GABRIELA PODSIADŁA-URBAN[1], MARIA CIESZKO-BUK[2], TERESA BACHANEK[2]

Ocena stanu zdrowia jamy ustnej u pacjentów reprezentujących pro- lub anty-zdrowotne style życia

Streszczenie

Wstęp. Ogólnie pojęty styl życia odnosi się do zespołu codziennych zachowań specyficznych dla danej jednostki, które mogą się zmieniać w zależności od kontekstu społeczno-środowiskowego. Jednocześnie styl życia odgrywa bardzo ważną rolę w promocji zdrowia oraz zapobieganiu i leczeniu chorób.

Cel. Celem pracy była ocena stanu zdrowia jamy ustnej u pacjentów reprezentujących pro lub antyzdrowotne style życia.

Materiał i metody. Badaniami objęto grupę 177 pacjentów. Przeprowadzono badanie podmiotowe w formie anonimowej ankiety na temat stylu życia i zachowań zdrowotnych i badanie przedmiotowe pozwalające określić stan uzębienia, przyzębia i poziom higieny jamy ustnej. Pytania dotyczące stylu życia opracowane zostały na podstawie kwestionariusza utworzonego przez American Public Health Service. Według udzielonych odpowiedzi tworzono profil zdrowotny każdego pacjenta kwalifikując go do jednej z trzech grup o typie zachowań: prozdrowotnych, antyzdrowotnych lub pośrednich.

Wyniki. Prozdrowotny styl życia prowadziło 32,20% badanych osób, 13,56% wykazywało wybitnie negatywne zachowania zdrowotne, a ponad połowa (54,24%) w umiarkowany sposób dbała o swoje zdrowie. Średnia liczba PUW w grupie osób preferujących prozdrowotny styl życia wynosiła 16,59 i była niższa niż średnie liczby PUW w pozostałych grupach (17,48 u osób prowadzących antyzdrowotny styl życia, a 17,19 w grupie zachowań pośrednich).

Wnioski. Stwierdzono, że preferencje dotyczące stylu życia istotnie zależą od wieku, płci i statusu materialnego, w mniejszym stopniu od wykształcenia, a nie są zależne od aktywności zawodowej. Najkorzystniejsze parametry badania klinicznego stwierdzono u osób prowadzących prozdrowotny styl życia, natomiast nie wykazano istotnych różnic pomiędzy stanem zdrowia jamy ustnej u osób wykazujących negatywne lub pośrednie zachowania zdrowotne.

Słowa kluczowe: styl życia, promocja zdrowia, higiena jamy ustnej.

Assessment of oral cavity condition at patients representing healthy and unhealthy lifestyle

Abstract

Introduction. In general perspective, lifestyle refers to a set of behaviour patterns specific for particular individual, which can change depending on the social-environmental context. Also, lifestyle may be of large importance in promotion of health as well as preventing and curing illnesses.

Aim. The aim of this study was to assess oral cavity condition at patients representing pro healthy and unhealthy lifestyle.

Material and methods. The study included group of 177 patients. Interview was conducted by means of anonymous questionnaire regarding one's lifestyle and health-related behaviour as well as physical examination allowing the assessment of the condition of teeth, paradentium and the level of dental hygiene. Questions concerning lifestyle were drawn up based on the questionnaire created by American Public Health Service. According to given answers, a health profile of every patient was formed qualifying the individual to one of the three groups of behavior pattern: healthy, unhealthy or intermediate.

Results. The analysis of health habits test of the examined demonstrated that 32.20% (n= 57) of patients represented healthy lifestyle, 13.56% (n=24) preferred extremely anti-healthy lifestyle. The most of the examined (n=96; 54.24%) represented moderate health care. Average PUW number in pro-healthy lifestyle group was 16.59 and was lower than average PUW numbers in other groups (17.48 at the group with anti-healthy behaviour patterns, and 17.19 at the group with intermediate health behaviour pattern).

Conclusions. It has been stated that preferences concerning lifestyle are significantly dependent on the age, sex and material status, and to a lesser degree on the education, and aren't dependent on the occupational activity. The most beneficial parameters of the clinical research were stated at patients with pro-healthy lifestyle; however important differences weren't demonstrated between medical condition of the oral cavity at individuals demonstrating negative or intermediate health-related behaviours.

Keywords: lifestyle, health promotion, oral cavity hygiene.

