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Prozdrowotne zachowania mieszkańców Lubelszczyzny

Health-related behaviors among the Lublin Province population

Streszczenie

Wstęp. Świadomość istnienia czynników ryzyka indukujących powstanie i rozwój raka to ważny element w walce z nowotworami. Odpowiednie zachowania prozdrowotne mogą ograniczyć powstanie i rozwój raka. Utrzymywanie prawidłowej masy ciała, aktywność fizyczna, abstynencja alkoholowa i zdrowa dieta to jedne z głównych działań profilaktycznych, nie tylko w prewencji chorób nowotworowych.

Cel. Celem pracy była ocena prozdrowotnych zachowań mieszkańców województwa lubelskiego.

Material i metody. Badaniem objęto 1352 osoby zgłaszające się z różnych powodów do swojego lekarza pierwszego kontaktu. Narzędzie badawcze stanowił kwestionariusz ankiety, a metodą badawczą był sondaż diagnostyczny. Pytania zawarte w ankiecie dotyczyły różnych aspektów zdrowego stylu życia.

Wyniki. Wiedza mieszkańców Lubelszczyzny na temat zachowań prozdrowotnych jest niewystarczająca i niekompletna. Analiza log-liniowa wykazała, że istotnymi statystycznie czynnikami wpływającymi na utrzymanie prawidłowej masy ciała, aktywność fizyczną, abstynencję alkoholową i dietę są interakcje wieku, wykształcenia, miejsca zamieszkania i płci.

Wnioski. Wnioski płynące z ankiety potwierdziły, że istnieje pilna potrzeba podniesienia świadomości społecznej na temat zachowań prozdrowotnych. Działania skierowane na promowanie zdrowego stylu życia muszą uwzględniać różnicę płci, zróżnicowanie społeczne, ekonomiczne oraz kulturowe.

Abstract

Introduction. Awareness of risk factors that induce the formation and development of cancer is an important element in the fight against cancer. Appropriate health-related behavior may limit the formation and development of cancer. Maintaining a healthy weight, physical activity, abstinence from alcohol and healthy diet are the main preventive measures, not only in the prevention of cancer.

Aim. The aim of the research was to explore the state of knowledge about health behaviors of the Lublin Province population.

Material and methods. The study included 1352 respondents presenting with different reasons to their family doctor. The research tool was a questionnaire, while the research method was a diagnostic survey. The questions concerned different aspects of a healthy lifestyle.

Results. Our study showed that the population of the Lublin Province has insufficient and incomplete knowledge about health behaviors. Log-linear analysis showed that the statistically significant factors in maintaining a healthy weight, physical activity, abstinence from alcohol and diet are the interactions of age, education, place of residence and gender.

Conclusions. The conclusions of the survey confirmed that there is an urgent need to raise awareness about healthy behaviors. Activities aimed at promoting a healthy lifestyle must include gender, social, economic and cultural habits.

Słowa kluczowe: choroby nowotworowe, zachowania prozdrowotne, prewencja nowotworów.

Keywords: cancer diseases, health behaviors, prevention.

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INTRODUCTION

Cancer is the second leading cause of death in Poland (~25% of all deaths) and the number of new cases per year exceeds 140,000 [1,2]. In Poland, the five-year relative cancer survival accounts for 25-30%. This differs from the situation in Western Europe with over 40% cure rate and the USA about 50% of recoveries. Cancer results from a combination of environmental factors and accumulation of specific genetic changes. Epidemiological studies showed the relationship between the incidence and course of cancer with various environmental factors. Scientists concluded that in more than 80% of patients with cancer, environmental factor, leading to the development of cancer can be indicated [3].

People should have a minimum information about risk factors and properly early react in case of any symptoms suggestive of cancer. Health-related behavior, awareness of the possibilities are the first-line prevention measures of cancer as well as civilization diseases. Still very high morbidity and mortality from cancer in Poland indicates the need to continue initiated and the introduction new comprehensive programs that promote a modern prevention, diagnosis and therapy of cancer. Raising public awareness about healthy behavior is an essential and cheap way to implement the National Program Against Cancer Disease [4].

