

ORAL IMPACT ON QUALITY OF LIFE AMONG YOUNG ADULTS IN IAȘI

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ABSTRACT

The aim of the study is to assess the impact of oral health on quality of life of the adult population, 18-34 years in Iasi, Romania. **Methods** A cross-sectional survey was conducted in 2011 and was selected a sample of 174 subjects with the age between 18-34 years old. The subjects were clinically examined according to WHO criteria and oral health related quality of life was assessed with the Oral Health Impact Profile-14 and Eurobarometer questionnaires. **Results** The most affected quality of life dimension was psychological discomfort, reported by 31% of the young adults. Some aspects, like functional limitation, difficulty to relax, and handicap are not affected. Other negative effects registered were associated with irritability (6.9%) and interrupted meals (5.7%). Using Eurobarometer questionnaire we found that 88% of the patients are unsatisfied with general and oral insurance system, and only 21.4% are confident in a better future. **Conclusions** Clinical indicators like "prosthodontic and surgical treatment needs" provide a sensitive predictor for negative impact on psychological dimensions of the quality of life.

Key words: young adults, OHIP-14, Eurobarometer

INTRODUCTION

The state of health of a population, including the oral one, cannot be thoroughly appreciated only on the basis of clinical examination, but also the relation with social environment and socio-economic conditions of community in which the individual works and lives should be known [1]. Internationally, the quality of life is recognized of being determined both by medical factors and social and psychological factors. These factors are measured and determined during practice and mostly medical research, being then used for the oral

health planning programs [2]. Research about the relationship between the quality of life and oral health is realized on the basis of socio-oro-dental indexes, defined as evaluations of the way in which oral health disturbs social function [3].

The aim of the study was to assess the impact of oral health on quality of life of the adult population, 18-34 years in Iasi Romania, using the Oral Health Impact Profile-14 and Eurobarometer questionnaires.

MATERIALS AND METHODS

The epidemiological study of cross-

sectional type took place at the Faculty of Dental Medicine of Iasi. Ethical approval for the study was obtained from the relevant authority. 174 subjects with the age between 18-34 years old were selected, who solicited the specialty assistance during the period of 2011 (Table 1). The assessment of the oral status occurred with the help of the Health World Organization based on clinical considerations without appealing to complementary examinations [4]. The Oral Health Impact Profile - 14 questionnaires, developed by Slade in 1997, comprises 14 questions which are destined to the influence that the oral affections have on the quality of social, psychic and physiological life [5]. The answers offered by the subjects are evaluated in the following manner: 0= never, 1= hardly ever, 2= occasionally; 3= fairly often; 4= very often. Thus, the negative impact is appreciated through the answers *fairly often and very often*, while a positive impact is determined by the answers: *never, hardly ever, and occasionally*.

	Nr	%
Female	101	57.87
Male	73	42.13
Urban	114	65.83
Rural	60	34.17
DMFT>10	120	68.92
Necessary of oral surgical treatments	26	14.90
Periodontal treatment need	25	14.70
Prosthodontic treatment need	76	43.60
Necessary of emergency treatments	56	32.94

Table 1. Profile of the study group

The standard Eurobarometer was established in 1973. Each survey consists of approximately 1000 face-to-face interviews per country and assesses the following major problems: health care, economy, human rights and policy, social politics. The questions used in our study are based on health care, insurance system, satisfaction and optimism about personal life and the future [6].

The data obtained were processed with the help of SPSS 17 program, for a statistical significance threshold, $p < 0.05$. We used the Spearman correlation test to assess the correlation between the OHIP-14 questions and the demographic, oral indicators, and logistic regression to assess the risk of low quality of live with dissatisfaction with oral health and insurance system.

RESULTS

Assessing quality of life using OHIP - 14 questionnaire

After applying the questionnaire, we have ascertained the following aspects (Table 2):

- most of the subjects, 69 (31%) felled self-conscious about oral health, that appreciates the psychological dimension of quality of life;
- some aspects, like *functional limitation, difficulty to relax, and handicap* are no affected;
- other negative effects registered were associated with *irritability* (6.9%) and *interrupted meals* (5.7%);
- under 5% negative effects were recorded for the last questions.

In order to check the association between the segments that incriminated the most frequent negative answer, OHIP-5, we have used the Spearman correlation analysis (Table 3).

We found significant association ($p < 0.05$) with oral indicators: *DMFT > 10*, *prosthodontic treatment need* and *necessary of oral surgical treatments*. The intensity of the association was moderate for correlation between *DMFT* and OHIP 5 ($r = 0.433$), *necessary of oral surgical treatments* ($r = 0.438$) and low intensity for correlation with *prosthodontic treatment need* ($r = 0.305$).

Assessing quality of life using eurobarometer questionnaire

The answers given by the patients are:

- over 80% of the patients are unsatisfied

- with general and oral insurance system (87.80%, respectively, 88.10%);
- 60% of the young adults had dental treatments in the last year;
- most of them, 75.6% are satisfied with their general health;
- only 21.4% are confidence in a better

future, regarding financial security, health care and Romanian development.

We checked the relation between unsatisfied with oral insurance system and demographic and clinic indicators using regression logistic analysis (Table 4).