[1] Dispensary of Conservative Dentistry with Endodontics SCK UM in Lublin
[2] Clinic and Division of Conservative Dentistry with Endodontics UM in Lublin

INTRODUCTION

The health of the oral cavity determined by the World Health Organization as the positive health standard is an integral component of general health of the patient and contributes to the general well-being of the individual. Not only correct hygienic and dietetic behaviours, but also individual genetic features determine the health of the oral cavity, as well as the effectiveness of dental and general-medical care and social, political, economic, or environmental factors. Activity aimed at maintaining or improving health should be held on all these levels, and undertaking them will enable patients to gain better control over their health. [1-3].

The promotion of health of the oral cavity is an integral component of health promotion. Diseases of teeth constitute the cause of pain and the source of inability of action, restricting certain choices, as well as particular capabilities of the individual. Poor condition of the oral cavity lowers life satisfaction, similarly to illnesses afflicting other systems and organs. The aim of pro-health dental education is to change behaviours supporting dental caries and periodontal diseases. Providing appropriate information in order to increase health awareness, developing necessary skills and repeating the information provided, are of vital importance. The place of pro-health education may be both a dentist's surgery, and an everyday environment of the patient. [3-5].

The experts regard a lifestyle as one of the most important factors affecting medical condition. The term „lifestyle" refers to a set of everyday behaviours, specific for the individual or the community. It is assumed that a lifestyle is developed in the process of interaction of the living conditions as well as individual patterns of behaviours. Standard reactions and patterns of behaviour deciding on the kind of a lifestyle are passed on in the process of socialization, in the course of social interactions with parents, siblings, peer groups, friends, as well as through the influence of school, media and others. They are not established once and for all, are subject to change as a result of constant interpretations and checking oneself in different social situations. [6-8].

From the point of view of health promotion, not only the influence of a lifestyle, but also a fact of potential changes in lifestyles is important. The society should be informed of advantages and disadvantages of individual behaviours resulting from particular lifestyles. Also, certain conditions should be provided for pro-health behaviours to be practiced. If we aim at improving the medical condition through changing lifestyles, we must influence both -the individual and the factors associated with the environment inhabited by the individual. All interventions undertaken with aspiration to change a lifestyle, in order for them to be effective, must be based on cooperation and full participation of people and relevant groups. It is also very important to understand that as a perfect medical condition does not exist, so there is no optimum lifestyle for all people. The culture, tradition, age, income, home and workplace environment cause that the certain ways and the living conditions are more attractive, available and appropriate than others. [7-9].

The basic components of healthy lifestyle that may directly influence oral cavity condition,are: appropriate hygienic habits, correct nutrition, rest from work in adverse environmental conditions and ability of dealing with stressful situations. Regular and accurate brushing teeth during the day, in the best situation - proportional to the amount of meals eaten significantly prevent dental caries and periodontal diseases, and the effectiveness of removing dental plaque is increased also by applying additional dental care products. [9-11].

The nutrition can have cariogenic or cariostatic influence. It shapes the structure of the tooth, the metabolism of dental plaque, composition of saliva and development of the tooth. The American Dietetic Association assumes that nutrition is an integral factor of the health of the oral cavity and for this reason a cooperation of dietitians and dental surgeons is suggested in promoting the health of the oral cavity. It is emphasized that this kind of promotional activity is also needed in order to prevent illnesses appearing elsewhere than the oral cavity so has interdisciplinary meaning [3].

The type of the pursued profession can also reflect on the oral cavity medical condition. Chronic mechanical injuries associated with foreign objects in the oral cavity or frequent contact of chemical substances with hard tissues of teeth and mucous membranes cause burns, ulcerations, or losses of noncarious origin.

The inability to deal with the long-term stress can affect the state of the stomatognathic system manifesting as the dysfunction of temporal-mandibular joint, pain on the paunch muscle part and pathological attrition of teeth, and even fractures in certain situations. [12].

AIM

The aim of the thesis was to assess oral cavity condition at patients representing different pro and anti-health lifestyles. It was also determined to what extent oral cavity condition reflects the whole of pro-health behaviour patterns of patients examined.

MATERIAL AND METHODS

The study was conducted among the group of 177 patients of different age, admitted to the Clinic of Preventive Dentistry with Endodontics at Dentistry Clinic Centre of Medical University of Lublin, in order to present the treatment of teeth diseases.

