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Health behaviors of people over 65 in the region of the Lublin Province

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Key words: Health Behavior, Aged, Life Style

ABSTRACT

Introduction

The Polish population is systematically aging. Health behaviors have a significant impact on the health and quality of life of seniors.

Objective of the work

The aim of this study was to assess the level of health behaviors among people over 65 living in the Lublin province.

Material and methods

The study was conducted from February 2014 to May 2014, among 80 people over 65, members of Senior Clubs, Universities of the Third Age and patients of the Institute of Rural Medicine in Lublin, living in the Lublin city and rural areas of the Lublin province. The research was conducted using a diagnostic survey - the Inventory of Health Behavior of IZZ Juczyński and a questionnaire constructed by the authors. The obtained results were subjected to statistical analysis using the STATISTICA 13.0 program. Significance of intergroup differences was verified using the Pearson Chi-square test.

Results

The index of health behaviors for all respondents was on average 83.65, including 87.10 for women and 78.19 for men. Most of the respondents assessed their health condition as good or average, they also undertook physical activity, usually walking. Nearly three quarters of patients complained of circulatory system diseases.

Conclusions

The examined elderly people were characterized by a high level of health behaviors. Women and younger people show more intense health behaviors than men and people from the older age group. Women and people with higher education levels, in the past, statistically more often observed the principles of rational nutrition and lead a healthy lifestyle. Among men, proper eating habits are rated worst, and in the more advanced age category - the positive psychical approach. Most of the respondents take physical activity, commonly walks and bike riding.

INTRODUCTION

Across Europe, especially in fast-growing countries, increasing length of human life can be seen. The picture of the demographic situation in Poland allows to classify this country in the

group of aging societies. According to the estimates of the Central Statistical Office, a gradual increase in the number of older people is expected, and in 2050 almost every third Pole will be 65 years old. At present, in Poland, among almost 38.5 million citizens, live 6,071,000 people over 65 years of age. Forecasts predict that in 2050 the number of older people may be almost doubled to 11,097,000, with 33,951,000 of the entire Polish population [1]. The described, quick changes in the demographic structure of the society should result in paying particular attention to aging processes, the problem of old age, health needs of seniors and the ways of their supply.

Aging is associated mainly with numerous health consequences and biological changes occurring in the human body, such as multimorbidity, fatigue, reduced physical fitness, susceptibility to chronic diseases or gradual loss of control over physiological processes. The phase of old age is characterized not only by typical biological changes but also by characteristic mental problems related not only to health problems, but also to critical life events or changes in social roles.

The aging process takes place on an individual basis in every human being. The pace of changes related to the processes of involution and physiological changes is also diversified both in relation to the whole organism and specific systems or organs. The specificity of the aging process is related, among others, to genetic predispositions or past diseases.

Cardiovascular disease is characterized by the highest morbidity and mortality among older people. One of the most frequently diagnosed conditions is hypertension, which is associated with progressive damage of elastin fibers and increase of the collagen content in the qualitative composition of the arterial walls [2]. These changes predispose to increased arterial stiffness and decreased susceptibility, which is particularly conducive to the presence of isolated systolic hypertension. At the same time, there is a dysfunction of endothelium in the production of vasodilating substance, which additionally favors the maintenance of high blood pressure [3]. In the period of old age, sinoatrial node function is also disturbed, which is conducive to the occurrence of arrhythmias. Coronary heart disease is also a frequently diagnosed disease entity in elderly patients. This phenomenon is associated with the progress of atherosclerotic process, caused by the mentioned endothelial dysfunction and the co-occurrence of hypertension, diabetes and chronic inflammatory diseases [4]. The older age is also characterized by an impaired response to beta-adrenergic stimulation, which results in a

smaller maximum frequency of cardiac work, contractility of chambers, which in turn are responsible for less exercise tolerance [5].

Osteoarthritis is also one of the most common clinical problems among older people. Changes in the joints are caused by gradual exhaustion of the ability to respond to chronic load. As the body ages, changes take place within the chondrocyte and matrix. It comes to apoptosis of chondrocytes, reduction of proteoglycans in articular cartilage and reduction of tissue hydration. These factors negatively affect the mechanical properties of articular cartilage and cause susceptibility to injuries and degeneration [6].

