

Use of Questionnaires in Assessing the Level of Knowledge of Oral Hygiene and its Importance

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Abstract

The main purpose of this study is to identify the role of the link between the patient and the dentist, based on medical questionnaire, and to highlight the importance of knowing and using correctly certain products designed to prevent diseases associated with the oral cavity. A questionnaire addressed to patients regarding the frequency of visits to the dental office, the use of products for the oral cavity, the content of products for the oral cavity, awareness of health risks in the absence of specialized consultations, was designed and distributed in dental offices in Timis and Arad counties. Patients completed the questionnaire during visits to dental offices. The variations of the answers were examined and processed. Over 20 relevant questionnaires and scoring systems were studied, from which important elements were extracted, making a questionnaire with 16 questions / situations. The average time required to complete the questionnaire was 10 minutes. The study included 253 patients aged 18-65 years. The scale had an increased internal consistency, Cronbach's alpha = 0.78 and a positive external validity. Most of the participants do not visit the dental office in a timely manner, do not know very well or do not pay attention to the composition of oral hygiene products, do not differentiate between prophylaxis and curative therapy, are not sufficiently informed about the possible occurrence of serious diseases. These issues need to be deepened in order to conduct certain awareness campaigns for all segments of the population and to prevent serious diseases and to take into account the related socio-economic aspects of the oro-maxillo-facial area.

Keywords: questionnaire, hygiene products, composition, chlorhexidine, sweeteners

I. INTRODUCTION

By preventing the occurrence of medical issues related to the oral cavity, a major contribution is made to improving the health of a population as well as reducing costs related to addressing certain socio-economic problems in the medical field. Different studies have been conducted to elucidate the problems related to the importance of the visit to the dental office. Thus, promising studies were realized based on adapted existing medical questionnaires related to patient-provider communication in order to evaluate performance regarding validity and reliability [1]. Another study was based on exploring the internal structure of a tool to assess the confidence of dental students in the ability to communicate with patients, suggesting that this type of assessment may be a useful tool in analyzing these types of communication [2].

The study of the aspects related to the cost and satisfaction of dental care is a topical one, which highlights the aspects related to the attitude of the specialized staff, the need for treatment, the treatment options but also the prevention ones and the value of the interventions [3]. There are a multitude of oral hygiene products available to consumers, which has both advantages and disadvantages [4]. The advantages are mainly represented by the wide range of selection and specificity and the disadvantages are mainly related to safety. Among the most used products for oral hygiene are: toothbrush, toothpaste and mouthwash. Their selection is often based on price and too few times on the benefits attributed [5,6]. On the other hand, oral hygiene is more developed in urban areas compared to rural areas, this being more and more accentuated in Romania. Also, depending on the oral hygiene products used and the existence of various pathologies, there may be side effects, especially in cases where medication is administered without a medical recommendation. The oral mucosa is predominantly permeable, strongly irrigated, with a rich supply of blood, also showing evidence of easy

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regeneration in terms of short recovery times after stress or injury. The oral cavity is often used for local, systemic administration of active compounds, especially for the treatment of gingivitis, dental caries, candidiasis and oral lesions, etc [7,8].

The main purpose of this study was to identify the role of the link between the patient and the dentist and the importance of knowing and using correctly certain products designed to prevent problems with the oral cavity. Based on the data obtained, it is expected to start appropriate programs to raise public awareness of oral hygiene and prevention of diseases related to this area.

II. STUDY DESIGN

Literature study and elaboration of the questionnaire.

Studies and articles describing currently available methods for assessing the relationship between physician and patient during a visit to the specialist office were searched in the literature. The search focused on databases in English (e.g. PubMed, Web of Science) and later on the bibliography of articles and studies considered relevant. The selection criteria were based on the doctor-patient interaction, and following the analysis of the articles considered relevant, a scale for evaluating and interpreting the results was built. The selected articles were analyzed by a scientific committee from the disciplines involved in the study, together with specialists, and involved the following steps: 1) reducing the number of articles to make a simple and concise questionnaire, 2) making final decisions in regarding the questionnaire, 3) elaboration of the questions in such a way that the answers can be scored using a Likert type scale from 1 to 4. The questionnaire was completed in Romanian. Using confirmatory factor analyzes and general rules in accordance with the description in the literature, the minimum sample size was established in 180 patients [9]. All patients gave their written consent and were informed about the study during the visit to the dental office by the doctor. The dentist included the patients in the study by completing a short inclusion reporting form.

Thus, a prospective observational study in two counties was conducted from January 2017 to September 2018 in dental offices. The study was conducted on a group of 253 people, aged between 18 and 65 years. They received questionnaires, according to the model presented in table 1, related to oral hygiene, and were asked to complete it without providing their personal data. The questionnaire was distributed in various dental offices in Arad and Timiș counties.

