

## PERCEIVED BARRIERS TO THE ORAL HEALTH CARE ACCESS: AN INSTITUTIONAL STUDY

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### ABSTRACT:

**Introduction-**Dental care is a vital and complicated problem. Oral health care is a human right, and dental hygienists must play a critical role in removing the obstacles that prevent people from receiving it. The nation has a large number of vulnerable and underserved populations. Small children, pregnant mothers, and older adults are among those who have the most trouble getting oral health treatment. Many factors affect dental care accessibility; they form a dynamic, multidimensional matrix in which multiple barriers can exist at the same time.

**Aim-** The main aim of this study is to understand the various barriers faced by the different sections of the society in this country in gaining proper oral health access and to provide solutions to eradicate such hindrances with proper planning.

**Materials and methods-** A set of questions were prepared and asked to 100 patients who came into the clinic at the Saveetha university, Chennai. The questions were based on the possible causes of why oral care access was denied for a few sections of the society. The data obtained through their answers were then calculated and presented with statistics using IBM SPSS statistics (Version 23).

**Results-** 46.67% of the participants replied that fear of dental injection was the most common factor that gives them anxiety before entering a dental clinic. 43.33% of the respondents have replied that fear of dental injection is the most common cause for fear or any discomfort for the patient during dental treatment. Majority of the participants (40%) said that lack of affordability is the current major barrier to accessing dental care, whereas 26.67% have replied as difficulties accessing care, 20% have replied as lack of availability of appropriate care and 13.33% have replied as lack of public funding for specialized services.

**Conclusion-**Affordability, availability, accessibility, lodging, and acceptability are the five major barriers to accessing oral health care services. Language and literacy levels, transportation, fear and anxiety, oral health literacy, lack of knowledge of the oral health care system and how to manage it, mental health and/or drug abuse problems, and attitudes of dental office workers toward vulnerable communities all affect access to dental care.

**Keywords:** Hindrances, oral health care, access to dental care, innovative technique, dental insurance, language barrier, innovative technique

### INTRODUCTION:

Oral health refers to a person's physical health, happiness, and quality of life. Dental caries, periodontal (gum) disease, tooth loss, oral cancer,[1] oral symptoms of HIV infection, oro-dental trauma, noma, and birth defects such as cleft lip and palate are among the diseases and conditions covered[2]. Oral diseases affect 3.5 billion people worldwide, according to the Global Burden of Disease Study 2017. Lip and oral cavity cancers are among the top 15 most common cancers worldwide, according to the International Agency for Research on Cancer, with about 180 000 deaths per year[3].

The leading noncommunicable diseases share modifiable risk factors with the majority of oral diseases and conditions[4] (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes). Tobacco use, alcohol intake, and unhealthy diets rich in free sugars are among the risk factors, all of which are on the rise globally[5]. Oral and general health have been shown to be related. Diabetes mellitus, for instance, has been related to the development and progression of periodontitis. Furthermore, there is a correlation between high sugar intake and diabetes[6,7], obesity, and dental caries. Brushing alone isn't enough to maintain good oral health. There are steps you can take to keep your teeth and mouth safe for a lifetime of use. Few things to consider are: [8]:

1. Understand one's own oral health care needs.
2. Developing and then following a proper daily oral health routine.
3. Use of fluoride.
4. Brushing, flossing, and also rinsing daily.
5. Eating a proper balanced diet and limiting snacking.

6. Complete stop on tobacco.
7. Regular mouth examination.
8. Regular dental visits.
9. Developing a partnership with the dentist.

Dental care is a vital and complicated problem. Oral health care is a human right[9], and dental hygienists must play a critical role in removing the obstacles that prevent people from receiving it. The nation has a large number of vulnerable and underserved populations. Small children, pregnant mothers[9–11], and older adults are among those who have the most trouble getting oral health treatment. Many factors affect dental care accessibility; they form a dynamic, multidimensional matrix in which multiple barriers can exist at the same time. The prohibitive costs of dental care[12]; inability to obtain dental insurance; shortage and maldistribution of dentists; low rate of medical insurance provider participation; insufficient professional training for evidence-based guidelines; lack of interdisciplinary collaboration; inadequate dental safety nets; and a complex oral health system are all examples of external barriers. Low oral health awareness, fear and anxiety[13] associated with dental treatment, and beliefs and myths regarding preventive oral health care are all internal obstacles to oral health care[14].