In old age, many other conditions are more common, like: diabetes, chronic obstructive pulmonary disease and health problems referred to as the great geriatric syndromes such as falls, impaired mobility, sight, hearing, incontinence of urine and stool and senile depression and dementia.

The probability of occurrence and the level of severity of many clinical problems encountered during the period of old age, depends to, a certain extent, on the lifestyle in both the past and the elderly. A healthy lifestyle includes taking actions by individuals to maintain and improve health and prevent disease. These behaviors include proper nutrition, avoiding alcohol and nicotine as well as serious stressful situations and regular physical activity.

OBJECTIVE OF THE WORK

The aim of this study was to assess the level of health behaviors among people over 65 living in the Lublin province.

MATERIAL AND METHODS

The study was conducted from February 1, 2014 to May 1, 2014, among people over 65, members of Senior Clubs, Universities of the Third Age and patients of the Institute of Rural Medicine in Lublin living in the Lublin city and rural areas of the Lublin province. The criteria for inclusion in the study were age over 65 and voluntary expression of willingness to participate in the project.

The study used diagnostic survey method, with a questionnaire constructed by the authors and standardized tool - Inventory of Health Behaviors (IZZ) by Z. Juczyński [7]. The

questionnaire contained 29 questions and consisted of two parts. The first part allowed for obtaining socio-demographic data (age and sex of the participant, level of education, type of work performed). The second part concerned health and health behaviors.

IZZ contains 24 statements describing various health-related behaviors and theorem No. 25 bearing the name "other", where own claim can be placed.

The tool assesses the intensification of healthy behaviors and four specific categories of health behaviors on the basis of the frequency of individual behaviors indicated by the respondents: correct eating habits (frequency of consuming fruit and vegetables, whole grains, salt, avoiding eating food with preservatives), preventive behaviors (adherence to health recommendations), positive psychological attitude (avoiding stressful and depressing situations), as well as health practices (physical activity, spending free time, sleep). The global value of the health behavior index is in the range of 24-120 points. The higher the value, the higher the level of declared health behaviors. The global indicator is converted into standardized units and is presented according to the sten scale: 1-4 sten - low level, 5-6 sten - average level, 7-10 sten - high level.

The obtained results were statistically analyzed using the STATISTICA 13.0 program. Significance of intergroup differences was verified using the Pearson Chi-square test.

RESULTS

Analysis of the original questionnaire

The study included 80 people over the age of 65 years of age. The subjects at age 65 -75 years constituted 63.8% of the study population (n = 51), the other respondents were enrolled in the age group 76-90 years old (36.3%, n = 29). Women were the most numerous group (61.3%, n = 49). 31 men were surveyed, which accounted for 38.8% of the entire research group. Almost half of the respondents had secondary education (45%, n = 36), and the less numerous group were people with higher education (27.5%, n = 22). Vocational education was chosen by 18 people (22.5%), and basic - 4 (5%).

The author's questionnaire also contained questions that were intended to synthetically determine health activity and behaviors in the past. The majority of respondents presented active or very active lifestyles in the past (47.5%, n = 38; 20%, n = 16)

doing sedentary or mixed work (33.75%, n = 27; 46.25%; n = 37). The statistical analysis showed the presence of gender dependence, and the fact of efforts to maintain a healthy lifestyle and rational nutrition in the past. It was found that women much more often cared about the hygienic way of life, compared to men, most of whom did not pay attention to health (Table 1.).

	Have you ever paid attention to a healthy lifestyle and a way of eating?		
Sex	Yes	No	Altogether
Women N Women %	34 73,9%	15 44,1%	49 61,3%
Men N Men %	12 26,1%	19 55,9%	31 38,8%
Altogether N Altogether %	46 100%	34 100%	80 100%
Statistical analysis: (Chi2 Pearson: 7,312524, df=1, p=0,00685)			

Table 1. The relationship between sex and a healthy lifestyle in the past.

In addition, education was also a variable that proved to have a statistically significant effect on the level of health behaviors that subjects presented in the past. Most of the respondents with higher and secondary education tried in the past to lead a healthy lifestyle, in contrast to those with basic and vocational education (Table 2.).

