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Nawyki higieniczne jamy ustnej wśród studentów kierunku lekarskiego i lekarsko-dentystycznego oraz studentów English Division Uniwersytetu Medycznego w Lublinie

Oral hygiene habits among Polish students of dentistry, medicine and the students of English Division of Medical University of Lublin

Streszczenie

Wstęp. Prawidłowa higiena jamy ustnej wpływa na funkcjonowanie całego organizmu, a częste oczyszczanie tkanek zęba oraz prawidłowa dieta może w znaczącym stopniu zredukować powstawanie próchnicy.

Cel. Celem pracy było porównanie nawyków higienicznych w zakresie jamy ustnej studentów Uniwersytetu Medycznego w Lublinie pochodzących z Polski oraz z zagranicy.

Materiał i metody. Badanie ankietowe przeprowadzono wśród 279 osób studentów UM w Lublinie. W badanej grupie było 189 studentów z Polski i 90 studentów anglojęzycznych, którzy pochodzą m.in. z USA, Kanady, Tajwanu, Indii, Norwegii. Pytania zawarte w ankiecie dotyczyły m.in. częstości szczotkowania zębów i spożywania słodyczy, wizyt w gabinecie stomatologicznym. Uzyskane wyniki badań poddano analizie statystycznej.

Wyniki. Wyniki badań zestawiono w Tabelach 1-5. Ankietowani zostali podzieleni na 2 grupy: studentów polskich i anglojęzycznych. Analiza statystyczna wykazała istotne statystyczne różnice pomiędzy grupą studentów polskich i obcokrajowych odnośnie częstości wizyt u stomatologa i szczotkowania zębów, oczyszczania języka, a także subiektywnej oceny stanu jamy ustnej. Natomiast nie wykazano istotnych różnic w częstości spożywania słodyczy.

Dyskusja. Wyniki badań dotyczących świadomości prozdrowotnej studentów UM w Lublinie porównano z wynikami badań podanymi przez m.in. Kawamurę z Hiroshimy, Usmana z Indii, Wędrychowicz-Welman z Poznania.

Wnioski. Studenci UM w Lublinie wykazują zadowalającą świadomością prozdrowotną w zakresie higieny jamy ustnej. Studenci anglojęzyczni częściej zgłaszają się na regularne wizyty do stomatologa. Studenci zarówno polsko jak i anglojęzyczni najczęściej szczotkują zęby dwa razy dziennie, regularnie oczyszczają język oraz oceniają stan swojej jamy ustnej jako dobry.

Słowa kluczowe: higiena jamy ustnej, kwestionariusz, zachowania prozdrowotne, polscy studenci stomatologii, wiedza o zdrowiu, studenci stomatologii, studenci medycyny.

Abstract

Introduction. Proper oral hygiene has a significant effect on the health of the entire body, but frequent brushing of teeth and proper diet can substantially reduce dental caries risks.

Aim. The aim of the work is the comparison of oral hygiene habits among Polish and foreign students of Medical University of Lublin.

Material and methods. We have carried out a survey among 279 Students of Medical University of Lublin. The respondents comprised 189 students from Poland and 90 students of English Division who come from USA, Canada, Taiwan, India, and Norway. The survey questions concerned the frequency of tooth brushing, consumption of sweets, and dental office visits. The results were statistically analyzed.

Results. The results are summarized in Tables 1-5. The respondents were divided into two groups: Polish and foreign students. Statistical analysis has revealed statistically significant difference between Polish and foreign students concerning the frequency of dental office visits, brushing teeth, tongue cleaning, and subjective evaluation of oral health condition. There is no statistically significant difference in frequency of sweets consumption.

Discussion. Research results concerning oral health care awareness of the students of Medical University of Lublin were compared to the results of Kawamura from Hiroshima, Usman from India, Wędrychowicz-Welman from Poznań, among others.