Problems with transportation, child care, job release, scheduling, and personal mobility exacerbate both external and internal barriers. Oral health inequalities represent unequal opportunities to be safe, making marginalised groups[15] much more disadvantaged in terms of oral health; eliminating oral health disparities, on the other hand, means providing disadvantaged[16] social groups with equal opportunities to be healthy. Pursuing equality in oral health care entails aiming to eliminate inequalities in oral health care, i.e., equal access to available care for equal need, equal use for equal need, and equal care quality for all[17].

Some people may be unaware of when and how to seek dental care[18]. Furthermore, receiving insurance or having health care facilities close by does not guarantee that people can receive the medication and services they need. When other obstacles are removed, residents of federally designated shortage areas[19], both covered and uninsured, can identify and receive treatment. Outreach programmes and attempts to integrate oral health care with other health-care services can help to increase service use[20,21]. As a result, while some people use the term "access" to refer to coverage and proximity, the degree to which a population "gains access" to health care is determined by the financial, organisational, social, and cultural obstacles that may hinder utilisation[22]. Our team has extensive knowledge and research experience that has translated into high quality publications [23–41]

The main aim of this study is to understand the various barriers faced by the different sections of the society in this country in gaining proper oral health access and to provide solutions to eradicate such hindrances with proper planning.

#### MATERIALS AND METHODS:

This cross-sectional study was performed at Saveetha dental college, Saveetha university, Chennai. A set of questions were prepared and asked to the patients who came into the clinic at the university. The questions were based on the possible causes of why oral care access was denied for a few sections of the society. 100 participants were provided with options and were asked to choose them. The results obtained through their answers were then calculated and presented with statistics using IBM SPSS (Version 23). The results were obtained from SPSS in the form of graphs. The questions and answers provided to assess the perceived barriers to access oral health care among the people in Chennai are depicted in the following tabular column.

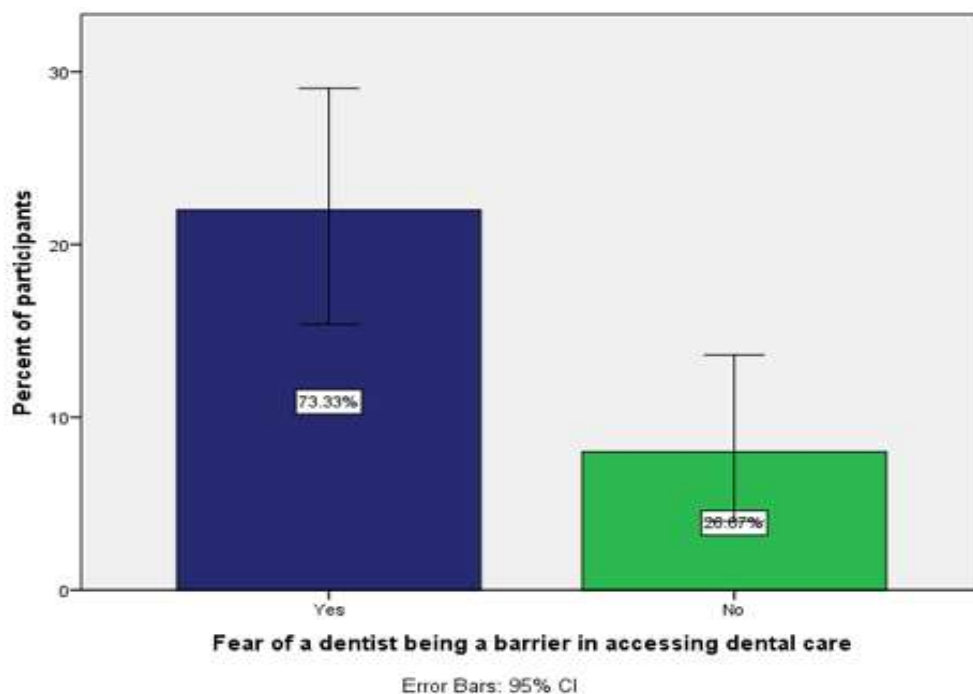
**Tabulation: 1: represents the questionnaire regarding the perceived Barriers to oral health care access among Chennai population.**