	Have you ever paid attention to a healthy lifestyle and a way of eating?		
Education	Yes	No	Altogether
Basic N Basic %	1 2,2%	3 8,8%	4 5,0%
Vocational N Vocational %	6 13,0%	12 35,3%	18 22,5%
Secondary N Secondary %	23 50,0%	13 38,2%	36 45,0%
Higher N Higher %	16 34,8%	6 17,6%	22 27,5%
Altogether N Altogether %	46 100%	34 100%	80 100%
Statistical analysis: (Chi2 Pearson: 8,719419, df=3, p=0,03336)			

Table 2. The relationship between the level of education and the healthy lifestyle in the past.

The respondents were asked to assess their own functional ability and mobility. The largest group of respondents described it as satisfactory (52.5%, n = 42), slightly lower as good (41.25%, n = 33). Only 4 people rated it as insufficient (5%) and 1 as very good

(1.25%). More than half of the elderly participating in the study suffered from shortness of breath during walking on flat terrain or climbing stairs (53.75%, n = 43). In the questions about the frequency of undertaking physical activity, the most frequent answers were: rarely (41.25%, n = 33), several times a week (26.25%, n = 21). Physical activity was reported daily by 20 respondents, which accounted for one fourth of the study population, 6 people (7.5%) practically did not practice any form of movement. By far, the most common form of physical activity was walking (78.75%, n = 63). Other types of physical activity of respondents are: riding a stationary bike, gymnastics and dancing. Based on the analysis of the surveys obtained, it was found that the majority of respondents spend their free time watching television. The second most frequent occupation was reading books. At the same time, it was found that 32.5% of respondents, due to their health, feel limited in active leisure time. Detailed data on this subject is presented in Table 3.

How do you spend your free time most often?	%	N
Watching TV	66,25%	53
Reading books	15,00%	12
Home activity	8,75%	7
Gardening	8,75%	7
Walking	1,25%	1

Table 3. Forms of spending free time.

The results of the research also indicate that a large percentage of project participants traveled daily using public transport (58.75%, n = 47). Only 28.75% of respondents moved on foot, and even less, because 6.25% using a bicycle or a car.

Among the health-related behaviors, tobacco smoking was also assessed, which was admitted by only 6.25% of patients (n = 5).

In the next part of the diagnostic survey, we tried to obtain data on the current health problems of the respondents. 77.5% of respondents suffered from cardiovascular diseases (n = 62). In the group of subjects, these were the most common types of diseases. The second most frequent were rheumatic diseases (7.5%, n = 6) and respiratory diseases (6.25%, n = 5). Much less frequently, the respondents chose the answers: neurological diseases, digestive system problems, cancer and skin diseases.

Regularity of using medical advice and control tests was declared by over three-quarters of the respondents. Regularly taking the medications recommended by the physician was also declared by many respondents (83.75%, n = 67). Over half of the respondents also were beneficiary of rehabilitation center services.

Most of the respondents did not experience any pain during the day. The most frequently reported pain was related to the bone and joint system with a clear indication of the spine area (21.25%, n = 17, 11.25%, n = 9). 51.25% of people complained about sleep problems (n = 41).

Analysis of Health Behavior Inventory

In the group of subjects, the global assessment of health behaviors was rated as high. The results were analyzed in relation to the age and sex of the subjects. Although, there was no statistical relationship between the respondents' declared health behaviors and the analyzed demographic data ($p > 0.05$), it was shown that women presented a higher overall level of health behaviors ($M = 87.10$, $SD = 12.75$ vs $M = 78.19$, $SD = 15.01$) and more often than men showed the presence of individual behaviors assessed in the IZZ test . After a detailed analysis of specific categories of health behaviors, it was found that in the group of surveyed women psychological attitude positive was assessed the highest ($M = 3.85$, $SD = 6.16$) and preventive behaviors - the lowest ($M = 3.62$, $SD = 5.66$) . In the group of men, subjects obtained the highest score when assessing prophylactic behaviors ($M = 3.45$, $SD = 7.09$), and the lowest in the category of proper eating habits ($M = 3.30$, $SD = 7.64$). The overall results are presented in Table 4.

Health behaviors	Women		Men	
	M	SD	M	SD
level of health	87,1	12,7	78,1	15,0

behaviors	0	5	9	1
proper eating habits	3,78	6,38	3,30	7,64
preventive behavior	3,62	5,66	3,45	7,09
positive mental attitude	3,85	6,16	3,32	7,58
health practices	3,65	6,60	3,44	7,04

Table 4. Categories of health behaviors acc. IZZ and the sex of the respondents.

