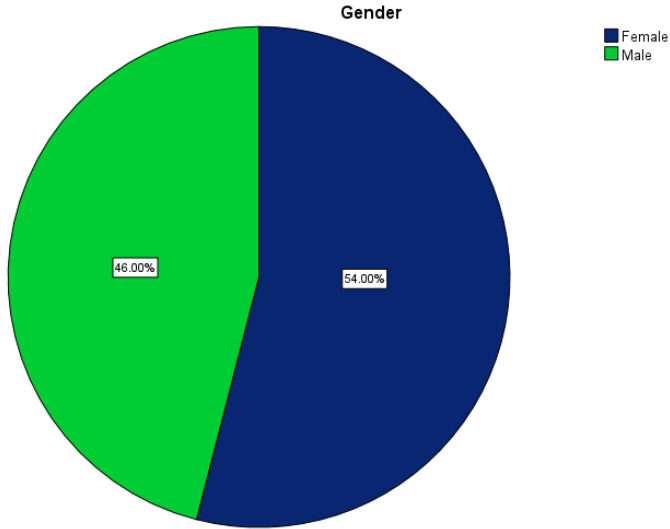


Figure 2: Pie chart shows the frequency distribution of age groups. Purple denotes 50 to 60 years age group, orange denotes 60 to 70 years age group and magenta denotes above 70 years age group. Majority of the patients reported to study were above the 70 years age group (40%) followed by 50 to 60 years (30%) and 60 to 70 years (30%).

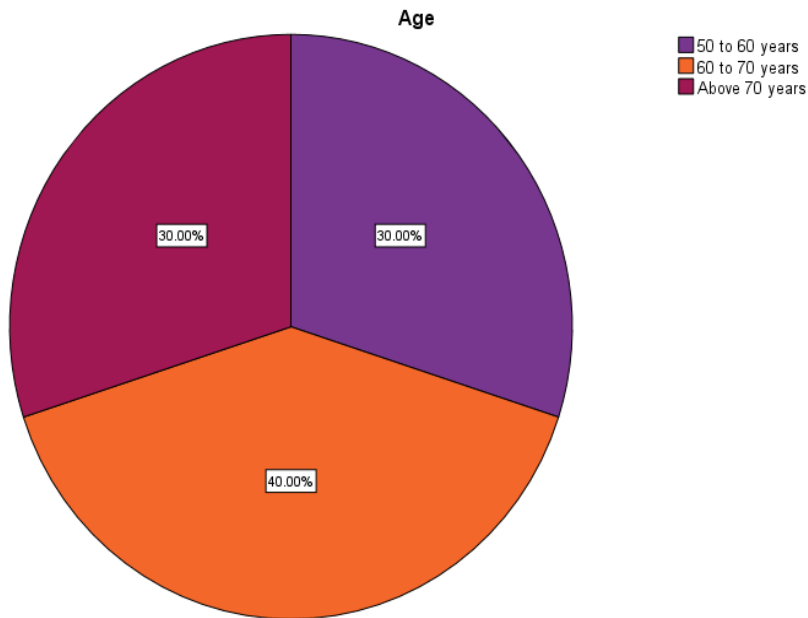


Figure 3 : Pie chart shows the frequency distribution of reasons for visiting a dentist. Crimson Red denotes sensitivity, mustard yellow denotes Restoration, light green denotes pain and rose pink denotes other reasons. Majority of the patients visited a dentist due to pain (36%) followed by sensitivity (28%) , restoration (22%) and other reasons (14%).

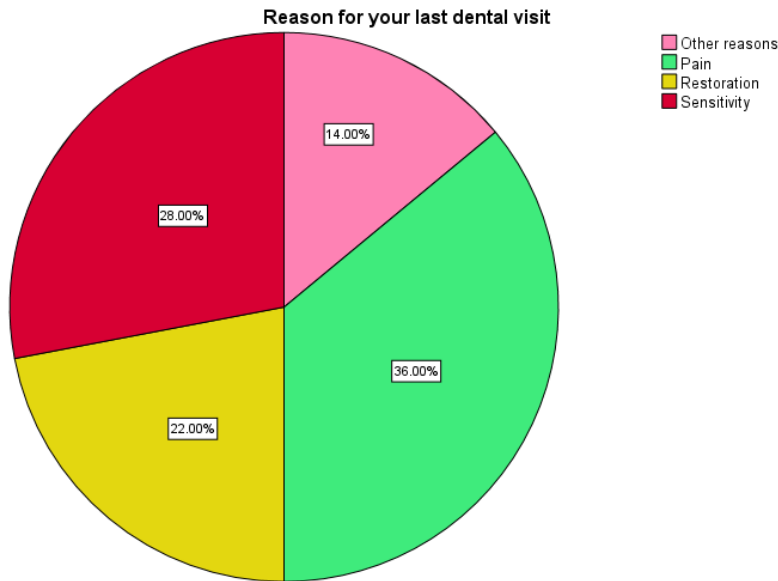


Figure 4: Pie chart shows the frequency distribution of dental anxiety . Light pink denotes No and lavender denotes yes. Majority of the older adults had dental anxiety (78%).

