

Health Behaviour among Students of Kaunas Universities: Dental Health and Oral Hygiene

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SUMMARY

The article presents the study data on oral hygiene and oral health of the first year students. The study was carried out in six universities of Kaunas in 2000. A standardized, self-administrated questionnaire was filled in by 1029 students. Half of the students assessed their oral health as very good and good. The association between self-reported oral health and self-reported health, health awareness and parents' education was found. Half of the men and 79.7% of the women brushed their teeth more than once a day. Oral hygiene behaviour was related with the subject of the study, self-reported health and health awareness. The obtained data revealed that 25% of the men and 14.6% of the women had not been to the dentist during the last year. Only 42% of the students visited a dentist for preventive examination. Improvement of the students' oral health should be one the tasks of health promotion programs at universities.

Key words: students, dental health, oral hygiene

INTRODUCTION

Oral health is important for physical and psychological well-being (1). There is evidence that oral health depends upon biological, social and environmental factors, mental and physical health (2, 3, 4, 5, 6). Different studies reported variations in prevalence of caries and periodontal disease among different countries and among different sub-groups of the same society (7, 8). These diseases are wide spread in Lithuania (9, 10, 11). According to the data of International Schoolchildren Health and Behaviour Project oral care of the Lithuanian children was the worst among 28 countries (12). The data of the study of Health Behaviour among the Lithuanian adult population show that people with higher education brushed their teeth more often compared with people with lower education (13). The Lithuanian students' oral health and hygiene still have been not sufficiently studied. The aim of this study was to evaluate oral health and hygiene habits of the students of Kaunas universities, depending on the subject of the study, social and economical factors.

MATERIAL AND METHODS

This study is a part of the international project "Health Promoting Universities". The random sample was drawn out of the register of first year students of six Universities

(Kaunas University of Medicine; the Lithuanian University of Agriculture; Kaunas University of Technology; Vytautas Magnus University; University of Law, Kaunas Faculty, and the Lithuanian Academy of Physical Education) in Kaunas.

Self-administered questionnaire was filled in by 1029 students (475 men and 554 women). The response rate was 81%. The average age of the respondents was 19.7 (0.05) years. The students were divided according to the subject of the study into three groups: 1) those studying biomedical sciences (Kaunas University of Medicine, the Faculty of Agronomy of the Lithuanian University of Agriculture, the Faculty of Health of the Lithuanian Academy of Physical Education); 2) those studying engineering (Kaunas University of Technology, the Faculty of Computer Science of Vytautas Magnus University, the Faculty of Water Economy of the Lithuanian University of Agriculture); 3) those studying social sciences and humanities (the Faculty of Humanities of Vytautas Magnus University, University of Law, the Faculty of Trainers, Tourism and Sports Management of the Lithuanian Academy of Physical Education).

In this study the questionnaire elaborated by Bielefeld University was used. The questionnaire was translated into Lithuanian and was adapted to the Lithuanian population. It contained questions about dental health status, tooth-brushing, dental check up, smoking, alcohol consumption, self-reported health status, health awareness, psychosomatic complaints and income. The survey procedures were designed to protect students' privacy and to allow anonymous participation.

In this study chi – square and ANOVA test for qualitative variable were used. Mean and standard error were calculated for quantitative variables. Multifactor logistic regression analyses were used to study associations between self-perceived oral health, tooth brushing more than once a day (dependent variable) and socio-demographic variables. Odds ratios and 95% of confidence intervals were calculated based on logistic models, using the enter model to adjust for gender and the subject of the study. All analyses were carried out using SPSS statistical package 10.0 version.

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RESULTS

Half of the students assessed their dental health as very good and good (48.5 % of men and 54.1 % of women). The prevalence of very good or good perceived dental health was the lowest among men studying social sciences (Fig. 1). The dental health assessment of women was not related with the subject of the study. The logistic regression model indicated higher odds of very good or good oral health if the respondents assessed their common health status as very good or good, reported taking care of their health very much or much and had parents with higher education (Table 1). The assessment of oral health was not related with oral hygiene habits, frequency of visits to the dentist, smoking,

alcohol consumption, eating habits and psychosomatic complaints.