S.no	Questions	Options
1.	Gender	Male Female
2.	Fear of dentists being a barrier in accessing dental care.	Yes No.
3.	Common factors that give you anxiety before entering a dental clinic.	Fear of dental injection Cost of treatment Anxiety over many instruments inside the mouth.
4.	Various factors that cause fear or discomfort during dental treatment.	Fear of dental injection. Disturbing noise from dental drill

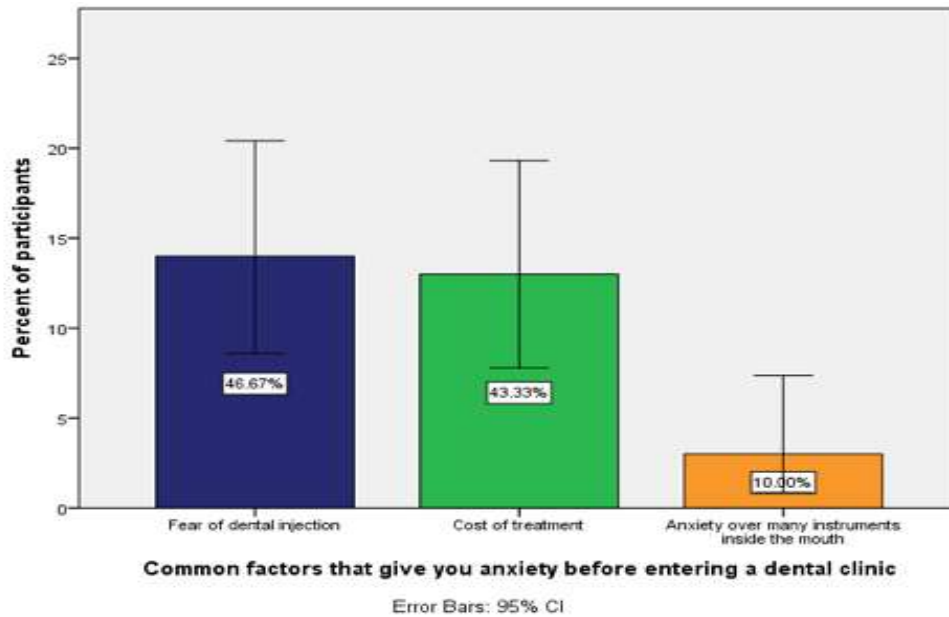
		Feeling of insecurity when the dentist is operating.
5.	The current barriers towards accessible dental care according to the patients.	Included lack of affordability Difficulties accessing care Lack of availability of appropriate care Lack of public funding for specialised services.
6.	Potential solutions to overcome these barriers	Provision of training and information to patients and carers about oral health and accessing dental services. Training dental professionals in caring for vulnerable groups. Better use of skill and guidance to ensure publicly-funded dental services.

**RESULTS:**

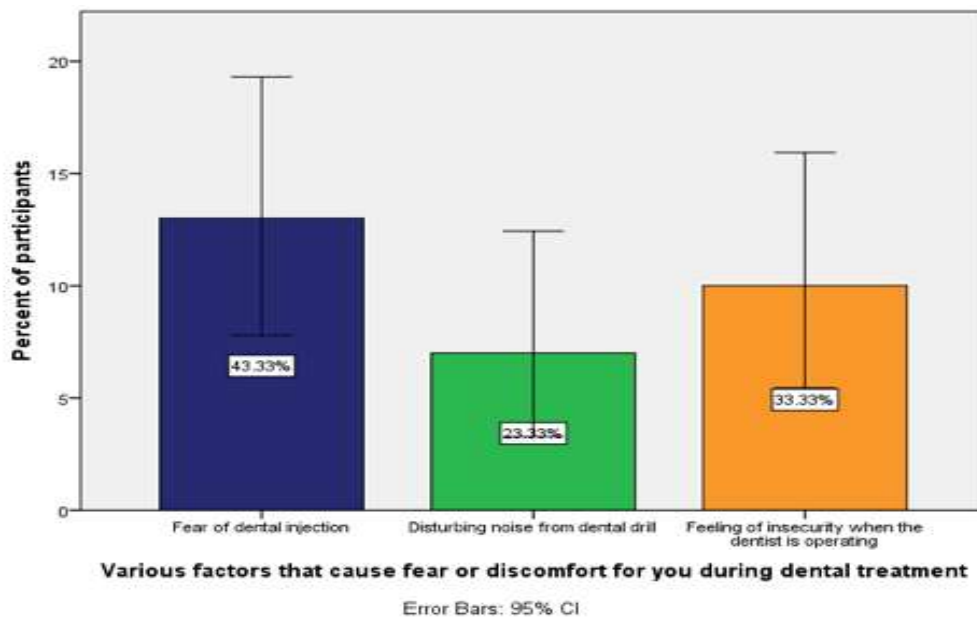
From the given below results, 73.33% of the participants have replied that fear of dentists is being a barrier in accessing dental care (fig: 1). When asked about the common factor that gives them anxiety before entering a dental clinic, 46.67% of the participants replied that fear of dental injection was most common (fig: 2). Again 43.33% of the respondents have replied that fear of dental injection is the most common cause for fear or any discomfort for the patient during dental treatment (fig: 3). Majority of the participants (40%) said that lack of affordability is the current major barrier to accessing dental care. (fig: 4). 60% of the participants have replied that provision of training and information to patients and careers about oral health and accessing dental services is the most potential solution to overcome the above given barriers (fig: 5). Associations between the various responses and the gender of the participants are depicted in Figures 6-10.