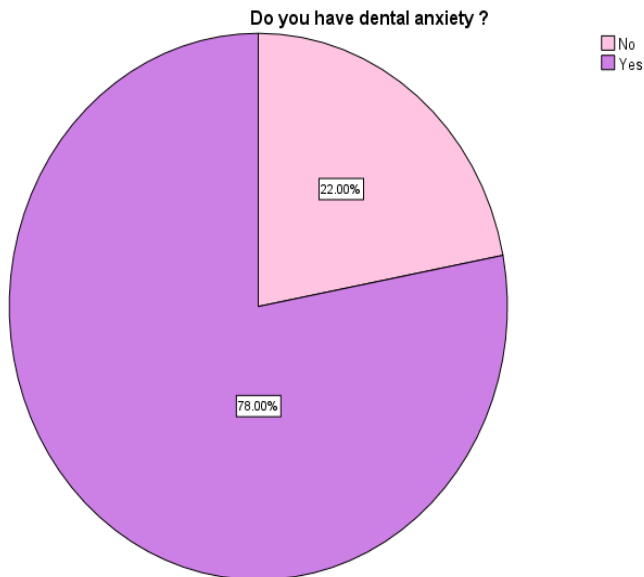


Figure 5: Pie chart shows the frequency distribution of the number of teeth present. Yellow denotes 1 to 9 teeth, Oliver green denotes 10 teeth or more and red denotes no teeth. The majority of the participants reported they are completely edentulous (36%) and some have 1 to 9 teeth (36%).

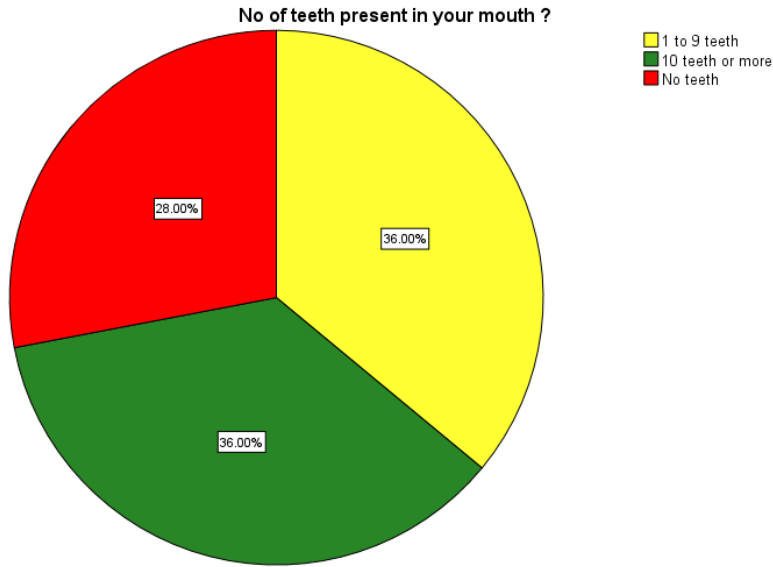


Figure 6: Bar graph shows the gender and barriers for not utilising the dental service. X-axis denotes the gender and Y-axis denotes barriers for not utilising the dental services. Blue denotes female and green denotes males. Majority of the female participants reported that the most important barrier for not utilising the dental services are dental anxiety and assumption that dental disease is not a serious one. Chi- square p value= 0.006, was statistically significant.

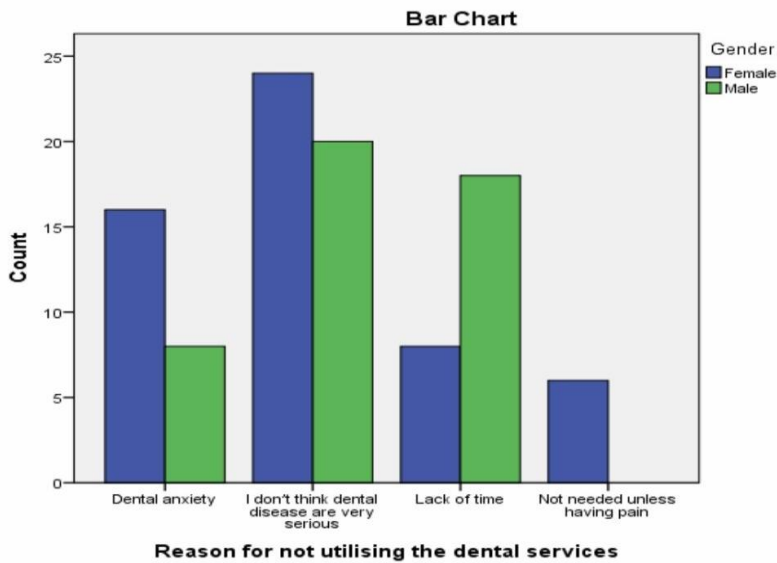
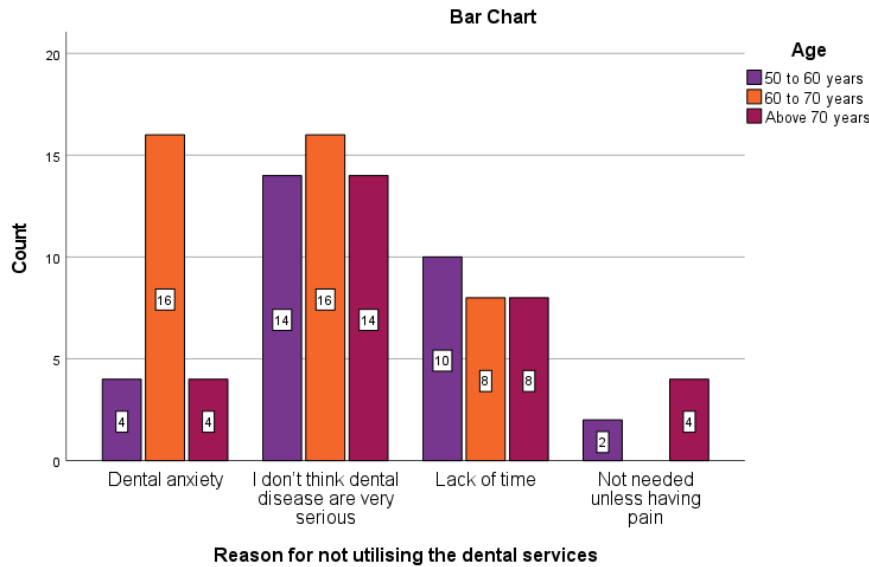