Almost half of men (49.8 %) and 79.9 % of women answered that they brushed their teeth more than once a day ($p < 0.001$) (Fig. 2). The students of engineering had the worst oral hygiene habits ($p < 0.05$). The frequency of tooth-brushing was associated with self-reported health and health awareness (Table 2). The odds of tooth-brushing at least twice a day were higher among the students who assessed their health as good and had high health awareness compared to those rating their health as average or poor and having low health awareness. No association was found between oral hygiene habits and smoking, alcohol consumption, eating habits, psychosomatic complaints and income level.

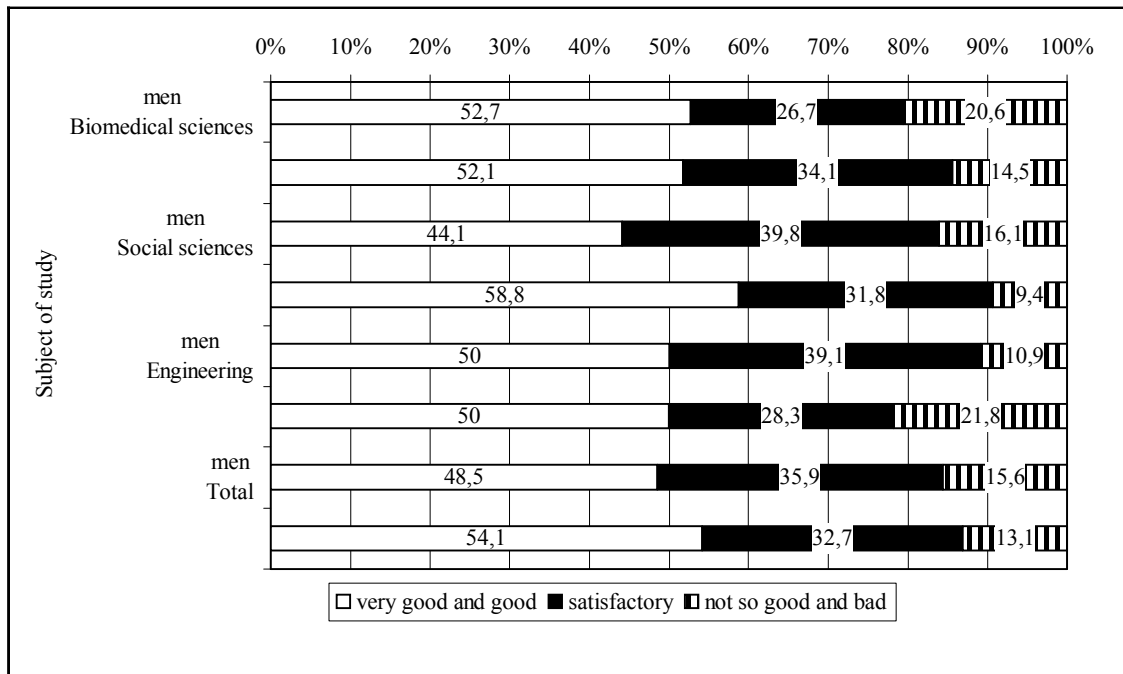
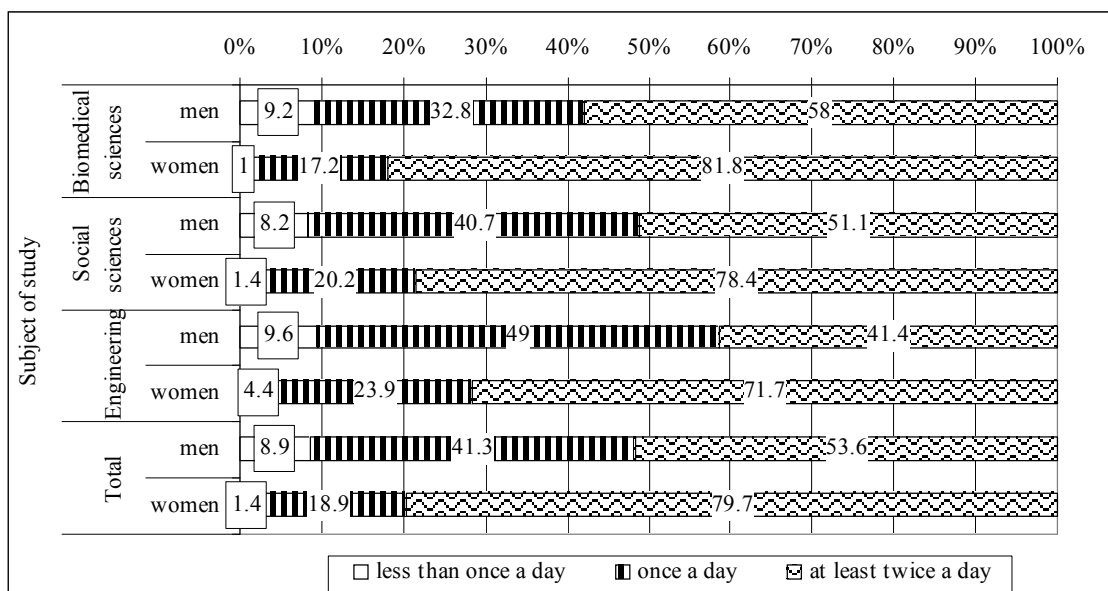