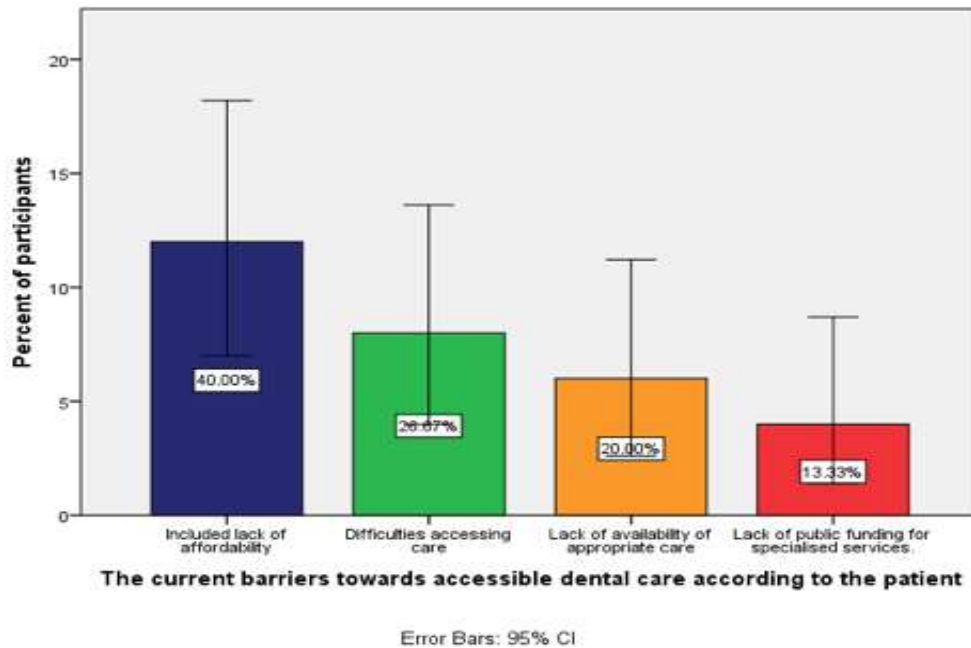
**Figure: 1:** represents responses of the participants regarding the fear of dentists being a barrier in accessing dental care. Blue bar represents ‘yes’ and green represents ‘no’. 73.33% of the participants have replied yes and 26.67% have replied as no. Majority of the participants said that fear of the dentist is a barrier to accessing oral health care.