Specify if you have a medical history	Acute	Chronic	
Are you allergic to certain medications, foods, etc.?	Yes	No	N.A.
How often do you go to the dentist?	Regular	Occasional	Only when it's an emergency
Do you often use oral care products?	Yes	No	
Do you know the composition of the dental care products you use?	Yes	No	I'm not interested
Are you a fan of natural or synthetic products?	Natural	Synthetic	I don't have a preference
Do you expect the dentist to recommend certain products, to explain their importance, to draw your attention if there are certain restrictions?	Yes	No	I'm not interested
Describe the products you use most often (toothpaste, mouthwash, etc.)			
Describe products you don't like.			
Do you use mouthwash that contains chlorhexidine (a recognized disinfectant)?	Yes	No	I'm not interested
Do you prefer to use products that contain aspartame or xylitol (two sweeteners commonly used in all products that do not contain sugar, approved by the World Health Organization) or products that contain sugar?	Yes	No	I'm not interested
What do you think about the use of baking soda?	It is useful	I have no information	I'm not interested
Are you a smoker?	Yes	No	
Do you know the risks associated with smoking? Have you heard of the association between smoking and the development of oral cancer?	Yes	No	N.A.
What prevention methods do you apply to maintain dental health?			
Describe the importance of the connection between the patient and the dentist			

Table 1. Questions from the questionnaire applied to patients to assess the importance of oral hygiene.

Statistical data

Statistical results were conducted using Excel from MS Office Pro Plus 2019 and the consistency of the items was evaluated by Cronbach's alpha (0-1 index).

III. RESULTS AND DISCUSSION

RESULTS

The recorded data highlight a number of positive aspects related to the approach to oral hygiene. Depending on the factors that influence the separation of patients, certain problems, issues or aspects can be identified that are beneficial in the correct approach to oral hygiene and in the awareness actions carried out by specialists in the field for the population. Of the participants in the study, 39% were male and the remaining 61% were female (figure 1).

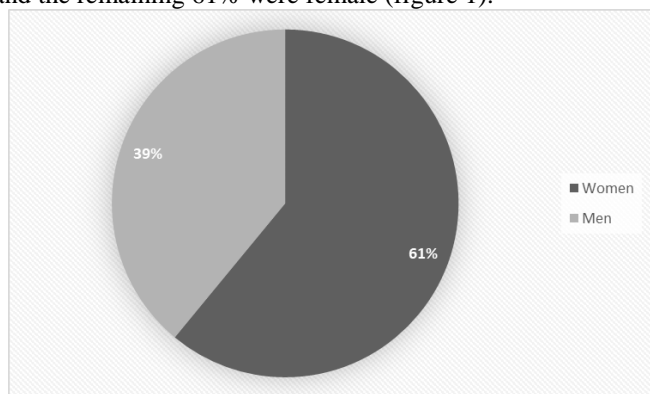


Figure 1. Gender distribution

People from different age categories were interviewed, which were then divided into age segments as follows: 18-25 years, 26-30 years, 31-40 years, 41-45 years, 46-50 years, 51-55 years and 56-60 years. In the case of males the age segment 31-40 years was predominant, and in the case of females the age segment 26-30 years was the highest. Patients were asked to indicate if they had a medical history; of these, 22% of males and 43% of females answered in the affirmative (Figure 2). Regarding the visit to the dentist's office, it was found that women appear in a larger number occasionally than regularly and men often end up in emergencies.

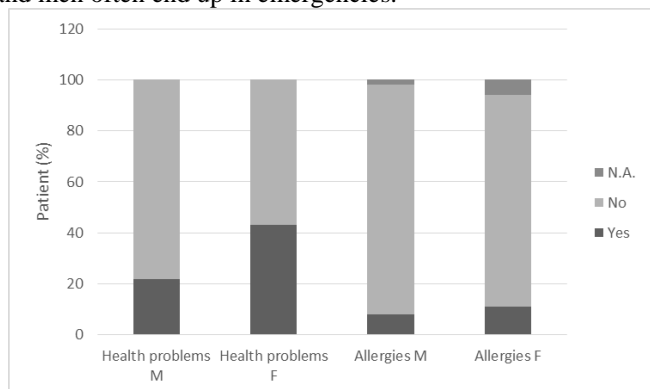


Figure 2. Distribution of percentages related to specifying the existence of a medical history or allergies

In the case of questioning the patients in the present study, it was found that men use less oral hygiene products compared to women. When asked if patients expect the dentist to recommend certain products, explain their importance or draw attention if there are certain restrictions, most patients, regardless of age or gender, answered in the affirmative mode.