Conclusions. Students of Medical University of Lublin demonstrate sufficient level of oral health awareness. Foreign students visit dental office more often to check-up their teeth. Both groups of respondents usually brush their teeth two times a day, regularly clean tongue and evaluate their oral health condition as good.

Keywords: oral hygiene, questionnaire, oral health behaviors, Polish dental students, oral health knowledge and behaviors, dental students, medical students.

INTRODUCTION

The proper hygiene of the oral cavity is not only important for the health of the teeth and surrounding tissues but it affects the functioning of the whole organism. Insufficient attention to oral health can lead to the formation of dental caries, dental pulp diseases, periodontal diseases, and, consequently, to loss of teeth. Currently, dental caries remains the leading cause of tooth loss, especially among young people – like our respondents [1-3]. The following are considered the factors influencing the development of dental caries: tooth-tissue sensitivity, duration of exposure, bacteria inhabiting plaque and the supply of substrate in the form of carbohydrates. Frequent cleaning of tooth tissues and the proper diet can significantly reduce the occurrence of cavities.

According to contemporary standards, teeth should be brushed twice a day, and preferably after every meal. It is also considered necessary to clean interdental surfaces and the tongue. Toothbrushes should be replaced at least every three months. Check-up visits to the dentist should take place every six months and include professional teeth cleaning and fluoride prophylaxis [4].

Students at the Medical University, as future professionals, need to be particularly aware of the importance of proper healthy behaviour.

AIM

The aim of this study was to compare the hygiene habits concerning the oral cavity among Polish and foreign students at the Medical University of Lublin.

MATERIAL AND METHODS

A questionnaire survey on the knowledge of oral hygiene principles and putting them into practice was conducted among 279 students of the Medical University of Lublin. The study group consisted of 189 students from Poland majoring in medicine, or medicine and dentistry, and 90 students from the English Division, who come from, i.e. the U.S.A., Canada, Taiwan, India, and Norway. The survey questions focussed on the frequency of tooth brushing, the use of other means of oral hygiene, the frequency of sweets consumption, and the causes and frequency of visits to the dental surgery.

The results were analysed statistically using Statistica 10.0 software. The significance level adopted was $p < 0.05$.

RESULTS

The results are summarised in Tables 1-5.

The respondents were divided into two groups: Polish and English-speaking students.

Table 1 summarises the results of the survey on the frequency of visits to the dentist's surgery.

The statistical analysis revealed significant differences between the Polish and foreign groups of students regarding the frequency of visits to the dental surgery (Pearson's $\chi^2 = 16.00891$, $p = 0.00113$).

Out of the surveyed group of students, 95 students, which accounted for 34.05% of the respondents, visited the dental surgery regularly every 6 months.

Among the Polish students, 58 (30.69%) visit the dental surgery regularly every 6 months, 79 (41.8%) go the dentist once a year, only 16 (8.47%) go to the dental surgery less than once a year, while 36 (19.05%) go there only when necessary and when in pain.

Among the students from the English Division, 37 (41.11%) patients visit the dental surgery every six months, while 19 (21.11%) foreigners visit it once a year. There were 4 (4.44%) students who went to the dentist's less than once a year, and 30 (33.33%) of the surveyed foreign students visited the dental surgery when in pain.

As the study implies, the majority of Polish students, although not controlling their oral cavity condition every six months as recommended, they do it often enough to avoid having to visit the dental surgery because of pain complaints. The group of English-speaking students is much more diverse in this respect. A larger percentage of them undergo check-ups every six months; however, many postpone the visit until the onset of pain.

Table 2 summarises the results of the survey on the frequency of tooth brushing.

The statistical analysis showed significant differences in the frequency of tooth brushing between Polish students and foreign nationals (Pearson's $\chi^2 = 25.298$, $p < 0.001$).

In the group of students from Poland, 96 (51.85%) brush their teeth twice a day or more, and 93 (49.21%) brush their teeth only once a day or less.