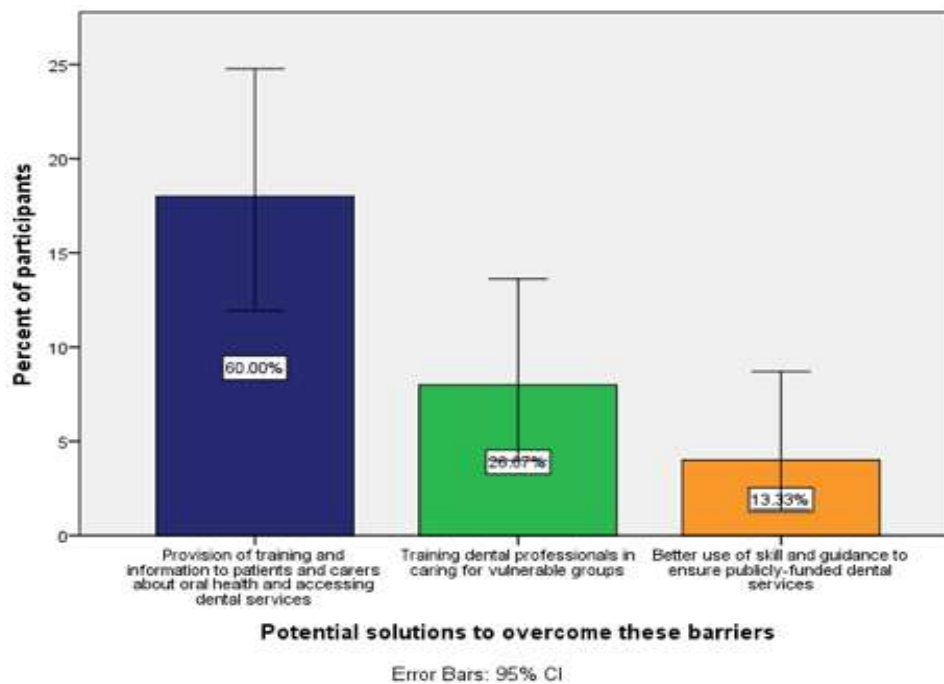
**Figure 2:** represents the common factors that give anxiety to patients before entering a dental clinic. Blue represents ‘fear of dental injection’, green is ‘cost of treatment’, and orange is ‘anxiety over many instruments inside the mouth’. 46.67% have replied as fear of dental injection, 43.33% have replied as cost of treatment and 10% have replied as anxiety over many instruments inside the mouth. Majority of the participants say that fear of the dental injection is the factor which causes them anxiety.



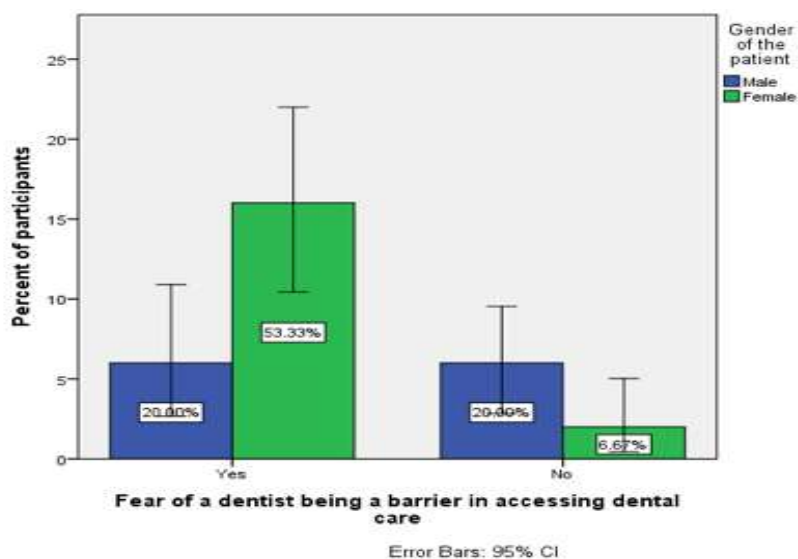
**Figure 3:** represents the various factors that cause fear or discomfort for patients during dental treatment. Blue represents ‘fear of dental injection’, green is ‘disturbing noise from dental drill’, and orange is ‘feeling of insecurity when the dentist is operating’. 43.33%% have replied as fear of dental injection, 23.33% have replied as disturbing noise from dental drill and 33.33% have replied as feeling of insecurity when the dentist is operating. Majority of the participants said that fear of the dental injection causes fear and discomfort for the patient during the dental treatment.