Analyzing the results of IZZ in relation to age, a higher overall level of health behaviors was found for the age group 65-75 compared to the group of older people (M = 88.57, SD = 10.18 vs. M = 75.87, SD = 16.36). Respondents from the younger age group obtained the highest scores in the preventive behavior category (M = 3.73, SD = 6.68), and the lowest number of points in the category of correct eating habits (M = 3.52, SD = 7.19). Also people from the 76-90 age group achieved the highest results in the preventive behavior category (M = 3.74, SD = 6.62), however, the lowest score was related to the positive psychological attitude (M = 3.59; SD = 6.92).

Health behaviors	65-75 years of age		76-90 years of age	
	M	SD	M	SD
level of health behaviors	88,57	10,18	75,87	16,36
proper eating habits	3,52	7,19	3,70	7,38
preventive behavior	3,73	6,68	3,74	6,62
positive mental attitude	3,53	7,03	3,59	6,92
health practices	3,58	6,67	3,70	7,29

Table 5 . Categories of health behaviors acc. IZZ and the age of the respondents.

DISCUSSION

Disability is a common problem among older people. During the National Census 2011, by 2 millions of seniors reported that they are disabled [8]. Together with the growing age of the population, the participation of people with disabilities in the society increases. Loss of independence in performing daily activities by older people is associated with weakness syndrome, increased risk of falls and higher mortality in this age group [9]. In the presented

own studies, respondents most often rated their functional ability as sufficient or good. In everyday activities and activities related to personal hygiene, 87.5% of respondents declared full self-reliance. The remaining part required little help from family members. Similarly, person included in the Świtała research assessed their general health and condition [10], which most often was defined as sufficient (41%) or good (37%). Most of the respondents also declared their independence in performing their daily activities. Most often, help was necessary in the case of housework (eg. cleaning) and shopping. The PolSenior study used the Katz scale (ADL) to assess the functional ability of patients [11]. The results of the cited studies coincide with those presented. 90% of respondents aged 65 and more performed basic activities of everyday life without the help of other people.

The level of physical fitness, in a physiological way, gradually decreases with age. However, maintaining a regular physical activity, at an older age, works in a positive way, promoting the processes of physiological and non-pathological aging, at the same time, playing a protective role against disability, reduces dependence on carers and promotes optimal mental health. In addition, regular physical activity slows down the loss of muscle strength and reduces the risk of two large geriatric syndromes such as mobility disorders and falls [12].

In one of the largest surveys of the Polish population of people aged over 65 - PolSenior -regular physical activity was undertaken by less than 40% of seniors per week [13] . Half of the respondents declared that they are completely passive, do not take any form of physical activity. The inclination to undertake physical activity decreased with age. The most common forms of active recreation were cycling and longer walks of several hours. Only one in eight surveyed practiced gymnastics and every hundred swimming. More than ¾ of the respondents took up physical activity with the intention of maintaining or improving their health, which illustrate the high level of seniors ' awareness of the beneficial effect of physical exercise on the proper functioning of the body. For patients, barriers for undertaking physical activity were mainly poor health and no need to undertake such activity. According to the authors of the Eurobarometer study, 54 % of seniors surveyed launched any physical activity [14]. In the paper describing the health behaviors of seniors with diagnosed ischemic heart disease, it was shown that regular physical activity, at least three times a week, lasting longer than 30 minutes is declared by almost one third of the respondents. At the same time, 22% negate the

maintenance of any form of physical activity. The most common activities were free walking and cycling [15].

In own research, daily physical activity was reported by one fourth of the study population, 7.5% practically did not practice any form of movement. However, unlike the PolSenior project, the most frequently, surveyed persons indicated a rare, but regular physical activity. As in the cited project, the most common form of activity turned out to be long walks and cycling. However, active spending of free time did not prove to be quite popular in the studied population. Based on the analysis of the surveys obtained, it was found that the majority of respondents spend their free time watching television, and less frequently reading books.