In the group of English-speaking students, 74 (82.2%) brush their teeth twice a day or more, while 16 (17.78%) once a day or less.

The students at the English Division brush their teeth more often than the Polish students. It is noteworthy that

TABLE 1. The frequency of visits to the dental surgery among students at the Medical University of Lublin.

Frequency of visits	Number and percentage of respondents	PL Group	ENG Group
Every 6 months	N	58	37
	% of the column	30.69	41.11
Once a year	N	79	19
	% of the column	41.80	21.11
Less than once a year	N	16	4
	% of the column	8.47	4.44
When in pain	N	36	30
	% of the column	19.05	33.33
Total	N	189	90
Pearson's $\chi^2 = 16.009$, $p = 0.00113$			

TABLE 2. The frequency of tooth brushing among students at the Medical University of Lublin.

Frequency of tooth brushing	Number and percentage of respondents	PL Group	ENG Group
Twice a day or more	N	96	74
	% of the column	51.85	82.2
Once a day or less	N	93	16
	% of the column	49.21	17.78
Total	N	189	90
Pearson's $\chi^2 = 25.298$, $p < 0.001$			

none of the students reported brushing their teeth three times a day or more frequently, or after every meal.

Table 3 summarises the results of the survey on tongue cleaning by students at the Medical University of Lublin.

The statistical analysis showed no statistically significant difference between the two groups of students from Poland and foreign students (Pearson's $\chi^2=2.798$, $p=0.094$).

In the group of 189 students from Poland, 131 (69.31%) patients not only clean their teeth, but also the tongue, and 51 (30.69%) do not clean the tongue. In the group of 90 international students, 71 (78.89%) clean the tongue, 19 (21.11%) do not clean it. Most of the students at the Medical University of Lublin treat tongue cleaning as part of the daily oral hygiene.

TABLE 3. Tongue cleaning by students at the Medical University of Lublin.

Tongue brushing	Number and percentage of respondents	PL Group	ENG Group
Yes	N	131	71
	% of the column	69.31	78.89
No	N	58	19
	% of the column	30.69	21.11
Total	N	189	90
Pearson's $\chi^2=2.798$, $p=0.094$			

TABLE 4. The frequency of the consumption of sweets by the students at the Medical University of Lublin.

Frequency of the consumption of sweets	Number and percentage of respondents	PL Group	ENG Group
Several times a day	N	38	24
	% of the column	20.11%	26.67%
Once a day	N	57	17
	% of the column	30.16%	18.89%
Several times a week	N	55	33
	% of the column	29.10%	36.67%
Less frequently	N	39	16
	% of the column	20.63%	17.78%
Total	N	189	90
Pearson's $\chi^2=5.459$, $p=0.14$			

TABLE 5. The personal assessment of the oral cavity condition of the students at the Medical University of Lublin.

Assessment of oral cavity condition	Number and percentage of respondents	PL Group	ENG Group
Very good	N	54	16
	% of the column	28.57%	17.78%
Good	N	85	31
	% of the column	44.97%	34.44%
Satisfactory	N	32	31
	% of the column	16.93%	34.44%
Fair/poor	N	18	12
	% of the column	9.52%	13.33%
Total	N	189	90
Pearson's $\chi^2=13.56079$, $p=0.00357$			

Table 4 summarises the results of the survey on the frequency of sweets consumption among the students at the Medical University of Lublin.

The statistical analysis showed no statistically significant difference between the two surveyed groups of students regarding the consumption of sweets (Pearson's $\chi^2=5.459$, $p=0.14$).

In the group of students from Poland, 38 (20.11%) respondents eat sweets several times a day, 57 (30.16%) students once a day, 55 (29.1%) persons several times a week, and 39 (20.63%) students less than several times a week.