Figure 1. The assessment of dental health by gender and subject of study (%).
 $X^2 = 9,855, df = 4, p = 0.043$, compared men by subject of study



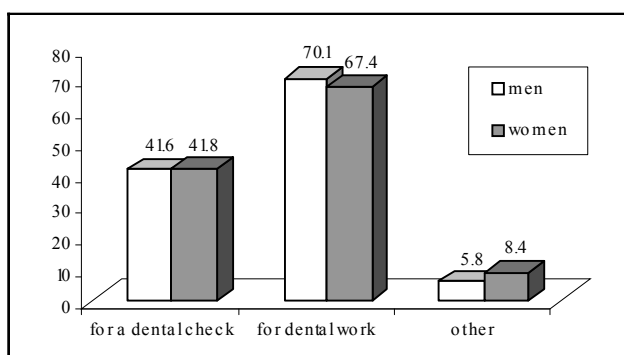
2 figure. Tooth brushing frequency by subject of study and gender (%)
 * $X^2 = 104,284, df = 2, p < 0.001$, compared with men;
 $X^2 = 9,855, df = 4, p = 0.043$, compared men by subject of study

Table 1. Logistic regression analysis of odds for very good and good perceived oral health among the students of Kaunas universities.

Independent variable		Odds ratio	Confidence interval	p-value
Gender	Women	1		
	Men	0,799	0,624 – 1,023	0,075
Subject of study	Engineering	1		
	Social sciences	0,99	0,698 – 1,405	0,95
	Biomedical sciences	1,885	0,725 – 1,482	0,84
Self reported health	Average and bad	1		
	Very good and good	1,643	1,251 – 2,158	0,0004
Health awareness	High	1		
	Low	0,698	0,501 – 0,973	0,03
Sense of coherence	High	1		
	Average	0,636	0,448 – 0,9036	0,012
	Low	0,75	0,547 – 1,03	0,075
Mother's education	University degree	1		
	Secondary and vocationally school	0,662	0,513 – 0,854	0,043
	Primary and incompleted secondary school	0,421	0,182 – 0,971	0,001
Father's education	University degree	1		
	Secondary and vocationally school	0,62	0,478 – 0,808	<0,001
	Primary and incompleted secondary school	0,351	0,195 – 0,633	<0,001

Table 2. Logistic regression analysis of odds for tooth brushing at least twice a day among the students of Kaunas universities.