It should be emphasized that knowledge of risk factors in cancer risk population is one of the most important elements determining the effectiveness of actions taken. Solving problems related to a healthy lifestyle is an important issue not only for health but in the long term will also lead to cost reduction of medical services and to productive lives in old age [5].

Promoting methods of early prevention, the basic element of which is a healthy lifestyle, should lead to a reduction in the incidence, increase in the cure rate and will break a taboo in society, defining cancer as an incurable disease. The basic condition for conducting health-related policies is to raise public awareness of widely understood relationship between lifestyle and health and benefits to body. An enormous role in early prevention is played by general practitioners (GP), who are required to carry primary and secondary prevention [6,7].

AIM

Assessment of health behaviors among primary care patients from the Lublin Province.

MATERIAL AND METHODS

The study group consisted of 1,352 people – 847 women and 505 men, representing respectively 62.7% and 37.4%. Our respondents were patients presenting with different reasons to their family doctor. Details of the respondents are shown in Table 1. A questionnaire was the research tool and a survey was the diagnostic method. Interviewing and filling out the survey was conducted by a person prepared for that purpose in each of the primary care practices participating in the project. The study was approved by the institutional Ethical Review Committee of Medical University of Lublin KE-0254/73/2011. Survey results were analyzed

based on the statistical program Statistica (Statsoft, version 9.0, USA). Variables were analyzed by the log-line analysis as well as by the χ^2 test.

TABLE 1. Respondents' characteristics.

Variable	n	%
All cases	1,352	100
Gender		
Male	505	37.35
Female	847	62.65
Place of residence		
Rural	929	68.71
Urban	423	31.29
Education		
Elementary/incomplete	337	24.93
Secondary	536	39.65
Higher education	188	13.91
Other	291	21.52
Age		
20-30	222	16.42
30-40	256	18.94
40-60	530	39.20
>60	344	25.44

RESULTS

I. Body weight

Important factors in maintaining a healthy weight are: age, education, place of residence, gender and education. The significance of the fitted log-linear model is high at $p=0.95$ which indicates a large influence.

Studies have shown that with increasing age the number of people maintaining a healthy body weight decreases. In the group of 60+ respondents, more than two times higher than in other groups (14%/7%), people do not know what should be their healthy body weight. Education in the interaction of gender is a factor having significant association with body weight.

Women with elementary education, less likely maintain normal body weight than others (only 44.9% have normal weight). In this group, more often women are more likely

TABLE 2. The relationship between education and maintaining a healthy body weight.

Do you maintain a healthy body weight?	Education-women				Total
	Secondary	Higher education	Elementary	Other	
Yes	66.3% (244)	73.2% (107)	44.9% (94)	67.7% (84)	529
Not	29.8% (110)	25.3% (37)	39.7% (83)	27.4% (34)	264
I do not know	3.8% (14)	1.4% (2)	15.3% (32)	4.8% (6)	54
Total	368	146	209	124	847

*Chi-square test $p<0.05$

to be obese and have less awareness of proper body weight. Women with higher education usually declare maintaining a healthy weight. They also have more awareness of what should be their healthy body weight (Table 2).

In the urban area people with elementary education have more than 2 times abnormal body weight (47.7% compared to 22.7% of people with higher education). People with elementary education and others frequently do not know what the normal body weight is. Responders from rural areas do not maintain a normal body weight and the percentage is similar in different education group (30%). People with elementary education often do not know what the normal body weight should be (Table 3).

TABLE 3. The relationship between education and residence and maintenance of normal body weight.

