

OVERWEIGHT AND OBESITY: KNOWLEDGE, ATTITUDES AND PRACTICES OF DOCTORS IN BULGARIA

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Abstract

Epidemiological data shows clearly that obesity is becoming a pandemic and is one of the most important public health issues in the modern world. Many chronic non-communicable diseases are associated with overweight and obesity, so physicians need sufficient professional and ethical skills to deal with obese patients. The aim of the study is to explore the attitude and the willingness of physicians from different specialties to participate in the prevention and control of overweight and obesity.

An anonymous direct individual questionnaire was conducted on 154 physicians working in outpatient and hospital medical care. Participants are selected on a lottery basis in two medical institutions for outpatient medical care and five hospitals on the territory of Bulgaria. We used sociological methods (questionnaire) and statistical methods (descriptive and analytical methods: Chi-square test, Fisher's exact test, One-Sample Kolmogorov-Smirnov test, and Kruskal-Wallis non-parametric test).

The participants in the age group of 41 to 60 years (55.8%) are predominant, with a small prevalence of women (53.8%). Most of the respondents have specialties: internal medicine, general medicine and cardiology. 64.5% of them work in multiprofile hospitals for active treatment. 57.7% disagreed and another 20.5% totally disagreed that overweight treatment should only be available in the presence of other risk factors such as diabetes mellitus type 2 and hypertension. The main reason doctors do not address the problem of "obesity" is that the condition is complex and should be treated by a specialist in nutrition and dietetics.

Continuing education in control methods and ethical attitude towards overweight and obese patients is necessary in order to improve the quality of medical services.

Doctors and healthcare professionals are a key resource that needs to be fully utilized in the field of health promotion and fight against risk factors.

Key words: *Doctors, Overweight, Obesity, Attitudes, Control, Continuing education.*

1. Introduction

The World Health Organization (WHO) identifies obesity as one of the most serious threats to health in the 21st century. Epidemiological data shows clearly that obesity is becoming a pandemic and is one of the most important public health issues [1, 2]. Overweight and obesity are known to be a risk factor for a variety of chronic non-communicable diseases: type 2 diabetes mellitus, hypertension, ischemic heart disease, cancers, malignancies etc. [1, 3, and 4] These are socially significant for developed countries. For that reason prevention and control of obesity are topics of interest at the political, healthcare and research levels [2, 5].

Many of the chronic non-communicable diseases which are in the field of the specialized primary and hospital medical care are associated with overweight and obesity. So, physicians need sufficient professional and ethical skills to deal with obese patients [4]. The development of competencies in the field of health promotion provides the opportunity to implement preventive activities for the chronic non-infectious diseases. Health promotion and disease prevention activities are regulated by law in the way that health professionals could be very helpful to patients who need health information to avoid health risks, including unhealthy diets and lack of physical activity [6]. Recent studies on the role of health professionals in health

promotion show their importance, but the resources in this area are still unused [7].

According to the Medical Establishments Act in Bulgaria, the specialized medical care is provided in: primary care units for specialized medical care, which are an individual or group practice for specialized medical care; medical center; diagnostic consultative center; independent medical-diagnostic and medical-technical laboratories, etc. [8]. In the cases when the diagnostic and medical purpose can not be performed in primary care units, patients are referred to hospital medical care. In the treatment of overweight and obesity are engaged mainly nutritionist, endocrinologists and surgeons practicing bariatric surgery [9]. As overweight and obesity are risk factors for many diseases a wide range of specialists daily meet patients with these conditions: GPs, cardiologists, pulmonologists, endocrinologists, surgeons, gynecologists, orthopedists, anesthesiologists, etc. An important vulnerable group of patients are the children with obesity who are subject to pediatric care [1].

The aim of the study is to explore the attitude and the willingness of physicians from different specialties to participate in the prevention and control of overweight and obesity.

2. Materials and Methods

The subject of our study are physicians in different medical institutions - for primary and hospital medical care. Study was conducted between November 2018 and April 2019 in individual and group practices for specialized medical care and five multiprofile hospitals for active treatment in the cities of Sofia, Plovdiv and Kardzhali (First Multiprofile Hospital for Active Treatment - Sofia EAD; Alexandrovska University Hospital; "Tsaritsa Yoanna - ISUL" University Hospital; "St. George" University Hospital - Plovdiv; Multiprofile Hospital for Active Treatment "Dr. At. Dafovski" AD - Kardzali).

An anonymous direct individual questionnaire was conducted on 156 physicians on their opinion on:

- Their role in the prevention and control of overweight and obesity.
- Their attitude towards overweight and obese patients.
- The barriers and difficulties in dealing with such patients.

