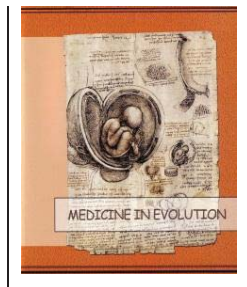


Self-evaluation of oral health: A questionnaire based survey



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Abstract

Aim and objectives: The aim of this study is to get an insight of how patients perceive oral health and to propose possible new methods of enhancing dental prevention methods and new models of education. **Materials and methods:** the questionnaire was created on google forms and shared through google drive. **Results:** Through the patient eyes the absence of symptoms and the increase costs of dental treatments are the most important factors taking in account while they are considering their visit to the dental cabinet. **Conclusions:** Despite being largely preventable dental caries are the most prevalent health condition and is rarely seen as a priority in health policy. The current direction of oral health programs needs to be re-evaluated adding more resources and creating educative programs for kids, adolescents and adults so we can change the patient's mindset from a young age.

Keywords: self-assessment, oral health, prevention, general health, education

INTRODUCTION

Oral health is defined by the FDI as multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotion through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex [1]. In the oral cavity there is a consortium of bacteria forming the bacterial ecosystem and with the help of salivary pellicle are attached to dental surfaces. This ecosystem is present in healthy individuals but if its balance changes then oral diseases might occur [2]. Despite being largely preventable, oral diseases are affecting more than 3.5 billion people around the world (2010), thus making dental caries the most common disease globally with increasing prevalence in many low-income and middle-income countries. The most recent data from 2015 confirmed that untreated caries in the permanent dentition remained the most common health condition globally (34.1%) [3]. Also when enamel is lost can't be replaced and only incipient enamel lesions can be re-mineralised using conventional sanitizing methods like tooth brushing with toothpaste containing hydroxyapatite [4]. Behaviours like dental check-ups, toothbrushing frequency, diet and sugar consumption, dental floss use and other methods of interproximal cleaning play an essential role in the prevention of dental caries since adequate oral hygiene habits and regular use of dental services have shown effectiveness in reducing the prevalence of these diseases as in the prevention and early diagnosis of oral diseases [5]. Another important factor that influences the appearance of oral diseases, and in this case dental caries, is the usage of orthodontic fixed appliances. It has been shown that even after 2 months the salivary pH drops to a more acidic level favouring bacterial overgrowth due to bacterial plate deposit [6]. A study made by Matichescu and her collaborators showed that normal toothbrushing alone can't eliminate tartar and plague efficiently in comparison with the ultrasonic instruments in the dental office highlighting once again the importance of the visit to your dental practitioner [7]. Oral diseases don't cause only individual harm but a collective one as well. In 2010 was calculated that direct costs of dental treatments were \$298B (billions) and \$144B to indirect costs in terms of productivity losses due to caries, periodontitis, and tooth loss accounting \$442B in total [8]. In addition patients with halitosis which might be a result from underlying disease exhibited a greater level of inadequacy, depression, anxiety, sensitivity, anger, and stress profile that tends towards neurosis, as well some subjects reported with obsession and personal sensitivity [9]. Non-resolving chronic inflammation derived from periodontal disease also impacts on diabetes control (elevated HbA1C) and complications reinforcing the importance of good oral health. Poudel et al showed in his study that majority of people with diabetes are unaware of the bidirectional link between diabetes and periodontal disease and they have limited knowledge of their risks for oral health problems. Diabetes care providers were unable to inform their patients about the association between diabetes and periodontal diseases due to the lack of their own knowledge in oral health and oral diseases [10].

Aim and objectives

The aim of this study was the self-evaluation and perception of individuals regarding their own oral health and to show an insight of what we need to change in our strategy for public oral health programs.

MATERIAL AND METHODS

The questionnaire was created on google forms and was shared through google drive links. To avoid bias, we excluded professionals working in the medical field because we wanted to establish the mindset of people without any relation or professional knowledge on the medical industry. Also an exclusion criterion was the age, accepting answers by users

over 18 years old and below 40 years old. The questionnaires were included only if 50% or more of the questions were answered. The total questions were 6 and including questions about chief complaint and intervals between visits in the dental cabinet.

RESULTS

A total of 446 questionnaires were submitted and we exclude 14 due to insufficient answering rate or due to age compliance. All the results are presented in percentages rounded up at one decimal place. In the questionnaire we had 58.9% female and 41.1% male participants. regarding the last dental check-up, 49% of the participants answered they had visit the dentist in the last 6 months, 22.7% answered that they visit the dentist between 6 months and a year and finally 27.3% haven't visit the dentist in over a year. The results are present in Figure 1.

