JUSTIFYING THE NEED FOR IMPROVED HEALTH EDUCATION OF OBESE ADULT PATIENTS IN BULGARIA

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Abstract: Bulgaria is the second-fastest aging nation in Eastern Europe and fifth in the world. Older people are the largest and ever-growing group of people in health care. The most common diseases in this age group are circulatory, endocrine, digestive, musculature, neoplasms, and respiratory systems. Some of the main reasons for these diseases include an unhealthy diet, a sedentary lifestyle, and obesity.

One hundred twelve adult patients with chronic diseases were interviewed.

The aim of the study is to establish the awareness of older people about overweight-related problems. In order to increase their knowledge and improve their quality of life and independence, we prepared a training program (Table4).

Introduction

With the continuous increase of life expectancy and persistent trends in declining birth rates in Bulgaria, the aging process continues. According to the data of the National Statistical Institute (NSI, 2020), at the end of 2018, people aged 65 and over were 1,493,119, or 21.3% of the country's population. The aging of the population has very serious social and economic consequences for the Bulgarian health system. The higher costs are not caused by the aging population itself but by the increase in the morbidity of elderly people. In people aged 65 and over, at first place in the structure are diseases of the circulatory system (24.1%), followed by factors influencing the health status of the population, the contact with the health services (17.5%), and the diseases of the digestive system (8.9%). (Balkanska and Georgiev, 2008)

In most modern literature sources, it is reported that the phenomenon of polymorbidity is observed in this age group, which is a combination of two or more chronic diseases in one patient. Polymorbidity (PM) is a new concept covering all diseases of the individual patient. PM is not just the amount of several nosological units, but the interaction between them with the formation of new disease status (Ministry of Health, 2011). This makes polymorbidity the most pressing problem of modern clinical geriatric practice. From the data analysis about the main health-demographic indicators is clear that currently Bulgaria, compared to the countries of the European Union, is facing a much more serious challenge related to the high level of overall mortality. It is formed mainly by the deaths of people over 65. Demographic projections show that, precisely because of the objective aging processes, the overall mortality rate in the country will remain high and unchanged until at least 2030. (Balkanska et al., 2008, Dimitrova,et al., 2009)

The health system is not effective in reducing preventable mortality, expressed in consistently high mortality from diseases such as cardiovascular disease, cancer, diabetes, and other non-communicable diseases. In fact, Bulgaria has the highest mortality from cerebrovascular disease (for example, stroke) in the EU and a very low survival rate for several cancer diseases. This indicates significant opportunities for optimizing health services, for example, by improving access to care and their quality and better prevention and better care coordination. (Dimitrova, et al., 2009)

The reasons for diseases that cause death or disability include unhealthy eating, sedentary lifestyle, and obesity. Obesity is most often due to several factors, mainly affecting lifestyle and diet, is a major health problem worldwide and is the leading preventable cause of death in the world, with increasing prevalence among adults and children. The authorities in this field believe that it is one of the most serious public health problems in the 21st century. (Balkanska, 2003, Blundell, 2014)

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In some European countries, half of the adult population is overweight or obese. According to the World Health Organization, 62% of the population is overweight – much more than the average level in the world, 39%. Obesity increases the likelihood of various diseases, in particular cardiovascular disease, type 2 diabetes, obstructive sleep apnea, some cancer diseases, and diseases of the musculoskeletal system. The main treatment for obesity consists of diet and exercise. (Dimitrova et al., 2009, Dimova et al., 2019, Fujioka, 2015.)

Age-appropriate diets and age-appropriate physical activity are effective in dealing with excessive adipose tissue accumulation. Information on healthy eating will provide an opportunity to learn the rules of proper nutrition and their application in daily life.

Healthy eating is a guarantee of health, prevention of the development of deficiencies and deficits, but it also reduces the risk of developing a number of diseases and other health problems. (Council of Ministers, 2012, Garvey WT et al., 2014.)

Methods of study

- Documentary method for data collection and analysis of various documentary sources
- Sociological method – a survey of the opinions, attitudes, assessments of respondents on the studied problems
- Statistical methods – for analysis and interpretation of the data in order to reveal the nature of the observed phenomena and their dependence. They are used for the statistical presentation of the results
- Frequency analysis of qualitative variables – for calculating the absolute and relative frequencies (%)
- Graphic analysis to illustrate the observed processes.