The interview had a form of an anonymous questionnaire form concerning lifestyle and health behaviours. Respondents answered 10 questions concerning the diet, addictions, taking medicines, forms of activity and ways of relieving the stress. Questions were created based on the test drawn up by American Public Health Service allowing assessment of the degree of health care of the individual. For every answer a determined number of points was granted, and the final result qualified the given patient to one of three groups of characteristic health behaviours: outstandingly healthy, antihealthy or intermediate. Demographic and social characteristics took into account the age, the sex, the education, the occupational activity and the subjective evaluation of their financial situation. In order to find out the oral cavity health habits, the questionnaire form included questions about the frequency of brushing teeth in a day, type of administered dental hygiene products, the dental care of examined persons and as well as one's own dental care, subjective evaluation of the medical condition of the oral cavity.

The clinical research took place on the dental chair, in the artificial lighting and they were conducted with the standard diagnostic set (a dental mirror, dental tweezers, dental probe) complemented with WHO 621 calibrated probe used for evaluation of the state of the paradentium. The level of dental hygiene was determined using approximate plaque indicator (API according to Lange). The state of teeth was presented with the DMFT number. Community Periodontal Index of Treatment Needed (CPITN) was used to assess the condition of paradentium (according to Ainamo).

The results obtained were analysed statistically and presented in tables and figures.

RESULTS

A group of 177 patients, including 109 women (61.58%) and 68 men (38.42%) was examined. After analysing their age, over a half of the examined was within the range of 20-39 years (52.54%, n=93), 40-59 years range included 25.42% (n=45) of patients, over 60 years – 13.56% (n=24) and only 8.47% (n=15) of examined were less than 20 years old. The most numerous group consisted of patients with medium education level (technical, high school graduates), it amounts to 57.63% of all examined, and the east numerous group was represented by individuals with lower level of education (8.47%). About 1/3 of examined represented higher education level, including Bachelor's degree (33.90%). Among all patients, the group of occupationally active amounted to 45.76% (n=81), and 54.24% (n=96) were unemployed. The group of unemployed consisted of 19.20% (n=34) individuals currently educating. When asked regarding their subjective evaluation of material condition, 13.56% (n=24) of the surveyed declared very good condition, 38.98% (n=69) declared good material condition, and 45.76% (n=81) evaluated their condition on average level. Only 1.69% (n=3) surveyed evaluated their condition as bad. The results are presented in Table 1.

TABLE 1. Socio-demographic characteristics of respondents.

Socio-demographic variables		n	%
Age	under 20	15	8.47
	20-39	93	52.54
	40-59	45	25.42
	over 60	24	13.56
Sex	female	109	61.58
	male	68	38.42
Education	basic	15	8.47
	intermediate	102	57.63
	higher	60	33.90
Occupational activity	yes (working)	81	45.76
	no (sill learning)	34	19.20
	no (unemployed)	62	35.04
Material status	very good	24	13.56
	good	69	38.98
	average	81	45.76
	bad	3	1.69
	very bad	0	0.00

The analysis of health habits test of the examined demonstrated that 32.20% (n= 57) of patients represented healthy lifestyle, 13.56% (n=24) preferred extremely anti-healthy lifestyle. The most of the examined (n=96; 54.24%) represented moderate care for health. The percentage of patients including their health habits is presented in Figure 1.

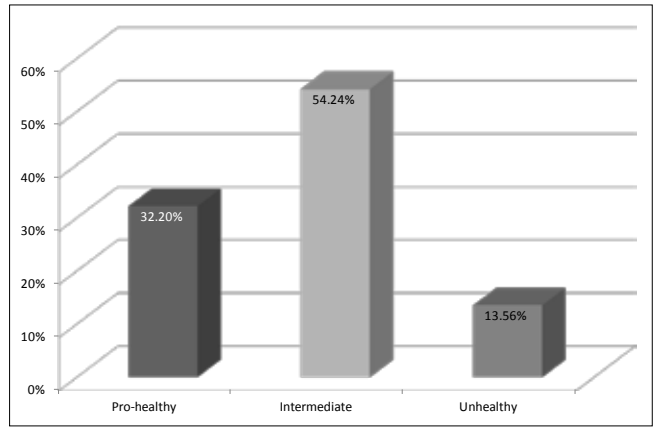

FIGURE 1. Percentage of patients examined based on health-related behaviours.