In the group of English-speaking students, 24 (26.63%) persons eat sweets several times a day, 17 (18.89%) eat sweets once a day, 33 (36.67%) of the respondents consumed sweets several times a week, and 16 (17.78%) students less than several times a week. It seems then that many English speaking and Polish students eat sweets much more often than recommended.

Table 5 summarises the results of the survey on the subjective assessment of one's own oral-cavity condition by the students at the Medical University of Lublin.

The statistical analysis showed no statistically significant differences in the assessment of oral cavity condition among the students at the Medical University of Lublin (Pearson's $\chi^2=13.561$, $p=0.00357$).

In the group of Polish students, 54 (28.57%) of the respondents assess the condition of their oral cavity as very good, 85 (44.97%) as good, 32 (16.93%) as satisfactory, while 18 (9.52%) as fair or poor.

In the group of English-speaking students, 16 (17.78%) persons assess the condition of their oral cavity as very good, 31 (34.44%) as good, the same number – as satisfactory, while 12 (13.33%) as fair or poor. This implies, therefore, that despite poorer oral cavity hygiene, Polish-speaking students have a better opinion on the condition of their oral cavities.

DISCUSSION

It is assumed that students on medical and medical-dental degree programmes should be model examples of proper healthy behaviour for both younger students and, above all, for the general public in the process of being educated on both overall and oral health.

National and foreign authors repeatedly have raised issues connected with the knowledge of oral health. The published studies assessed the level of knowledge on the basis of questionnaires developed by the researchers or the Dental Behavioural Inventory developed by Kawamura at the Hiroshima University (HU-DBI – Hiroshima University – Dental Behavioural Inventory) [5]. It was used to assess the attitudes and health-related behaviour of students on various medical and non-medical degree programmes, noting some differences between students on medical courses and students on other programmes of study, as well as cultural differences. Our study used our own questionnaire, therefore not all the information can be compared with the HU-DBI questionnaire.

The frequency of visits to the dental surgery declared by medical students and medical and dental students at

the Medical University of Lublin is higher than among the Indian students presented by Usman et al. [6].

As implied by the present study, 82.2% of English-speaking students and 51.85% of Polish students brush their teeth twice a day or more often, whereas the study by Wędrychowicz-Welman et al. shows that the majority of students at the Poznań University of Medical Sciences brush their teeth even less often. In Poznań, 42% of the students brush their teeth twice a day, 39% of them do it three times a day and only 16% of the respondents brush their teeth after every meal [7].

It is worth emphasising that a high percentage of young people declare cleaning their tongue, which should be regarded as a standard oral cavity cleaning procedure. Our findings on tongue cleaning are similar to those reported by Kaczmarek et al. The author also included a question on the self-assessment of oral-cavity condition by the respondents. In the group of dentistry students, 36.1% of the respondents assessed this condition as very good, whereas in the group of medical students very good condition was reported by 31.2% of respondents. About half the students in both surveyed groups declared a condition rated as good (54.2% vs. 50% respectively), while others identified it as satisfactory (9.7% vs. 18.2% respectively). None of the respondents rated their dental health as poor [8]. In the present study, a higher percentage of students dissatisfied with their oral cavity condition was reported – 9.52% in the group of Polish students, and as many as 13.33% in the English-speaking group.

The declared very good knowledge of the principles of oral hygiene among the assessed students and their high self-assessment of the oral cavity condition probably emanates largely from their education in medical studies. It should be noted, however, that the high level of knowledge of hygiene principles and the self-assessment of oral-cavity condition stated by the respondents does not have to be in accordance with the facts confirmed by clinical examination [7,9].

Summary of study results

1. The English-speaking students make regular visits to the dental surgery more frequently.
2. Both the Polish and English-speaking students usually brush their teeth twice a day.
3. The vast majority of both the Polish and the foreign students regularly clean their tongue.
4. Most of both the Polish and the English-speaking students assess the state of their oral cavity as good.

CONCLUSION

The students at the Medical University of Lublin have satisfactory health awareness concerning oral hygiene.

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