# Availability of Dental Services for Medical Students in Georgia 

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#### Abstract

: Oral health is important issue in field of public health and can be negatively affected by psycho-emotional factors. Foreign medical students can be subjected to oral disease risk factors and therefore be in significant need for regular dental care, but there is a lack of information how good students access the dental clinics. Study aimed to evaluate the accessibility to dental care for foreign medical students in Georgia. We conducted an online survey in duration of two weeks in October - November 2022. Study sample were medical undergraduate students, they answered 12 questions about frequency and type of dental visits, about availability and quality of dental care they received in Georgia. Overall from 270 medical undergraduate students aged between 18-45 years, $70 \%$ were male and $30 \%$ female. $70 \%$ were from Jordan, Iran - 15\%, Egypt - 4\%; Great Britain - $4 \%$, France $-4 \%$ and Rwanda - $4 \%$. In their countries $50 \%$ of students used to visit dental clinics every 6 months for regular check-up (70\%); professional cleaning (31\%) and dental pain (27\%). 81.48\% of interviewed students have never visited a dental clinic in Georgia. Among them who visited, the purpose was check-up ( $65 \%$ ) and dental pain ( $30 \%$ ). For the source of information about dental clinics the students named internet ( $60 \%$ ). Access to dental care was rated as medium ( $37.50 \%$ ), while overall satisfaction was rated as normal ( $47.62 \%$ ). The study showed very low rate of referral to the dentist. However, among those who visited the clinic, their evaluations were satisfactory. We can estimate the lack of information as an important barrier for students. In addition, some students arrived in Georgia only a few months before the study started, so there might be no need to visit dentist in the time interval studied. Further research is needed to clearly identify possible barriers for dental care for medical students.


Keywords: Oral health; Dental care; Accessibility of dental care; Medical students

## 1. Introduction

Oral health is an important issue in the field of public health. Despite the successes in the field dental diseases remain an acute and urgent problem in the world, especially among the poor and underprivileged groups of the world population, both in developed and developing countries (WHO, 2022). The most common dental diseases are dental caries and periodontal diseases. These diseases are multifactorial and their development is influenced by many local and general risk factors (Kazeminia et al., 2020). Dental care is one of the most expensive medical services and is rarely covered by insurance companies. Worldwide, reimbursement for dental services varies according to regional or country health policies (Alemayehu and Warner, 2004).
Oral diseases are negatively affected by psycho-emotional factors. It is known that chronic stress can contribute to progression and even development of oral diseases in two different ways. Individuals subjected to chronic stress are more prone to lead unhealthy lifestyle, to substance abuse, drugs, tobacco and alcohol misuse. They also can neglect oral hygiene. In addition chronic stress contributes to development of dysfunction of physiological systems critical to homeostasis and thus affects key mechanisms of disease progression in general (Vasiliou et al., 2016).
Socioeconomic factors are well known to have influence on overall oral health and can be one of the reasons for demonstrated inequalities in oral health outcomes. Several authors suggest that when compared to other common social groups, individuales from vulnerable and disadvantaged groups are less likely to have dental insurance. Due to this fact they are more likely to visit a dentist only in case of acute emergency and avoid routine dental visits due to high cost (Borenstein et al., 2013).
Foreign medical students can be considered as individuals subjected to chronic stress and oral disease risk factors and therefore be in significant need for regular dental care. But due to high costs of dental services students are also less likely to apply for routine dental visits. But there is a lack of information on how good students access the dental clinics and if high quality dental care in Georgia is affordable for them. Therefore, our study aimed to evaluate the accessibility to dental care for foreign medical students in Georgia.

## 2. Materials and Methods

This study was conducted using online survey. Data collection was performed during 2 weeks in October and November 2022. Study sample were undergraduate students of Medical Faculty of European University enrolled in english language Dentistry program. The university is located in the capital of Georgia - Tbilisi and in Fall semester 2022-2023 has 944 students enrolled in the Dentistry program. Main inclusion criteria were citizenship of foreign country and residency in Georgia for more than 6 months
The data were collected by an online survey, which was created using AL-powered online platform SurveyMonkey. A Total of 12 questions were included in the online questionnaire. To verify possible associated social and demographic factors participants were asked to specify their gender, age and nationality. To identify changes in frequency and types of dental services after arrival in Georgia, participants were asked separate questions about frequency and purpose of dental visits in their home country and in Georgia. To evaluate the availability of information about dental clinics in Georgia participants have been asked to specify the way they get information about dental clinics in Tbilisi. The accessibility of dental services for students was evaluated by direct question "How would you rate the access to the service". At the end participants also were asked to leave any additional comments about their experience regarding receiving dental treatment in Georgia.
The research project and questionnaire was approved by the Ethics and Research Committee of the Faculty of Medicine of European University. All participants were previously informed about the study and the confidentiality of the information provided was guaranteed.