The study aims to establish the awareness of older people about weight problems and to examine its relationship to health

For achieving this goal, the following tasks have been performed:

1. Self-assessment of health status.
2. Presence of chronic disease.
3. Distribution of respondents by body weight.
4. The opinion of patients about the importance of the relationship between obesity and their health was studied and analyzed.
5. The readiness of the surveyed people to increase their awareness related to obesity was established
6. Prepare a training program.
7. Observe the participants' willingness to change their eating habits, improving their everyday physical activity, and their preferences of how to do that.
8. Self-assessment of health status after the end of the training.

Results

Table 1: Presence of a chronic disease or health problem by age groups				
	Prevalence of chronic diseases	Chronic consequences of myocardial infarction	Ischemic heart disease	Hypertension
	65-70	7 – 41.1%	2 – 11.8%	9 - 53%
	71-75	15 – 71.4%	4 - 19%	10 – 47.6%
	76-80	14 – 22.2%	17 - 27%	42 – 66.7%
	80+	5 – 45.4%	5 – 45.5%	4 – 36.4%
Source: Author				

We surveyed 112 patients over the age of 65 in total, divided into the following age ranges: 65-70 –18 patients, 71-75 – 29 patients, 76-80 – 73 patients, 80 and more – 9 patients.

We found that more than half (76.8%) of the respondents rate their health status as satisfactory, bad, and very bad. Only 23.2% answered that their status is good or very good. Table 2 shows the answers for the self-assessment of the status by age group.

BMI (Body Mass Index) was calculated for all patients, the results are presented in Table 3. The highest percentage of obesity was found in 19.7% of patients in the age group of 76-80, 80 and older – 18.6%, 71-75 – 9.5%. The lowest percentage of obesity – 4.6 is in 65– 70-year-old. The overweight in 80 years-old is 45.8%, in 76 – 80 years-old – 44.9%, in 71-75 years-old – 34.1% and 16.3% in 65-70 years-old.

Table 2: Self-assessment of health status

Age	65-70	71-75	76-80	
Very good	3	3	6	
Good	4	2	8	
Satisfactory	5	7	15	
Bad	3	4	21	

Source: Author

Table 3: BMI

BMI	Total %	Age	BMI	
		65-70	71-75	
Weight below normal (under 18.5)	2.2	5.9	3.4	
Normal body weight (18.5-24.99)	43.8	73.3	53.0	
Overweight (25.00-29.99)	39.2	16.3	34.1	

Source: Author

Figure 1: The readiness of the respondents to increase their awareness about obesity and its impact on their health.
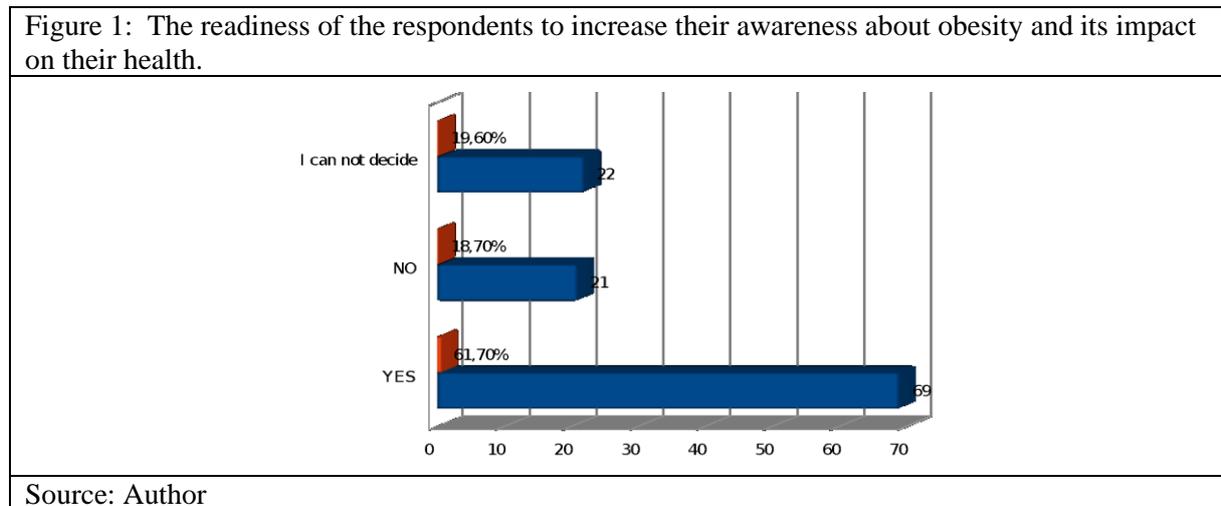

Source: Author

Fig. 1 provides information about the readiness of the respondents to increase their awareness of obesity and its impact on their health.