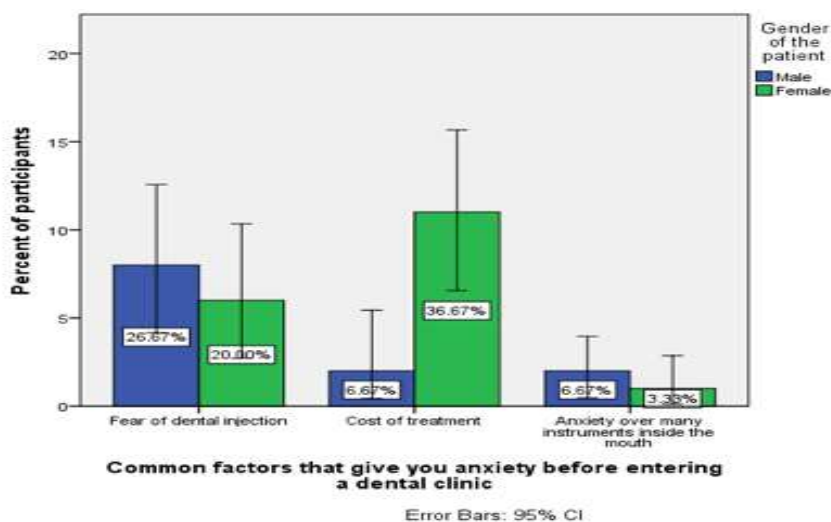
**Figure 4:** represents the current barriers towards accessible dental care according to the patient. Blue represents ‘included lack of affordability’, green is ‘difficulties accessing care’, orange is ‘lack of availability of appropriate care’ and red is ‘lack of public funding for specialised services. 40% have replied as included lack of affordability, 26.67% have replied as difficulties accessing care, 20% have replied as lack of availability of appropriate care and 13.33% have told as lack of public funding for specialised services. Majority of the participants said that lack of affordability is the current major barrier to accessing dental care.



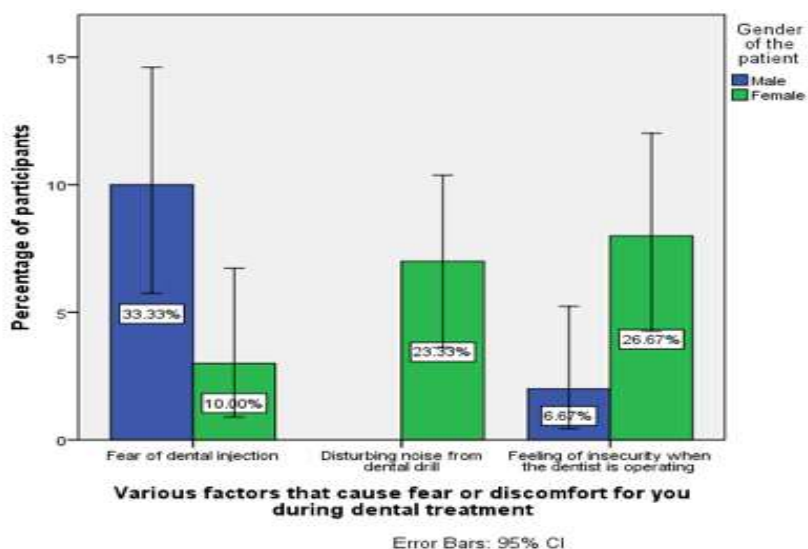
**Figure 5:** represents the potential solutions to overcome these barriers. Blue represents ‘provision of training and information to patients and careers about oral health and accessing dental services’, green is ‘Training dental professionals in caring for vulnerable groups’, and orange is ‘better use of skill and guidance to ensure publicly-funded dental services. 60% have replied as provision of training and information to patients and careers about oral health and accessing dental services, 26.67% have replied as Training dental professionals in caring for vulnerable groups and 13.33% have replied as better use of skill and guidance to ensure publicly-funded dental services. Majority of the patients consider ‘provision of training and information to the patients and careers about oral health and accessing dental services’ as a potential solution to overcome the barriers.