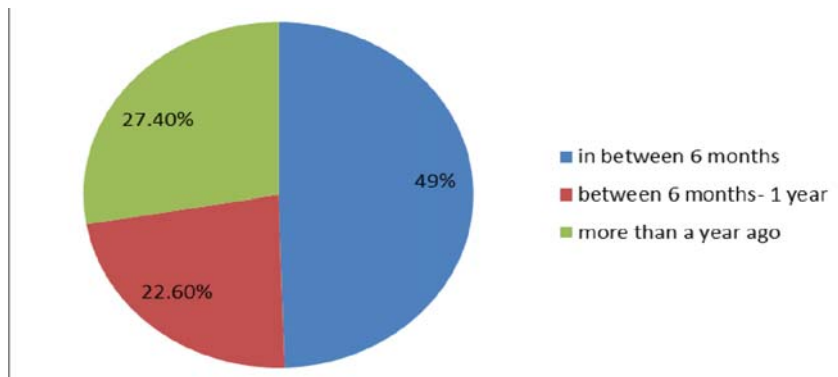


Figure 1. When it was the last time you visit the dentist?

Asking about the chief complaint of the patient 23.4% answered they visit the dentist because they had pain, 51.1% answered for a regular consultation, 2.7% due to a trauma and 22.6% answered for other reasons as it is show in Figure 2.

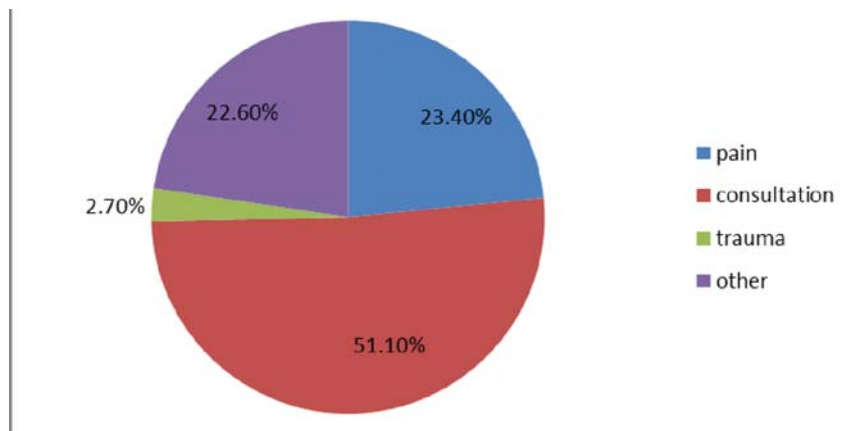


Figure 2. Chief complaint

When the participants were asked why they haven't visit the dentist 34.0% answered because they didn't have any symptomatology i.e. pain, 25.0% said because dental visits and treatments are expensive, 9.7% declared that visits to the dental practitioner it doesn't benefit them and 31.3% said that they are going in the recommended interval proposed by their dentist (fig.3).

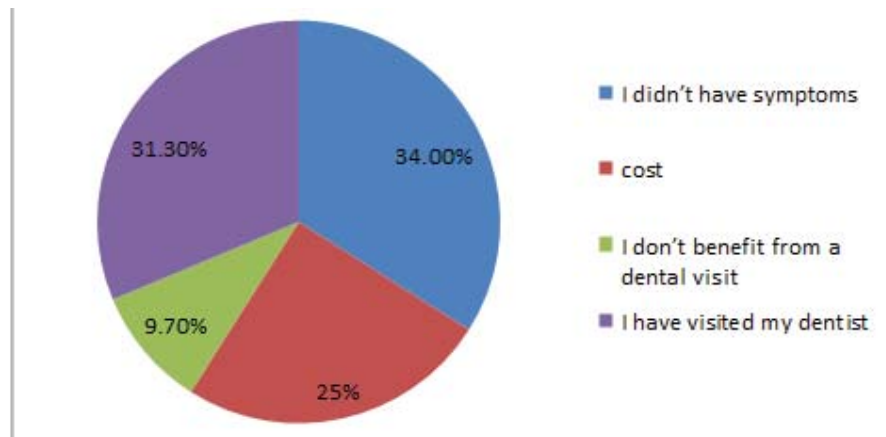


Figure 3. Reasons why I'm not visiting the dentist

Last but not least the participants were put to answer if they knew that without symptomatology there it might an underlying disease in an incipient level would you have come for consultation with 86.6% saying yes and 13.4% declaring no (fig.4).

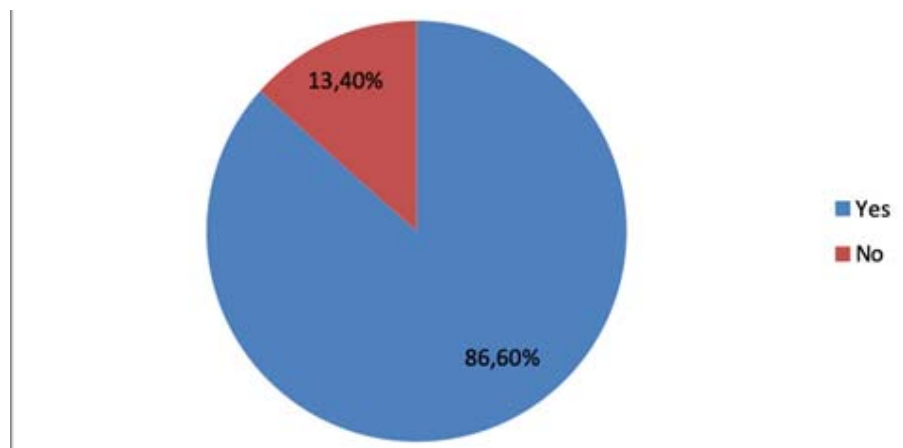


Figure 4. If you knew that without pain you might have a problem would you visit your dentist?