Do you maintain a healthy body weight?	Education-women				Total
	Secondary	Higher education	Elementary	Other	
Yes	63.5% (122)	76.4% (84)	43.2% (19)	50.6% (39)	264
Not	31.3% (60)	22.7% (25)	47.7% (21)	38.9% (30)	136
I do not know	5.2% (10)	0.9% (1)	9.1% (4)	10.4% (8)	23
Total	192	110	44	77	423
	Education-rural				Total
	Secondary	Higher education	Elementary	Other	
Yes	66% (227)	65% (51)	53% (154)	65% (139)	571
Not	30% (104)	31% (24)	31% (92)	29% (62)	282
I do not know	3.8% (13)	3.8% (3)	16.0% (47)	6.1% (13)	76
Total	344	78	293	214	929

*Chi-square test $p < 0.05$

II. Physical activity

Factors determining physical activity are: gender, age, education and place of residence. The significance of the fitted log-linear model is $p = 0.88$.

Usually women play sports several times a month (72.5%) whereas men several times a week (49.7%). Men doing sport everyday account for 13.9%, and that is a four times more than women (13.9%/3.3%) (Table 4).

TABLE 4. The relationship between gender and physical activity.

How often do you do sport?	Men	Women	Total
Everyday	13.9% (70)	3.3% (28)	98
Several times per week	49.7% (251)	23.3% (197)	448
Several times a month	35.0% (177)	72.5% (614)	791
I do not practice	1.4% (7)	0.9% (8)	15
Total	505	847	1,352

*Chi-square test $p < 0.05$

Age groups 20-30, 30-40 and 40-60 are very similar in terms of frequency of do sports. People with 60+ more frequently declared doing sports several times a month (74.7%) (Table 5).

TABLE 5. The relationship between age and physical activity.

	How often do you do sport?				Total
	Age				
	20-30	30-40	40-60	60+	
Everyday	10.8% (24)	7.0% (18)	8.3% (44)	3.5% (12)	98
Several times per week	35.6% (79)	38.7% (99)	38.1% (202)	19.8% (68)	448
Several times a month	52.3% (116)	53.9% (138)	52.8% (280)	74.7% (257)	791
I do not practicing	1.3% (3)	0.4% (1)	0.7% (4)	2.0% (7)	15
Total	222	256	530	344	1352

*Chi-square test $p < 0.05$

People with secondary, higher and other education are similar in terms of physical activity. Respondents with elementary education are the least of all physically active (74.8%) (Table 6).

TABLE 6. The relationship between age and physical activity.

	How often do you do sport?				Total
	Education				
	Secondary	Higher education	Elementary	Other	
Everyday	7.6% (41)	6.9% (13)	4.1% (14)	10.3% (30)	98
Several times per week	37.1% (199)	41.5% (78)	19.0% (64)	36.8% (107)	448
Several times a month	54.5% (292)	51.6% (97)	74.8% (252)	51.5% (150)	791
I do not practice	0.7% (4)	0	2.1% (7)	1.4% (4)	15
Total	536	188	337	291	1,352

*Chi-square test $p < 0.05$

III. Cigarette smoking

Log-linear analysis showed that the factors having a statistically significant relationship with cigarette smoking are: gender, age and education. The significance of the fitted log-linear model is $p = 0.5$.

People declaring cigarette smoking account for 23.9%. Men twice more likely smoke than women (35.2%/17.1%).

In the age groups 20-30, 30-40, 40-60 the ratio of non-smokers to smokers is similar and ranges between 2.4-3.1. In the group of 60+ the ratio of smokers and non-smokers increases to 6.6 (86.9%/13.1%)

Most non-smoking people have higher education – 87.8%. In other groups it is as follows: secondary – 74.8%, elementary – 79.5%, other – 67.0% (Table 7).

TABLE 7. The relationship between smoking and education.

	Do you smoke?				Total
	Education				
	Secondary	Higher education	Elementary	Other	
Yes	25.2% (135)	12.2% (23)	20.5% (69)	33.0% (96)	323
Not	74.8% (401)	87.8% (165)	79.5% (268)	67.0% (195)	1029
Total	536	188	337	291	1,352

*Chi-square test $p < 0.05$ **IV. Drinking alcohol**

Factors related to high alcohol consumption are: gender, age, education and place of residence. The significance of the fitted log-linear model is high $p = 0.99$.