Based on the research conducted, it has been determined that healthy lifestyle is definitely more characteristic for people under 20 years of age (66.7% in relevant age group) and over 60 years of age (75% in relevant age group). Patients surveyed aged 20-39 mostly demonstrate moderate health care habits (70.96%). Similar situation can be demonstrated in 40-59 age group (51.11%). It should be noticed that significant majority of the remaining group of average age demonstrates definite anti-healthy habits (37.77%).

Analysing the kind of lifestyle preferred, taking the sex into account, it has been demonstrated that women more often follow healthy lifestyle than men (41.3% vs 17.66%). Typically anti-healthy behaviour was demonstrated by 22.05% men and only 8.25% women, and moderately healthy behaviours at 60.29% men and 50.45% women.

It has been stated that healthy lifestyle is more often chosen by people with the secondary education (57.8% in the „healthy" group) and higher education (respectively 29.82%). However these relations were not significant statistically. An adverse phenomenon is the fact, that unsettled lifestyle and outstandingly negative health habits are demonstrated at 13.33% of examined with the primary education, 12.74% with secondary education and 15% of people with higher education.

As a result of conducted examinations, no important differences were stated in health behaviours with reference to the occupational activity. Outstandingly healthy lifestyle is preferred by 26.51% of professionally active respondents and 37.23% of respondents professionally not active. Most commonly, people from both groups demonstrate moderate care of the entirety of health behaviours (56.63% active and 52.13% professionally not active).

A statistical analysis showed that the material status indeed influenced the type of health behaviours. Persons propagating the healthier lifestyle indeed have more often declared good or very good financial situation (n=27; 15.25%) unlike respondents from the group of anti-healthy behaviours (n=3; 1.69%). The results are presented in Table 2.

The thesis also presents the characteristics of health behaviours of examined persons including hygienic habits in the oral cavity and dental care. The results obtained are presented in Table 3. Respondents most often declare brushing teeth twice a day (52.63% of people from the healthy behaviours group, 65.62% from „moderate"). Only in the group demonstrating significantly anti-healthy behaviours, 45.83% admitted to brushing teeth once a day. It was also stated, that people in the healthy behaviours group indeed brush their teeth more often – over 2 times a day (26.31%), than the rest of examined patients.

In every group reflecting different health behaviours, large percentage of examined declared the use of additional dental care products (n=119; 67.23%). The most popular were fluorine rinses (17% of the whole group of examined) and dental floss (14.38% of the whole group of examined), were interdental brushes were occasionally used.

Respondents who preferred healthy lifestyle most often report to the dental surgeon once a year (n=23; 40.35%) or twice a year (n=19; 33.35%). Important differences were not stated in the frequency of dental visits between individuals demonstrating unhealthy or moderate health behaviours. The majority of these respondents reports to the dental surgeon once a year (45.84% and 44.80%), but the rest declares visits once in 2-3 years (29.16% and 25%) or even more rarely (25% and 20.83%).

The majority of examined determined their medical condition of the oral cavity as satisfactory (n=120; 67.79%).

TABLE 2. Characteristics of health-related behaviours among patients examined , with socio-demographic factors taken into account.

Socio-demographic variables		Unhealthy		Intermediate		Pro Healthy		Statistic analysis
		n	%	n	%	n	%	
Age	under 20	2	13.30	3	20.00	10	66.70	Chi^2=68.22 p<0.00001
	20-39	3	3.22	66	70.96	24	25.82	
	40-59	17	37.77	23	51.11	5	11.12	
	over 60	2	8.33	4	16.67	18	75.00	
Sex	female	9	8.25	55	50.45	45	41.30	Chi^2=41.69 p<0.00001*
	male	15	22.05	41	60.29	12	17.66	
Education	basic	2	13.33	6	40.00	7	46.66	Chi^2=2.03 p=0.73
	intermediate	13	12.74	56	54.90	33	32.36	
	higher	9	15.00	34	56.66	17	28.33	
Occupational activity	yes (working)	14	16.87	47	56.63	22	26.51	Chi^2=3.00 p=0.22
	no (unemployed)	10	10.64	49	52.13	35	37.23	
Material status	very good	0	0.00	14	58.33	10	41.67	Chi^2=36.04 p<0.00001*
	good	3	4.29	50	71.43	17	24.29	
	average	19	23.46	32	39.51	30	37.04	
	bad	2	100.00	0	0.00	0	0.00	
	very bad	0	0.00	0	0.00	0	0.00	

TABLE 3. Characteristics of health-related behaviours among patients examined , with oral cavity hygiene and dental care taken into account.