DISCUSSIONS

Tooth unique structure, having no nerve endings in enamel and therefore there is no pain in incipient lesions, tricks the patients on believing the absence of pain equals as absence of disease. When the patient seeks the help of the professionals it's when the pain starts as it shows in figure 3 with a 34% rate. That's imperative because oral health doesn't affect a person just physically but mentally as well. Studies showed that edentulism (consequence from an untreated carious lesion) and prostheses conjugate a significant binomial impact on the quality of life. High edentulism rates address incredulity on natural dentition, making a path for considering dental loss, natural. On the other hand, "artificial" dentition does not meet the masticatory demands, reverberating social dimensions and impacting quality of life. The difficult to adapt to jaw prostheses leads to their uncountable edentulous abandonments, causing deficient alimentation and other aesthetic, functional and psychological injuries [11]. Another study showed that oral problems, particularly tooth loss and edentulism, have been linked to the risk of depressive symptoms and deterioration in oral health and oral health-related quality of life had a negative effect on depressive symptoms among older adults, suggesting the importance of oral health as a key determinant of SWB (subjective well-being) among older adults. Strategies to improve oral health among older adults may not only have

direct benefits on their oral health but also have the potential to improve their well-being [12]. Moreover oral health issues have been associated with many other medical conditions, ranging from other severe oral pathologies to diverse pathologies such as diabetes, heart conditions, kidney disease, or even affecting pregnancy. According to Gluck and Morganstein, maintaining a good oral health in relation with the entire healthy self is important because being healthy means more than not having a medical condition. Yet, in the case of oral health, preventive measures have not been implemented to their fullest potential, even though relatively small investments would yield lifelong benefits [13]. Additionally studies showed that prevention can be beneficial in an economical point of view. The universal application of resin sealants would be a cost-effective measure in populations where the prevalence of caries in first permanent molars is high and a study in 6 states in U.S.A. showed that preventive dental services for children results in cost savings to their population [14, 15]. Health systems have significant potential to change health behaviours and to improve health and that preventive orientation can also reduce the demand for health services and the economic burden of oral diseases. A previous study on Romanian population showed that they are visiting less frequently an oral health practitioner than the Swedish and Portuguese population. One-fifth the Romanians reported having the last visit three or more years ago or never being to oral health professional. Furthermore, the chief complaint for Romanians and Swedish population was for extraction and prevention respectively. The results of this study showed that Romanian adolescents brush their teeth less frequently than Portuguese and Swedish. Also, more than half of the samples never use dental floss, this habit being less frequent in Romania [5]. This highlight the importance of Community public oral health programs could increase awareness and enhance adolescent education to encourage healthy routines and self-care. For example, if frequently observed an incipient lesion can be solved by the usage of sealants, saving the patient from all the complications of carious lesions mentioned earlier in this paper. Sealing of pits and fissures is included by WHO among the four methods of dental caries prevention, general and local fluoridation, food and oro-dental hygiene. Sealing is a method widely described in literature as a simple, safe and effective clinical procedure in terms of cost / benefit and, therefore, it is highly recommended. In Romania is rarely used and it might be because the Romanian population doesn't visit the dental office very often [5,16]. In a study by Funieru and his collaborators in preschool children in Romania on 2014 showed that there was a high proportion of untreated caries with a clear socioeconomic gradient, and a change in the school-based oral preventive strategy is needed to meet the needs of the children even though the incidence of caries was declining in comparison with previous national surveys [17]. Also, Sfeatcu et al made a 2-year pilot study to test if education on oral health has benefit in reducing the oral caries incidence. The children in the test group received 3 experiential lessons while the control group not. The prevalence of dental caries was increased in the control group by 8.58% and decreased in the test group by 1.64% showing the positive effects on oral health status, oral health knowledge and behaviour among adolescents. Other findings showed that in children's education major role play the parents as well as the teachers in term of instruction on oral hygiene [18,19]. In United states the Centers for Disease Control and Prevention, Division of Oral Health has made oral health an integral part of public health programs e in the effort to eliminate oral health disparities and improve oral health for all [20].

This study had some limitations as well. Firstly, the questionnaire was made online and it was seen only by the users available on the specific week of implementation so the results might not correspond in other settings. Moreover, this is a small sample of the population which could result in not accurate findings. Other samples might have other characteristics, due to cultural and religious differences, and might show different results, underlying that there is not a universal successful public health program but more likely a program individualised according to the needs, flaws and habits of the respective population.

CONCLUSIONS

This study is in accordance with the statistics saying that the current system, globally, regarding oral health and prevention is not working and we should reconsider our course of action. Public health education for adults, giving some lectures to kids from a very young age and encouraging the patients to come to the dental cabinet will have beneficial outcome in the upcoming years. Future studies should be made to identify in depth where the negligence of oral health comes from and ways to combat it.

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