We used sociological methods (questionnaire and documentary methods) and wide variety of statistical methods:

1. Descriptive statistics: arithmetic mean, median (mean, median); standard deviation (SD); frequency tables - absolute frequencies (n); relative frequencies (%).

2. Analytical methods: Chi-square test or Fisher's exact test; Kolmogorov-Smirnov's test in one sample (one-sample Kolmogorov-Smirnov test); Mann-Whitney non-parametric test (Mann-Whitney test), and Kruskal-Wallis non-parametric test when comparing more than two independent groups. The accepted critical level of significance is $\alpha = 0.05$. The statistical data package SPSS (Statistical Package for Social Sciences) version 13.0 was used to process the survey data.

3. Results and Discussion

3.1 Demographic characteristics of the respondents

The distribution by age groups is presented in Figure 1. More than half of the respondents are in the age group 41 - 60 years (55.8%) with a small prevalence of women - 53.8%, which corresponds to the age profile of doctors in Bulgaria (Figure 2).

The largest share of the respondents are specialist in Internal Medicine (19.4%), General Medicine (16.4%), and Cardiology (11.9%) (Table 1). Not all respondents have reported their specialty.

More than half (64.5%) of the doctors surveyed work in Multiprofile hospitals for active treatment, 13.2% in Diagnostic-consultant center, 6.4% in individual practice for specialized medical care, 3.9% in group practice for specialized medical care and 9,2% respond that they

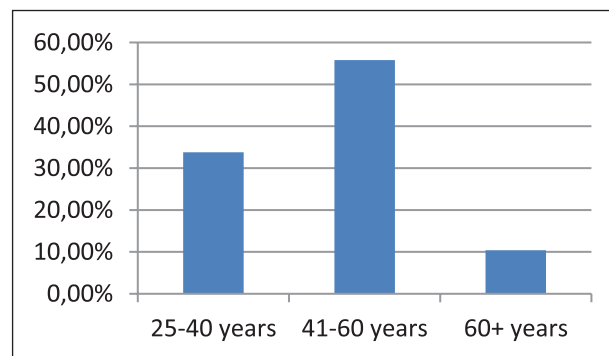


Figure 1. Distribution of participants by age (%)

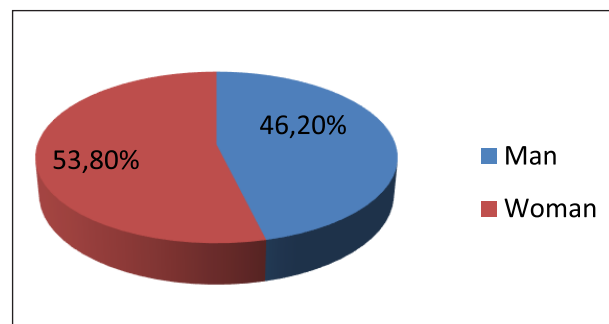


Figure 2. Distribution of participants by sex (%)

Table 1. Distribution of participants by gender and specialty

Specialty	Women n (%)	Men n (%)	Total n (%)
Urology	0 (0)	6 (9.4)	6 (4.5)
Cardiology	6 (8.6)	10 (15.6)	16 (11.9)
Endocrinology	4 (5.7)	4 (6.3)	8 (6)
Pulmonology	6 (8.6)	0 (0)	6 (4.5)
Allergology	4 (5.7)	4 (6.3)	8 (6)
Nephrology	6 (8.6)	4 (6.3)	10 (7.5)
Orthopedics	0 (0)	4 (6.3)	4 (3)
General medicine	14 (20)	8 (12.5)	22 (16.4)
Internal diseases	14 (20)	12 (18.8)	26 (19.4)
ENT	0 (0)	2 (3.1)	2 (1.5)
Dermatology	2 (2.9)	0 (0)	2 (1.5)
General Surgery	4 (5.7)	8 (12.5)	12 (9)
Anesthesiology	10 (14.3)	2 (3.1)	12 (9)
Total	70 (100)	64 (100)	134 (100)

are working in more than one medical institution.

3.2 Role in prevention and control of overweight and obesity

To the question "Do you think that you as a doctor have role in the prevention and control of overweight and obesity?" 28.2% say they definitely have such role, 42.3% think they have some of these obligations partly and 26.9% do not recognize this obligation (Figure 3). We interpret this percentage as significant in the context of frequent encounters with patients with Body