Healthy habits		Unhealthy		Intermediate		Pro Healthy	
		n	%	n	%	n	%
Frequency of brushing per day	once	11	45.83	9	9.37	5	8.77
	twice	8	33.33	63	65.62	30	52.63
	more than twice	3	12.50	15	15.62	15	26.31
	after each meal	2	8.34	9	9.39	7	12.29
Other means of hygiene	yes	16	66.66	61	63.54	42	73.69
	no	8	33.34	35	36.46	15	26.31
Frequency of dental visits	once/half a year	0	0.00	9	9.37	19	66.65
	once a year	11	45.84	43	44.80	23	40.35
	once/2-3 years	7	29.16	24	25.00	9	15.78
	rarely	6	25.00	20	20.83	6	10.52
Self-evaluation of oral health	very good	0	0.00	0	0.00	2	3.50
	good	0	0.00	3	3.12	15	26.31
	satisfactory	15	62.50	69	71.87	36	63.18
	bad	7	29.17	15	15.62	4	7.01
	very bad	2	8.33	9	9.39	0	0.00

Good or very good oral cavity condition was declared by respondents representing healthy lifestyle, 37,5% of respondents representing anti-healthy lifestyles declared dissatisfaction with their oral cavity medical condition, as well as 25% of people representing moderate health care.

At the end of the questionnaire survey the patients were asked what sources they most often take vital information from about prevention and curing tooth decay and periodontal diseases. Significant majority of respondents (77.93%) pointed at media such as radio and TV commercials, internet forums and glossy magazines advice columns. The rest of examined (22.07%) responded, that if they find the information in professional promotional leaflets in the dentist's surgery, or as a result of a face-to-face conversation with the doctor.

In the clinical research the level of oral cavity hygiene was examined using the percentage API indicator. The average value of this indicator in individual groups was: 53.20% for the significantly unhealthy lifestyle group, the 50.60% for persons in moderate health care group and 39.47% for the healthy lifestyle group. In the first two groups the dental hygiene was determined as the average and absolutely requiring improvement, and the third group was assessed as good.

The degree of dental hygiene has a significant effect to the condition of teeth and paradentium. Average DMFT values in individual groups did not differ much among each other (17.48; 17.19; 16.59), but important differences were observed between individual components, i.e. D, M, F numbers. The differences are presented on Figure 2. The maximum value of D number was noted in the group of people with moderate health care (D=5.76). The highest number of teeth extraction due to tooth decay (M=4.95) was stated in the anti-healthy lifestyle group, however substantial number of teeth filled (F=10.60) was observed amongst persons preferring healthier lifestyle.

The condition of paradentium of examined patients, determined with CPITN index regardless of preferred health behaviours was assessed as unsatisfactory. At the majority of examined, abundance of tartar was stated (CPI code=2) and deepened alveolar pockets not exceeding 6 mm (CPI code=3). In the group of people with unhealthy lifestyle, inflammatory condition of gums was stated at 12.5% of the group, manifesting with bleeding while probing (CPI code=1), a half demonstrated dental tartar, and more advanced stage of periodontal disease was demonstrated at 37.5% of the group. Amongst patients representing moderate health behaviours, a healthy paradentium was only stated at 6.25% of the group, at 3.12% bleeding gums were stated, at 71.85% had dental tartar, and 18.78% of the group had deepened alveolar pockets. Similar parameters of paradentium condition were noted in the group of people with healthy lifestyle, where the healthy paradentium was stated only at 8.77% of examined. Results are presented in Table. 4.

TABLE 4. Periodontal status and health related behaviours among patients.

	Unhealthy	Intermediate	Pro healthy
CPI – 0(%)	0.00	6.25	8.77
CPI – 1(%)	12.50	3.12	12.28
CPI – 2(%)	50.00	71.85	57.89
CPI – 3(%)	37.50	18.78	21.06

DISCUSSION

Promotion of health and healthy lifestyle is one of key targets of modern medicine. In medical sciences, prevention and rehabilitation constitute the area of interest more and more often, and behaviours determining lifestyle are object of many examinations [1,2,6,9-15]. The results are that social-demographic factors, particularly age, sex, the level of education and material status indeed influence the condition of teeth, in smaller degree the condition of paradentium [6,8,10]. Astrøm and Rise in their research conducted in the group of Norwegian 25-year-olds, demonstrated that health behaviours were closely subject to living conditions and the level of education [15]. The results of own examinations seem to confirm that, based on what age, sex and financial circumstances were recognised as social-demographic factors to be the most diversifying in their influence on the health attitude and the condition of the oral cavity.