Figure 7: Bar graph shows the age group and barriers for not utilising the dental service. X-axis denotes the age group and Y-axis denotes barriers for not utilising the dental services. Purple denotes 50 to 60 years age group, orange denotes 60 to 70 years age group and magenta denotes above 70 years. Majority of the participants' important barrier for not utilising the dental services are dental anxiety and assumption that dental disease is not a serious one. Chi- square p value=0.034, was statistically significant.



DISCUSSION

This study is the first to report the prevalence of dental service utilisation in Chennai using a small sample of the general population. According to this study findings less than half of the elderly adults didn't use dental services in the past 1 or 2 years and this outcome was influenced by general health population, educational level and number of remaining teeth. Some studies have reported that elders remain for a long period without using any dental services [37,38]. The prevalence of not using the dental services in the previous 2 years in Nellore was higher than that recently described for elderly people in this study [39].

Over 89% of participants felt that they needed dental treatment in the past year. This was in contrast to the results reported by Pradeep et al and Andrea et al [40,41], where only 55% and 40% respectively, of the study participants reported a need for dental treatment. The dental visit among older people in the past year was 28%. These results correspond to the study done by Bommireddy et al [42]. This number was higher than the 6% reported by Kakatkar et al [43]. These results show that there is only a very less number of people taking dental services which shows that various barriers exist in the utilization of dental services

Previous studies have suggested the importance of socioeconomic variables such as education and income as determinants for the use of dental services regardless of age [43,44]. In this present study, the level of education proved to be a predictor for the use of dental services by the elderly adults which is corroborating with previous findings [45]. Dental anxiety(78%) was observed as a barrier to oral health care utilization among the older population. Fear of the dental instruments and sound of the drill, dental injection constituted the barrier among the people. Avoiding dental care due to fear is a well-recognized phenomenon. Older people tend to avoid stressful

situations and emphasis on dental literacy also plays a key role. Studies done by Kakatker et al, Ajayi et al. and Thomas S found that dental fear is related to dental attendance [43,46,47].

About 44% had reported that dental treatment is not an emergency need and 9% of older adults had reported that they don't need treatment at this age. This finding shows the inability of older people to recognize the need for dental treatment on their own and acts as a barrier to the utilization of dental services. People seek dental care only when their condition worsens. This result corresponds to the study where 50% of the study participants had reported that dental diseases are not serious done by salim et al [12].

Looking into the utilization of dental services among older adults, it is noticed that as age increases the utilization of dental services decreases. This may be because the young-old group (50 to 60 years) had more dental literacy and fewer barriers [48]. It was also found that the very old group did not think that oral health was important. These results also show that barriers in the utilization of dental services are more as age increases. The dependency of older people can also be considered as a major reason for the non- utilization of dental services. This result does correspond to the finding by Bommireddy et al, Astrom et al [42,49] that the results in these studies also show a decreasing trend of dental service utilization as age increases. Poor oral hygiene, oral health, and untreated oral diseases can create a huge financial burden. Systemic diseases also have an impact on oral diseases.[50]In India a minimal amount has been allotted to dental insurance and social security for older adults, even though the dental services are very expensive. So, people avoid using dental services and symptomatically treat their dental problems with home care or over-the- counter medications.

CONCLUSION:

In conclusion, the result of this study demonstrates the low rate of use of oral health services among the elder, especially those with poor self assessed general health and with or without few teeth, pointing to major inequities to be faced. To minimize the barriers to utilization of dental services and to address the health needs of the increasing older population, the health system needs to be strengthened especially the primary health care centres with the need to integrate oral health programs and emphasis on health promotion.

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