Women drink alcohol two times less often than men (73.2%/35.4%). A significantly lower percentage of women compared to men drink alcohol once a month or once a week. The percentage of abstainers in the age groups 20-30, 30-40, 40-60 is similar to an average of 53%, and increases in the 60+ group to 75.9% (Table 8).

TABLE 8. The relationship between age and frequency of alcohol consumption.

	How often do you drink strong alcohol?				Total
	Age				
	30-40	20-30	40-60	60+	
At all	53.9% (138)	53.1% (118)	53.2% (282)	75.9% (261)	799
Once a month	38.7% (99)	35.6% (79)	38.1% (202)	19.8% (68)	448
Once a week	7.0% (18)	10.8% (24)	8.3% (44)	3.5% (12)	98
Everyday	0.4% (1)	0.4% (1)	0.4% (2)	0.9% (3)	7
Total	256	222	530	344	1,352

*Chi-square test $p < 0.05$

The group with elementary education has a higher percentage of abstainers – 75.4%. More abstainers are in rural areas – 61.2% compared to 54.4% of the urban areas. It is interesting that people who drink alcohol everyday (although they are few – 0.7%) are those from rural areas. Men usually drink strong alcohol once a month – 49.7% of respondents. The majority of women do not drink alcohol 73.2%. The greatest differences due to gender are observed in the group with elementary education and others. Women with elementary education mostly do not drink alcohol – 90.9% while in men it is at the level of 50.0% (Table 9).

V. Diet

Log-linear analysis showed a correlation between food rich in red meat and gender, age, education, place of residence with $p = 0.99$.

Women eat less red meat than men. Poultry consumption in women is more than three times higher than in men (Table 10).

Consumption of red meat increases with age, and then slightly decreases after 60+. The largest consumption of poultry is in the youngest age group. The highest intake of red meat is observed in the group with elementary, other and secondary education (78.9%, 79.7% and 66.4%). The smallest number of red-meat-eating people is in the higher education group – 53.2%; they also consume much more poultry. Rural residents consume more red meat compared to urban residents (74.8% and 61.2%).

DISCUSSION

Human health depends on: genetic factors (5-15%), physical environment (5-10%), social environment (20-25%), lifestyle (50%) and medicine (10-20%). Every fourth person in Poland will develop cancer during her/his lifetime, and one

TABLE 9. The relationship between gender, education and frequency of alcohol consumption.

	How often do you drink strong alcohol?				Total
	Education-men				
	Secondary	Higher education	Elementary	Other	
At all	32.1% (54)	35.7% (15)	50.0% (64)	27.5% (46)	179
Once a month	53.0% (89)	47.6% (20)	38.3% (49)	55.7% (93)	251
Once a week	14.9% (25)	16.7% (7)	8.6% (11)	16.2% (27)	70
Everyday	0	0	3.2% (4)	0.6% (1)	5
Total	168	42	128	167	505
	Education-women				Total
	Secondary	Higher education	Elementary	Other	
	At all	65.5% (241)	56.2% (82)	90.9% (190)	
Once a month	29.9% (110)	39.7% (58)	7.2% (15)	11.3% (14)	197
Once a week	4.3% (16)	4.1% (6)	1.4% (3)	2.4% (3)	28
Everyday	0.3% (1)	0	0.5% (1)	0	2
Total	368	146	209	124	847

*Chi-square test $p < 0.05$ **TABLE 10. The relationship between gender and type of meat diet.**

	What kinds of a meat do you often eat ?		
	Men	Women	Total
Red meat	87.5% (442)	60.4% (512)	954
Poultry	10.5% (53)	36.7% (311)	364
Fish	1.2% (6)	1.8% (15)	21
Vegetarian	0.79% (4)	1.1% (9)	13
Total	505	847	1,352

*Chi-square test $p < 0.05$

in five will die because of cancer. The main cause related to malignancies in Poland is low public awareness of cancers [8]. Awareness of health determinants allows people to identify their own health problem contributing to better control of health. Therefore, important are all the activities aimed at prevention and raising awareness that cancer can be prevented primarily through a healthy lifestyle.