Level of education, situation in the family and immediate work environment also shape individual features of health behaviours. A lifestyle is often defined as the decisions associated with the health and behaviours controlled by the individual. In the examined population various factors resulting in the entirety of health behaviours were taken into account. In the everyday diet, the frequency and an amount of eaten meals and a way of eating were taken into consideration (the haste, the place). Questions were also asked regarding the content of animal fats and carbohydrates in the diet. Addictions concerned not only smoking and frequent alcoholic beverages consumption (beer was often mentioned), but also of popular substances consumed by young people (energy drinks, soft drinks) and of adults (coffee, strong tea). Forms of relieving commonly occurring stress were also important: sport activity, conversations with family and friends or the psychologist, addictions. Persons qualified for the healthy lifestyle group presented high health awareness in most of described aspects and most importantly these behaviours were an everyday life for them, and did not occur occasionally. It has been stated that healthy lifestyle is most of all the choice of young persons (below 20 years of age). The research conducted by Slack-Smith and associates based on the population of Australian young people shows that more and more young people consciously approach the issues of dental diseases and regularly performs dental visits. In this age group, the level of education and a type of the health education in

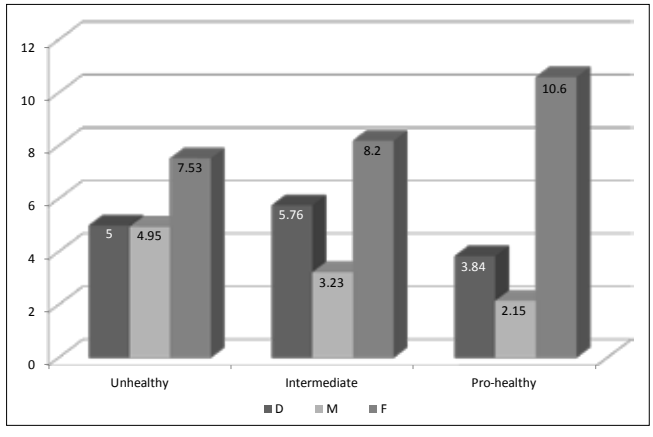

FIGURE 2. Dental status (DMF) and health behaviours among patients.

schools and home environment, significantly influence health behaviours [1].

At healthy lifestyle promoters, clinical examination of oral cavity demonstrated the best parameters. The level of dental hygiene was determined in this group as good (API=39.47%), and the DMFT average number was lower than in remaining groups (16.59). One should point out that the total DMFT number results from the lowest of all groups teeth extractions due to complications of the tooth decay (M=2.15) and F value higher than at remaining persons (10.6) proving the quality of dental care service. The highest percentage of patients with healthy paradentium was also recorded in the group described (8.77%).

The results of conducted examinations indicate that the majority of people demonstrates moderate health care It means that some behaviours support health, whereas others influence it in negative way. It also happens, that each of healthy lifestyle elements (the appropriate nutrition manners, avoiding stimulant substances and active leisure activity) is introduced irregularly and on a short-term basis, leaving the individual returning to old, less beneficial habits. This group is largely constituted of professionally active individuals, the most of the 20-39 years of age group. Examinations showed that so-called the „middle age" supports anti-healthy behaviours. People over 40 years of age, particularly professionally active men most rarely pay attention to performing healthy behavior habits. Extended stress, smoking, abusing caffeine and alcohol, the unbalanced and high-calorie diet and lack of activity often cause many social and civilisation-related diseases [6,9,11]. Examinations by different authors conducted in the course of years confirm the theory, that co-occurrence of adverse factors such as smoking, abusing caffeine and alcohol not only supports the development and progress of periodontal diseases, but also indeed increases the risk of metaplastic changes in the oral cavity [6,11,12, 14].