## 3. Results

Totally 270 undergraduate students participated in study. The age range was from 18 to 45 years, $70 \%$ were male and $30 \%$ female; Main foreign home countries for students were: $70 \%$ Jordan, Iran - 15\%, Egypt - 4\%; Great Britain - 4\%, France - 4\%, Rwanda - 4\% (Figure 1).


Figure 1. Distribution of participants according to gender and home country

In their countries $50 \%$ of students used to visit dental clinics every 6 months. For the question about the purpose of visit participants had multiple options for choice. Regular check-up was named in $70 \%$, professional cleaning visit in- $31 \%$, dental pain - in $27 \%$, dental caries in $20 \%$. Further reasons for dental visits such as root canal treatment, tooth extraction, orthodontic treatment and prosthetic treatment were named in less than $10 \%$. Same questions were asked about dental service in Georgia. 81.48\% of interviewed students have never visited a dental clinic in Georgia. Among them who visited, main purpose were check-up (65\%) and dental pain (30\%) (Table 1).

Table 1. Main reasons for dental visits in home country and in Georgia.

| Purpose of dental visit | In home country (\%) | In Georgia (\%) |
| :--- | :---: | :---: |
| Regular check-up | 70 | 65 |
| Professional cleaning | 31 | 30 |
| Dental pain | 27 | 32 |
| Dental caries | 20 | 16 |
| Root canal treatment | 9 | 4 |
| Tooth extraction | 6 | 4 |
| Orthodontic treatment | 9 | 12 |
| Prosthetic treatment | 3 | 8 |

As the source of information about dental clinics, the students named the internet (60\%). Also they get information from their friends (28\%) and lecturers ( $20 \%$ ). University was named as a source of information only in $10 \%$ of cases.
Access to dental care was rated as easy by $37.93 \%$ of participants, as not so easy by $17.24 \%$, medium by $37.93 \%$ and difficult or too difficult by less than $7 \%$.

Overall satisfaction from nearly half of participants was rated as "normal" (47.62\%). 34.6 \% of students were "satisfied" with dental service provided in Georgia, while $15.08 \%$ were "very satisfied". Only $2.7 \%$ of participants described the service as "very bad".
Most participants ( $60 \%$ ) evaluated the value for money of dental service in Georgia as "average" while $28 \%$ of them rated it as "above average" and $8 \%$ as "excellent". Only $4 \%$ of students assessed value for money as "poor".

## 4. Discussion

In recent literature high costs are named as the main barrier to receive dental care (Thompson et al, 2014). Avoiding dental visits and treatment due to high cost is a barrier that exists prior to seeking treatment, while sometimes, when the recommended dental care is costly, after the initial visit, persons reject the recommended care. Both circumstances point to the possibility of progressive dental caries or poor oral health due to cost barriers (Ramraj and Quiñonez, 2013). Our study has demonstrated a low rate of initial referral to the dentist. But from the participants of our study "money for value" evaluation for dental treatment was rated mostly as medium. So we can speculate not to consider high costs as the main reason for low referral. Also among those who visited the clinic, their evaluations were on the average satisfactory. Instead we can estimate the lack of information as an important barrier for students. Since students receive less information about dental services from University than from the internet ( $10 \%$ and $60 \%$ respectively), based on our study we can suggest recommendations for student service centers to promote information about available dental clinics, services and prices in Tbilisi. As the limitation of our study, we found that some students arrived in Georgia only a few months before the study started. To avoid the bias caused by this weakness, only the students who have spent more than 6 months in Georgia were involved in our study. But still, students might not have needed to visit the dentist yet. Further research is needed to clearly identify possible barriers for dental care for medical students.

Conflicts of Interest: The authors declare no conflict of interest.

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