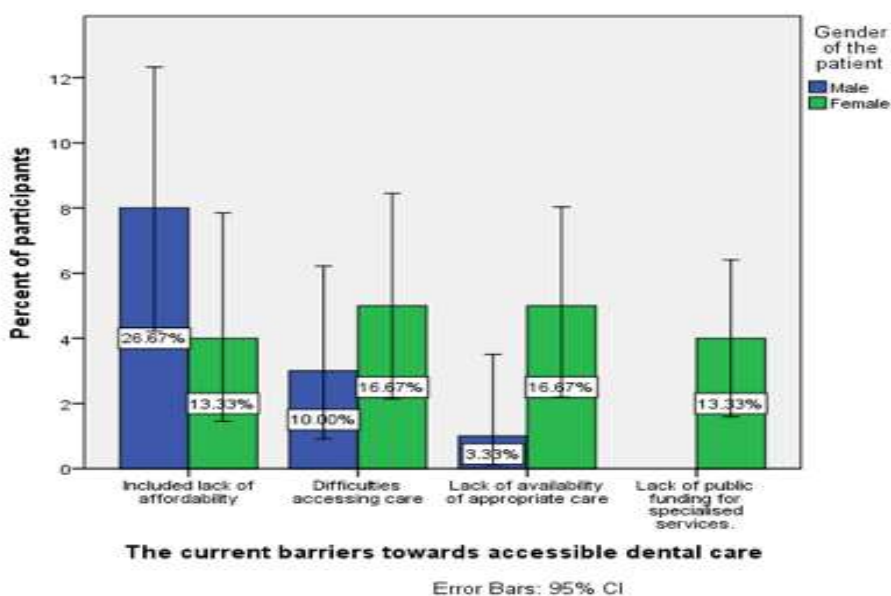
**Figure: 6:** represents the association between the gender of the participants and their fear of the dentist being a barrier in accessing dental care. The X axis depicts the presence or absence of fear of dentists among the participants and the Y axis depicts the percent of participants. Blue represents ‘male’ and green represents ‘female’. Chi square test was used and the association was found to be statistically significant (pearson chi square value= 5.568, p value= 0.018). Majority of the male participants did not find the fear of the dentist being a barrier to accessing dental care while most of the female participants did.



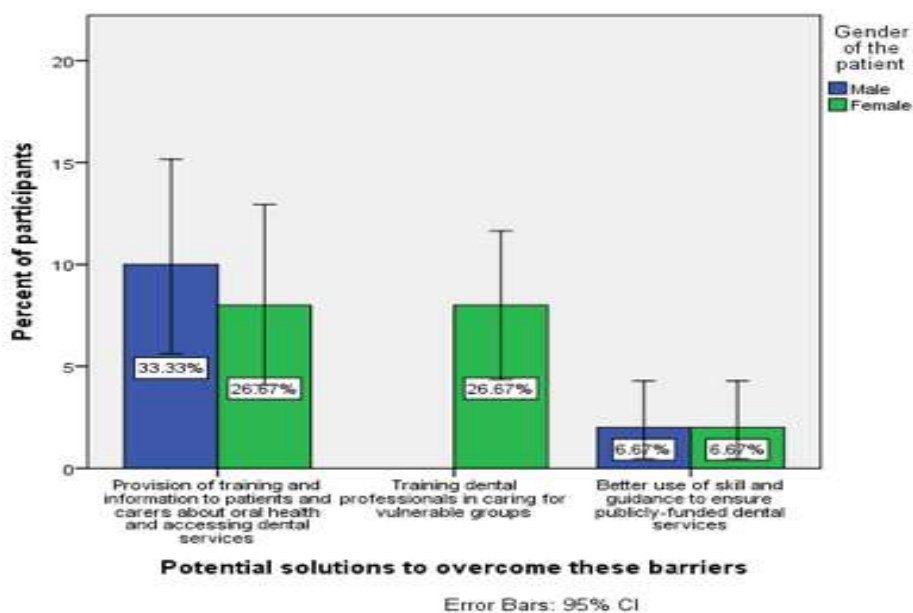
**Figure: 7:** represents the association between the gender of the participants and the common factors that give them anxiety before entering the dental clinic. The X axis depicts the factors that give the participants anxiety and the Y axis depicts the percent of participants. Blue represents ‘male’ and green represents ‘female’. Chi square test was used and the association was found to be statistically significant (pearson chi square value= 5.885, p value= 0.53). Majority of the male participants found the fear of infection as the common factor giving them anxiety before entering the dental clinic while most of the female participants felt that the cost of the treatment was the most common factor affecting their anxiety before entering the dental clinic.



**Figure 8:** represents the association between the gender of the participants and the various factors that cause fear or discomfort for the patient during the dental treatment. The X axis depicts the various factors that cause fear or discomfort for the participant and the Y axis depicts the percent of participants. Blue represents ‘male’ and green represents ‘female’. Chi square test was used and the association was found to be statistically significant (pearson chi square value= 13.71, p value= 0.001). Majority of the male participants found that the fear of dental infection was a factor that caused fear or discomfort while most of the female participants found that a feeling of insecurity as the factor that caused them fear or discomfort.