Chlorhexidine has been shown to be unknown to patients and thus chlorhexidine-based hygiene products (Figure 3). Patients have not heard or given importance to products containing chlorhexidine and believe in the recommendations of specialists in the prevention of diseases associated with the dental sphere. Here it can be said that we are facing a problem, because as previously observed the visits to the dental office are relative and the need for awareness actions is obvious. In contrast, sweeteners such as aspartame or xylitol have been better known among patients compared to chlorhexidine (Figure 3). More and more people have expressed concern about the damage caused by sugar consumption to the body and have responded that they use products whose specific label - does not contain sugar.

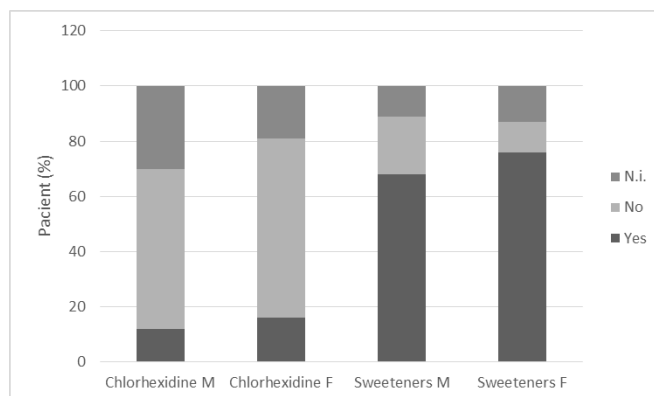


Figure 3. Distribution of percentages related to the use of chlorhexidine products, respectively sweeteners (aspartame or xylitol)

In some cases baking soda is used either as a cleaning agent or as an alkalizing agent. Among the patients who participated in the study, a significant number of females found it useful to use the compound, while more than half of the male patients said they had no information about its use.

Alpha Cronbach was calculated for the 253 patients, as 0.78, indicating a good internal consistency of the questionnaire (> 0.7). The correlation coefficients for items related to prevention methods apply to maintain dental health and the composition of the dental care products were lower.

DISCUSSION

Oral hygiene products play a key role in maintaining the health of teeth and the oral cavity in general. Depending on different parameters, these products are either recommended by specialists in the field or used by consumers due to curiosity, the influence of advertisements on different products or for reasons of prevention through a so-called knowledge, which can be assimilated with self-medication, taking into account any side effects that may occur [10-12]. Also, based

on specialized studies, it is of major importance to treat gingivitis that leads to serious complications. In these cases, specialized treatments and the use of optimal products must be carefully selected and justified only in the presence of a specialist [13]. Knowledge of oral hygiene products can be done through various means. The population is very receptive to advertisements for products in this category and probably a more relevant impact is related to the widely used term bio. Family physicians and dentists as opinion formers have an important role in the preventive oncological control and in establishing the early diagnosis of precancerous and cancerous lesions in the oral cavity. Some patients who have problems with the oral cavity have a high risk of oral cancer, especially if they are smokers or drink alcohol [14]. Proper oral hygiene can significantly reduce the risk of oral cancer, especially among smokers [15]. The present study sought to assess the doctor-patient relationship and to obtain information related to patients' knowledge of the use of oral hygiene products, the type of products used, etc. Numerous clinical studies have focused on the toxic effects on the oral mucosa associated with cancer therapy, such as a common acute toxicity effect of radiation therapy in patients with head and neck cancer [16].

Screening for the prevention of oral diseases and tumor pathology in this area, in addition to preventive oncological control, should include the application of a test to people who do not have oncological symptoms, and can be considered apparently clinically healthy, to identify those who have predispositions for the development of a tumor pathology and to distinguish them from those who do not have these predispositions. The test is not intended to be a diagnostic test, but aims to identify changes, which may be the first signs of an imminent disease. Defined in this way, screening is an ongoing public health measure, often funded by governments. A screening program must not be harmful and must also be cost effective. Governments require strict evidence of benefits and cost-effectiveness before implementing a program. Although there have been many studies that have investigated the usefulness of potential screening tests, there have been few evaluations of screening programs. Systematic reviews have concluded that there is insufficient evidence to show that screening for oral diseases can reduce mortality due to them, and so far no country has implemented a standardized formal screening program.

IV. CONCLUSIONS

Oral and dental hygiene, treatment of dento-periodontal diseases, detection of incipient lesions, along with sanogenic measures: reducing alcohol, tobacco consumption and avoiding prolonged exposure to the sun are essential measures in preventing oral cancer. Dentists need to devote more time to educating the population about oral hygiene, especially for patients in rural areas.

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