Table 4: Training program

Activities	Training	Topics	Deadline
Nutrition 1. Development of healthy eating information materials for people over 65 years age. 2. Printing, distribution, and promotion of healthy eating information materials. 3. Carrying out health-educational activities aimed to raise awareness of health risks in case of nutritional deficiencies and the benefits of healthy and dietary nutrition.	GP, Nurses.	1. Nutrition of the food (Energy, Fat, Carbohydrate, Fibre, Protein ect.) 2. Prohibited and recommended foods. 3. Preparation of sample eating plans.	January 2021- December 2021
Physical activity 1. Development and distribution of educational materials (posters, information brochures, leaflets, leaflets, etc.) 2. Development and provision of individual programs for physical activity. 3. Providing consultations and support.	GP, Nurses, Rehabilit ators.	1. Benefits of the physical activity; 2. Preparation of individual programs for physical activity.	January 2021- December 2021

Source: Author

Willingness to raise awareness of obesity – 69 or 61.7% of the respondents definitely wanted to raise their awareness of obesity, 22 of the respondents (19.6%) could not judge, and only 21 (18.7%) did not want to receive more information about obesity.

Training was provided to the 112 obese patients in small groups and individually. The training was on the topics indicated in Table 4 and in accordance with the individual characteristics of the patients
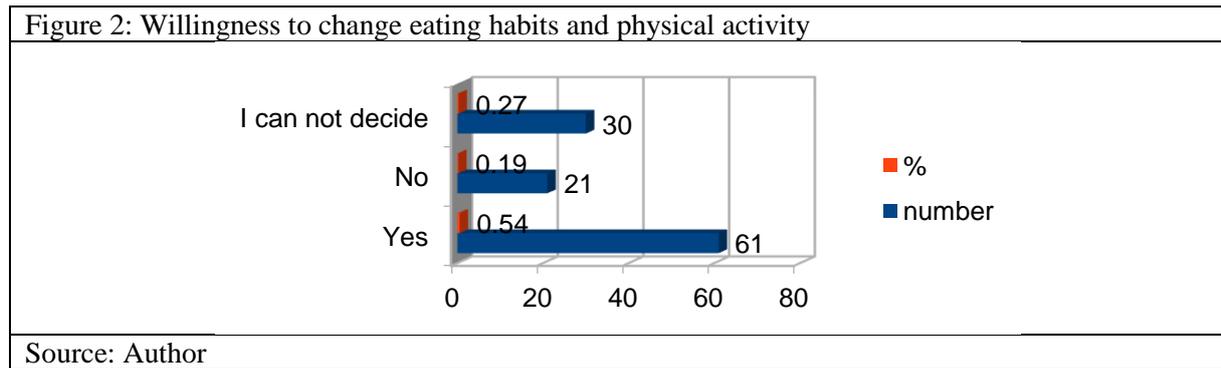
Figure 2: Willingness to change eating habits and physical activity		
Source: Author		

Fig. 2 preset the readiness of half (54%) of the respondents to change their diet and physical activity, 27% are not convinced, and 19% do not want to.

Table 5: Self-assessment of health status after the training				
Age	65-70	71-75	76-80	
Very good	6	3	6	
Good	7	5	19	
Satisfactory	0	4	10	
Bad	2	4	15	
Source: Author				

Table 5 presents the results of the self-assessment of the health status of the participants after the training. There is a significant improvement in self-esteem in all age groups.

Conclusion

There is a strong desire to raise awareness of obesity – 61.7% and only 18.7% do not have such a desire. After the course, the subjects reported an improved attitude and trust in the GP, nurses, and rehabilitators after the course. After thematically analyzing the stories of the respondents, we found positive changes in the attitudes, beliefs, and self-esteem of 112 elderly people. As evidenced by our study, overweight and obesity contribute greatly to the development of non-communicable diseases, reduce life expectancy, and adversely affect its quality. A training program for elderly people is developed in order to raise their awareness of obesity and its impact on health, a large percentage of chronically ill elderly people will be involved. Training elderly people will motivate and encourage them to lead a healthy lifestyle – proper nutrition and adequate physical activity. This lifestyle will improve their health and independence.

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