**Figure 9:** represents the association between the gender of the participants and the current barriers towards accessing dental care according to the participant. The X axis depicts the current barriers towards accessing dental care according to the participants and the Y axis depicts the percent of participants. Blue represents ‘male’ and green represents ‘female’. Chi square test was used and the association was found to be statistically significant (pearson chi square value=7.604, p value=0.055). Majority of the male participants found that lack of affordability as the current barrier to accessing dental care while most of the female participants find lack of availability of appropriate care as the current barrier to accessing dental care.



**Figure: 10:** represents the association between the gender of the participants and the potential solutions to overcome the barriers. The X axis depicts the potential solutions to overcome the barriers and the Y axis depicts the percent of participants. Blue represents 'male' and green represents 'female'. Chi square test was used and the association was found to be statistically significant (pearson chi square value=7.315, p value=0.026). Majority of the male participants consider provision of training and information to patients and careers about oral health and accessing dental services as the potential solution and so do the female participants.

**DISCUSSION:**

There was a previously done study on perceived oral health beliefs, traditional practices and oral health status of nomads of Tamilnadu, 30.9% had perceived strong beliefs about oral health, 30.9% of the subjects used proper toothbrush and 20% of participants at least had one oral mucosal lesion whereas in our study it was about the hindrances that prevent us from getting proper health care where 43.33% of participants have replied as fear of injection which prevents them from visiting a dentist[42].

There was another study conducted on association of level of education and utilisation of restorative dental care among rural women in India, only 56.9% of the subjects have visited the dentists before and the subjects who don't visit the dentists were around 55.7% and most of them were illiterates whereas in our study literacy don't play an important role where only fear and anxiety like 46.67% have replied as fear of dental injection, 43.33% have replied as cost of treatment and 10% have replied as anxiety over many instruments inside the mouth was an important factor which prevented them from visiting a dentist[43].

There was an assessment done about the comprehensibility of oral health instructions given by health service providers to the outpatients in a public hospital at Chennai, only 4% of the participants have score excellent and 58% have scored good but 6% of the participants was scored poor, whereas in our study there was no assessment or comprehensibility of oral health instructions [44].

The primary cause for lack of hindrance in access to oral health was dental professionals' lack of confidence and training in treating patients from vulnerable groups. Patients and caregivers have communication issues. There is a lack of awareness of cultural or disability issues. Access to dental care is hampered by physical obstacles. Decreased energy and motivation associated with depression can have an impact on oral health by leading to a higher risk of dental caries and periodontal disease, cariogenic nutrition, avoiding necessary dental care, and antidepressant-induced xerostomia. This can be prevented by brushing and flossing regularly, we will have to visit the dentist routinely for checkup and cleaning in order to overcome the fears about dental clinics, and a well-balanced diet must be maintained.

The limitations of the study are that since it is constricted to a single university not all barriers can be addressed in the study and also since the patients who were questioned regarding their hindrances were given limited options, the results can turn out biased too. Future recommendations for the study are to increase the count of patients and to ask multiple questions with a wide range of options and also being open to new barriers put forward by the population.

**LIMITATIONS:**

The study is limited to just a single institution hence results being limited. However, it would be better to increase the radius of the reach of the study to many more institutions within the state and then extended to within the country thus



increasing the credibility and reliability of the results. Despite the limitations showcased, these studies show association between major variables which can provide a solid base to future research on this very topic or related topics.

### CONCLUSION:

Affordability, availability, accessibility, lodging, and acceptability are the five major barriers to accessing oral health care services. Language and literacy levels, transportation, fear and anxiety, oral health literacy, lack of knowledge of the oral health care system and how to manage it, mental health and/or drug abuse problems, and attitudes of dental office workers toward vulnerable communities all affect access to dental care. Aside from cost, education of dental practitioners and office workers to improve knowledge and sensitivity, case management, client advocacy/system navigation, and alternative dental care models are all possible solutions or methods to reduce barriers to oral health care access. Although the expense of dental care is a major obstacle for many people, research has shown that even publicly-funded or low-cost services do not guarantee access. It is suggested that the government and other organisations continue their education and lobbying activities, but that representatives also think about how they can help overcome additional barriers to treatment.

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### CONFLICTS OF INTEREST

The authors declare no potential conflict of interest.

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