Independent variable		Odds ratio	Confidence interval	p value
Gender	Women	1		
	Men	0,294	0,22 – 0,392	<0,001
Subject of study	Engineering	1		
	Social sciences	1,47	1,026 – 2,125	0,036
	Biomedical sciences	1,885	1,29 – 2,753	0,001
Self reported health	Average and poor	1		
	Good and very good	1,6516	1,226 – 2,224	0,001
Health awareness	High	1		
	Low	0,698	0,501 – 0,973	0,03

**Figure 3.** The reasons of the visits to a dentist by gender(%) * (* several reasons were available)

The respondents were asked to indicate the number of their visits to the dentist during the last year. The average number of visits was 1.91 (0.14) for men and 2.22 (0.12) for women ($p < 0.05$). Men studying biomedical sciences reported 2.13 (0.34) visits, those studying engineering – 2.02 (0.22) and for social sciences – 1.64 (0.18) visits ($p < 0.05$). Women respectively 2.5 (0.19), 1.8 (0.35) and 1.91 visits ($p < 0.05$). Every fourth of men (25.4 %) and 14.6 % of women indicated that they had not been to the dentist during the last year ($p < 0.001$). Figure 3 represents the distribution of students according to the reason of their visit to the dentist. The most frequent reason of visits was dental treatment. Preventive examination was indicated by 46.1 % of men and 41.8 % of women.

DISCUSSION

This study revealed that oral health status of students was not good: only half of them assessed it as good. Surely clinical oral examination would provide more precise data on oral health status. Nonetheless, some authors found strong correlation between self-reported dental health and objective findings (14, 15, 16). In our study high health awareness and good subjective health were related to good dental health. Unfortunately, we did not find association between oral hygiene habits and oral health assessment. Other investigators estimated the links between oral health and oral hygiene habits (9, 17). According to the data of the Lithuanian adult health behaviour study, those persons who missed 5 teeth and more had worse oral hygiene habits than those who missed none (3). We estimated positive association between parents' education and dental health assessment of the students. These data are consistent with the findings of other studies.

(18). Parents with higher education and higher income level take better care of oral health of their children compared to those of poorer education and lower income persons.

The oral hygiene habits of the students of Kaunas universities, especially of men, were not very good, but they were better than those of their contemporaries in the population. The data of health behaviour study among the Lithuanian adult population showed that 28.3 % of men and 46.8 % of women 20 – 24 years of age brushed their teeth at least once a day (13). The Lithuanian recruits' oral hygiene habits were even worse: only 11.3 % of them brushed their teeth at least twice a day (19).

The oral hygiene habits of the Lithuanian students were similar to those of young people in other Baltic states and Finland. More than one third (38.6 %) of men and 65.1 % of

women 15-24 of age brushed their teeth at least twice a day in Finland (20), 43.6 % and 63.4 % respectively in Estonia (21), 38.5 % and 62.9 % respectively in Latvia (22). The Spanish students' oral hygiene habits were better compared with those of the Lithuanian students (23).

Toothache was the most frequent reason of students' visits to the dentist in Lithuania. Only 2 % of the students in Finland and 56 % in Japan visited the dentist because of toothache (24). Many investigators found association between oral health status, smoking and alcohol consumption (3, 19, 25, 26). These findings could be explained by better oral hygiene habits of non-smokers compared with those of smokers. The data of our study did not reveal any association between oral health status and oral hygiene habits, smoking and alcohol consumption. Possibly, the impact of these factors on oral health in a young age is not highly expressed.

CONCLUSIONS

1. Only half of the students of Kaunas universities assessed their oral health status as good and very good. Oral health assessment was related with subjective health, health awareness and parents' education.

2. One fifth of women and half of men brushed their teeth at least twice a day. Oral hygiene habits were associated with the subject of the study, self reported health and health awareness.

3. Most of the students visited the dentist at least once during the last year. The most frequent reason of the visits was dental treatment.

4. The data of the study proved the need for oral health promotion programs at the universities in Kaunas.

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