In addition to spending time actively and regular physical activity, one of the health behaviors that can prevent, among others, cardiovascular disease, but also cancer of the stomach and pancreas is to refrain from using tobacco products. In the study group only 6.25% of respondents admitted to systematic tobacco smoking. The WOBASZ Senior study showed a comparatively low percentage of smokers - 11% of men and 4% of women. Interestingly, in the past, a much larger number of men used tobacco products - as many as 55% of respondents [16]. In the group of seniors with confirmed ischemic heart disease, despite the proven harmful effect of tobacco on the progression of the disease, there were also smokers, but their participation in the cohort was equally low (7.25%) [15]. Despite the relatively low number of people using tobacco products and the significant decline in the number of smokers confirmed by the NATPOL 2011 study, their group is still large and amounts to around ¼ of the surveyed population (2,413,000 people from nationwide research group) [17].

In the study group, the most common health problems were cardiovascular diseases, sleep problems and rheumatic diseases. Similar results were obtained in the research evaluating the behavior of elderly people as consumers - 2/3 of seniors declared the presence of chronic health problems, most commonly eye deterioration, sleep problems and cardiovascular problems (significantly often hypertension) and osteoarthritis. Over half of the respondents used the services of rehabilitation facilities. According to the PolSenior analysis, among the most-frequent seniors' diseases, hypertension occupies a high place, with as many as 70.5% of those over the age of 64, who were treated for hypertension [18], in the WOBASZ study this percentage was 75%. In our study, the most common disease entity from declared

cardiovascular diseases, was arterial hypertension as well. More than half of respondents felt shortness of breath when climbing stairs and walking on flat terrain, which may prove a high prevalence of undiagnosed coronary heart disease.

In the second part of the study, a standardized tool - Inventory of Health Behaviors was used to perform a reliable assessment of health behaviors among the studied population.

The examined elderly showed a fairly high level of health behaviors, i.e. 83.65. However, the average health behavior among Polish seniors was significantly higher in the group of subjects with type 2 diabetes (92.92) [19] and among three groups of students of the University of the Third Age - 86.8 [20], 88.39 [21], 89.85 [22]. This fact may result from the positive impact of participation in such activities on the awareness of health behaviors. The group, we studied, also included members of the Clubs of Senior and Third Age Universities, but their share in the entire surveyed population was less than 50%. The seniors, who were patients of the primary health care clinics, also from the area of the Lubelskie Voivodeship included in the study of Nowicki et al., presented a lower overall level of health behaviors (76.49) [23].

The obtained results allow to state that women presented a higher overall level of health behaviors than men (87,10 vs 78.19). These results are consistent with a large number of studies in the field of prophylaxis and pro-health behaviors [22, 24, 25].

In the group of surveyed women, the highest results were noted for a positive mental attitude, which seems to conflict with well-known facts regarding the higher frequency of depression in women than men, resulting from different cognitive strategies used in stressful situations. Men are much more often focused on a specific action, which reduces their level of emotional tension, while women through ruminations, detailed analysis of problems experience the intensification of negative emotions associated with stressful situations [26].

In men, the subjects received the lowest scores in assessing the correct nutritional habit. This is a fact most probably associated with past incorrect male eating habits or a higher level of knowledge and awareness about the diet and its impact on health among women described by Kołłajtis-Dołowy et al. [27].

When analyzing the results of the IZZ in relation to age, a higher overall level of health behaviors was found for the younger age group . Rarely taking health behaviors may be associated with deteriorating general health status [22]. It was also proved that among seniors, lower level of health behaviors is associated with pain, functional limitations and poor health self-assessment [23], which appear more often with a more advanced age. However, according to Zadworna-Cieślak et al., age does not significantly affect the degree of health behaviors undertaken, and both younger and older seniors present a similar level of health behaviors [22].

Respondents from the older age groups (76-90 years), the lowest score was obtained in the category of positive mental attitude. It mainly includes assessing the avoidance of stressful and depressing situations. Chronic exposure to stress can have an adverse effect on the health of older people, as it is a recognized risk factor for many diseases, including ischemic heart disease, as evidenced by data obtained during the INTERHEART study [28].

CONCLUSIONS

1. The examined elderly people were characterized by a high level of health behaviors.
2. Women and younger people show more intense health behaviors than men and people from the older age group.
3. Women and people with higher education levels, in the past statistically more often observed the principles of rational nutrition and lead a healthy lifestyle.
4. Among men, proper eating habits are rated worst, and in the more advanced age group - the positive psychical approach.
5. Most of the respondents take any form of physical activity. The most frequent activities are walking and cycling.

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