To sum up, no major differences were stated between the level of oral hygiene, the condition of teeth and the paradentium at patients in groups of unhealthy and moderate behaviours. The examined dental hygiene was assessed as average, definitely requiring improvement. Average DMFT numbers in both groups are high (17.48 and 17.19), a maximum value of M number is a particularly adverse phenomenon (4.95) amongst people representing anti-healthy lifestyle. The conclusion is that the condition of the whole organism, including the condition of oral cavity, is determined by the influence of the whole set of positive health behaviours, rather than selected elements. This relation acts independently in both directions, because good condition of the stomatognathic system, one's own teeth and lack of pain have positive effect on the frame of mind and rise the comfort of living.

CONCLUSIONS

1. The majority of people from the examined population demonstrated moderate health care. The most beneficial parameters of the clinical research were stated at people with typically healthy lifestyle. No statistically important significant differences were stated between the medical condition of the oral cavity at people demonstrating moderate or negative health behaviours.
2. Preferences concerning lifestyle significantly depend on the age, the sex and the material status, to a lesser degree on the education, and are not dependent on the occupational activity.
3. Universal access to information through various sources (press, television, the Internet) influences the effectiveness of preventive programs and the promotion of health of the oral cavity as well as the first it shapes the attitude and health behaviours of the examined population.

REFERENCES

1. Slack-Smith LM, Mills CR, Bulsara MK, O'Grady MJ. Demographic, health and lifestyle factors associated with dental service attendance by young adults. Aust Dent J. 2007;52(3):205-9.
2. Petersen PE. The World Oral Health Report 2003: continuous improvement of oral health in 21st century- the approach of the WHO Global Oral Health Programme. Community Dent Oral Epidemiol. 2003;31(1):3-24.
3. Borysewicz–Lewicka M, Przystanowicz A. Aktualne tendencje w promocji zdrowia jamy ustnej. Stomatol Współcz. 2001;8(3):48-51.
4. Dybiżbańska E. Skuteczność stomatologicznej edukacji prozdrowotnej na podstawie doświadczeń międzynarodowych. Nowa Stomatol. 2005;3:139-41.
5. Strużycka I, Małkowska A, Stopa J. Efektywne sposoby promocji zdrowia jamy ustnej. Czas Stomatol. 2005;58(6):392-6.
6. Garg A. What's in Your Patient's Mouth? How lifestyle, disease, and the environment affect the oral cavity. Dent Implantol Update. 2010;3:20-4.
7. Płotka A. Styl życia jako nadawanie kształtu ludzkiej egzystencji. (cz. XVI) Alma Mater. 2010;1(74):90-7.
8. Płotka A. Zdrowy styl życia - jedno z naczelnych zadań współczesnej medycyny. (cz. XVII). Alma Mater. 2010;2(75):146-55.
9. Watt RG. Emerging theories into the social determinants of health: implications for oral health promotion. Community Dent Oral Epidemiol. 2002;30:241-7.
10. Ekbäck G, Nodrehaug-Astrøm A, Klock K, Ordell S, Unell L. Satisfaction with teeth and life-course predictors: a prospective study of a Swedish 1942 birth cohort. Eur J Oral Sci. 2010;118:66-74.
11. Pearce MS, Thomson WM., Walls A, et al. Lifecourse socio-economic mobility and oral health in middle age. J Dent Res. 2009; 88(10):938-41.
12. Kandelman D, Petersen PE, Ueda H. Oral health, general health and quality of life in older people. Spec Care Dentist. 2008;28(6):224-36.
13. Lee IC, Shieh TY, Yang YH, Tsai CC, Wang KH. Individuals' perception of oral health and its impact on the health-related quality of life. J Oral Rehabil. 2007;34:79-87.
14. Locker D, Clarke M, Payne B. Self-perceived oral health status, psychological well-being, and life satisfaction in an older adult population. J Dent Res. 2000;79(4):970-5.
15. Åstrøm AN, Rise J. Socio-economic differences in patterns of health and oral health behaviour in 25 year old Norwegians. Clin Oral Invest 2001;5:122-8.

Informacje o Autorkach

Lek. dent. Gabriela Podsiadła-Urban – Poradnia Stomatologii Zachowawczej z Endodoncją, Uniwersytet Medyczny w Lublinie; Dr n. med. Maria Cieszko-Buk – adiunkt; prof. dr hab. n. med. Teresa Bachanek – kierownik, Katedra i Zakład Stomatologii Zachowawczej z Endodoncją, Uniwersytet Medyczny w Lublinie.

Adres do korespondencji

Gabriela Podsiadła-Urban
tel. 502 642 339
E-mail: gabrysia.urban@gmail.com