The conclusions of the survey confirmed the need to acquaint the public with a healthy lifestyle. Now we know the areas in which the awareness of healthy behavior is the most deficient and therefore, what should be the focus of educational activities. The continuous and consistent public awareness-raising is an essential element in the fight against cancer. Insufficient physical activity is the cause of 600,000 deaths per year in Europe [9]. Physical inactivity promotes formation of: colon cancer, breast or prostate. On the contrary 30-40 minute physical activity several times a week, has protective effects [10,11]. Physical activity can be the part of our daily routine (e.g. walking instead of using public transport).

Poor nutrition is responsible for 5% of cancer cases in Europe [9]. Typically, the diet is determined by individual preferences and socio-economic factors. Social position, education determine the type of consumed foods. Respondents in most of their diet use large amounts of red meat, which predisposes to the formation of gastrointestinal cancers, primarily stomach and colon cancer [12-14]. People should reduce the amount of bad foods (red meat, cured, food, fried dishes) for a healthy diet with lots of vegetables and fruits [15,16].

Smoking has an impact on formation of cancers in such organs as: lung, oral cavity, esophagus, stomach and bladder [17-19]. In Europe, the smoking population accounts for 34.1% of which 44.4% are men and 23.2% are women [9]. Research showed that in the Lublin region cigarettes smokers account for 23.9% of the population, including 35.2% men, and 17.1% women. Among older people 60+ only 13.08% are active smokers. Our results are identical with the data published in 2010 about smoking in Lublin Province [20] and they are better than data from 2005 [21], which would indicate a decrease in the number of smokers.

Alcohol drinking remains a serious global problem [22]. Non-drinking of strong alcohol is declared by 73.2% women and 35.4% of men. Men drink more often and much more, compared to women. Men also start drinking at young age, which further negatively affects their development. [23].

Prevention of obesity requires an integrated approach which combines the promotion of healthy lifestyles and balancing socio-economic inequalities. The importance of nutrition, physical activity and healthy weight is reflected by the action program for public health. The research results showed that the residents of Lublin Province are poorly informed, and rarely follow a healthy lifestyle and this is consistent with the previous reports about the youth of Lublin [24]. Women typically have higher levels of healthy behavior starting from an early age and this trend is also observed in other reports [24]. At a young age people make lifestyle choices that determine health in adulthood. It is therefore appropriate to target young people with healthy behavior. A key place to promote a healthy lifestyle is a school and medical facility.

Healthcare facilities and other institutions should contribute in the health education. Doctors can help understanding of the relations between food, smoking, physical activity and cancer. Awareness is essential in making the necessary changes in lifestyle. GPs should try to convince patients to make lifestyle changes during the routine contacts. It is the responsibility of primary care physicians [7]. Multidimensional approach to dissemination of choices for a healthy lifestyle involves taking into account these issues in local politics, at regional and national levels.

The study showed that elements of healthy lifestyle are significantly different in men and women in different age, education groups and places of residence. Local tradition has a significant impact on dietary habits, as well as physical activity, smoking cigarettes or drinking alcohol. Therefore, approaches aimed at promoting a healthy lifestyle must include gender, education, age, residence, socio-economic diversity and cultural heritage.

Awareness of healthy behaviors impact on health is difficult to assess clearly, because it can be measured using different criteria. With the criterion of proper diet, smoking, or drinking alcohol, Poland is as bad as other European countries [9,22]. Thus the process of raising the awareness of Polish risks of cancer and its prevention is a challenge today. Awareness of how to live and what to do to reduce the risk of cancer is the cheapest and best way to avoid it.

CONCLUSIONS

There is a need to develop simple, consistent and clear plan to improve health behavior and spread it in the society using different methods in appropriate form to the culture of the community, age, education and gender.

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