OHIP 14 QUESTIONS	POSITIVE IMPACT	NEGATIVE IMPACT
	%	%
OHIP1-trouble pronouncing words	100	0
OHIP 2- worsened taste	97.7	2.3
OHIP 3-aching in mouth	97.7	2.3
OHIP 4-discomfort eating food	97.7	2.3
OHIP 5-feeling self-conscious	69	31
OHIP 6-feeling tense	95.4	4.6
OHIP 7-poor diet	97.1	2.9
OHIP 8-interrupted meals	94.3	5.7
OHIP 9-difficulty relaxing	100	0
OHIP10-embarrassment	98.3	1.7
OHIP 11-irritability	93.1	6.9
OHIP 12-difficulty in doing usual jobs	97.1	2.9
OHIP 13-life less satisfying	100	0
OHIP 14-inability to function	100	0

Table 2. Distribution of OHIP -14 items (positive and negative impact) How often in the past year have you had the following problems?

Clinical indicators	Spearman correlation coefficient (r)	Statistical significance for 95% CI (p)
DMFT>10	0.433	0.001*
Prosthetic treatment need	0.305	0.047*
Periodontal treatment need	0.071	0.390
Necessary of oral surgical treatments	0.438	0.001*
Necessary of emergency treatments	0.021	0.554

*p<0.05

Table 3. Spearman correlation between oral status and OHIP 5

Demographic and oral indicators	Odds ratio (OR)	Statistical significance for 95% CI (p)
Gender distribution: Female Male	2.948	0,01*
Geographic area	0.002	0.56
DMFT>10	0.163	0.03*
Prosthetic treatment need	0.014	0.86
Periodontal treatment need	0.056	0.17
Necessary of oral surgical treatments: Yes No	3.592	0.01*

*p<0.05

Table 4. Logistic regression: unsatisfaction with oral health insurance system

The results shown that the risk of unsatisfied with oral insurance system is the 3.5 higher from subjects who need surgical treatments (OR=3.592) and 2.9 from female than male (OR=2.948). Oral indicator $DMFT > 10$ has statistical significance, $p=0.03$, but the calculated risk is low, OR=0.163. The others variables included in the analysis haven't statistical significance, $p > 0.05$.

DISCUSSION

Assessing quality of live with OHIP 14 questionnaire

The most affected dimension of quality of live was psychological discomfort. The question to which 31% of young adults answered *quite often* and *very often* is OHIP 5: *Do you consider yourself guilty for the situation of your oral cavity?*

One expects the feeling of guilt to increase, as the oral status is more depreciated. This theory is confirmed by the bi-varied correlation analysis that recorded significantly static associations ($p = 0.001$) for the indicators describing a depreciated oral status: $DMFT > 10$, *prosthodontic and surgical treatment needs*. The explanation consists in the fact that these subjects become aware of the need of a preventive therapy, or of a minimally invasive treatment, based on the feeling of guilt determined by the appearance of coronary and periodontal complications, resulting in dental extraction.

We recorded no negative answers for other dimensions, such as: the handicap (OHIP-13, 14), the functional limitation (OHIP-1) and the psychological disability (OHIP-9). If we were to draw a comparison between the answers of young people from other countries, one observes the following: in Australia one notices a much more reduced percentage of individuals complaining of this feeling of guilt, namely only 14.7% [7, 8]. On the contrary, in Nigeria, where Okunseri et al.

discovers a much more increased percentage of young people, of 63%, whereas in Thailand this percentage is more reduced, of 46% [9, 10].

Recently, a study conducted with the London students of King's College, revealed a reduced

Assessing quality of life using eurobarometer medical questionnaire

The answers offered by our subjects demonstrate that 54.2% of them are content with their private life, and only 21.4% are confidence in a better future.

Almost half of Romanians (46%) are pleased with their lives although only 4% of them consider the national economy works well and only 14% expect the economy to improve this year, according to Eurobarometer study. The study shows the level of people's satisfaction with their lives is similar to that in autumn 2009, but improves greatly as compared to spring 2010, when the index dropped to 36%. The EU average of people who say they're content with their lives in general is about 30% higher than that in Romania. The best percentages were reported in northern countries (over 90% in Denmark, Sweden, Netherlands, Luxembourg, and Finland). Portugal (45%) and Bulgaria (38%) are the only countries with a worse percentage than Romania [6].

The discontent with regard to the social health insurances system is an issue denounced by most of the questioned subjects, by 87.80%, both for general healthcare and dentistry services (88.10%). This fact can be explained having in view the particularities of the Romanian health system, where the insurance does not cover treatment costs [12]. It is common knowledge that the health state is influenced to a great extent by the quality of medical services and by health insurances systems, as well. In this context, the knowledge of the patient's degree of satisfaction is greatly useful in order to

implement a realistic reform in this field. In order to get a complete picture, we continued the static analysis using the logistic regression method, which highlighted the fact that the best prediction factor is the clinical one, namely the subjects needing dental extractions are much more dissatisfied with the current system, as opposed to the others. As for demographical factors, one underlined the fact that female subjects are 2.9 times more dissatisfied as compared to male subjects. Amongst the first researches conducted in Romania, one may count those of Professor C. Amariei, who discovers that 59% of patients are satisfied with dentistry care services, especially private medical practices [13]. In other countries, such as Turkey, only 38.6% of the patients who referred to dental clinics are satisfied with the

quality of provided services, complaining of a general state of discontent caused by the extended treatment period and lack of organization of the system, as well [14].

CONCLUSIONS

1. The most affected quality dimension of the life related to the oral health are reported to the psychological discomfort, and the less affected is the one appreciating the functional limitation and handicap.
2. Feeling of self-conscious is greater with a poor oral health, DMFT>10 and surgical treatment needs.
3. The most important proportion of the subjects is unsatisfied with both general and oral insurance system, the risk is greater for female subjects and for those who need prosthodontic treatments.

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