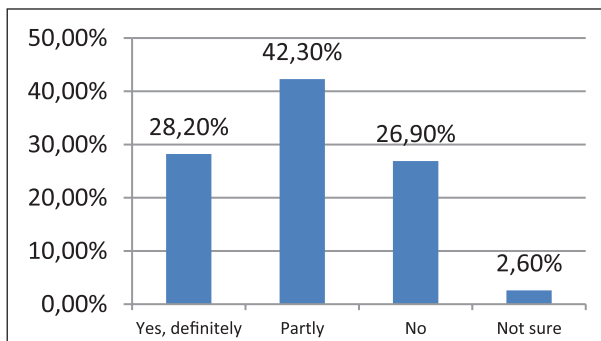


Figure 3. Distribution of participants according to the answer to the question "Do you think that you as a doctor have role in the prevention and control of overweight and obesity?" (%)

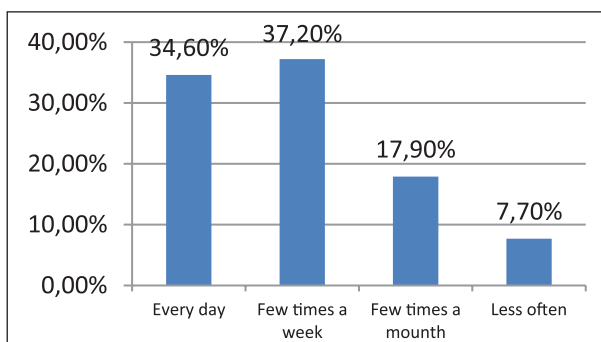


Figure 4. Distribution of participants according to the answer to the question "How often do you meet overweight patients (BMI over 25 kg / m²) in your practice?"

mass index (BMI) over 25 kg/m² (Figure 4). No statistically significant difference was found between the answers to this question, the gender, the specialty and the age of the respondents.

More than half of our respondents (57.7%) disagreed and 20.5% strongly disagreed with the statement that overweight treatment should only be available if other risk factors are present (Figure 5).

Our data suggests that physicians from different specialties prefer to refer their patients to a competent nutritionist instead of dealing with this complex con-

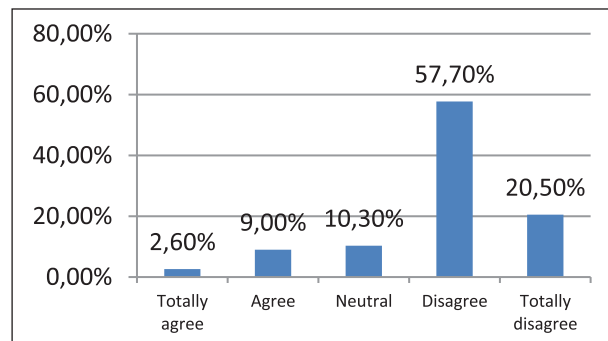


Figure 5. Distribution of participants according to the answer to the question "Overweight treatment should only be available if there are other risk factors such as type 2 diabetes mellitus or hypertension"

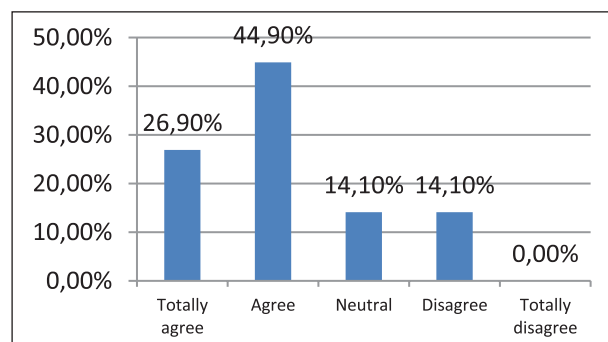


Figure 6. Distribution of participants according to the answer to the question "Is this the best decision for overweight / obese patients to be referred to a nutritionist instead trying to treat their medical conditions?"

dition, although they are directly related to patient's predominant (main) disease (Figure 6).

In order to clarify the reasons for these answers and the insufficient addressing of the problem in primary and hospital care, we asked the respondents which of the causes they consider valid not to undertake treatment of obesity in their medical practice. Most of the specialists surveyed indicated that it is a complex condition (38.5%) and the impossibility of long-term follow-up and consultation (30.8%). A quarter of them (24.4%) prefer to focus on the treatment of the main disease, and 17.9% indicate that time for consultation is not enough (Table 2). The healing and diagnostic role of doctors is fundamental and, to a large extent, their promotional role remains neglected.

Table 2. Distribution of participants according to the answer to the question "Which of the following reasons are valid for you as a doctor not to prescribe treatment for an obese patient?"

Barriers and difficulties	N	%
The consultation time is not enough	24	17.9
I prefer to focus on the treatment of the main disease	38	24.4
I would discuss with the patient the risks of overweight/obesity but I do not have the opportunity for long-term follow-up and consultation	48	30.8
Most obese patients deny their problem, so I have no motivation to pay them any further attention	16	10.3
Obesity as a condition is complex and should be treated by nutritionist	60	38.5
Other	4	2.6

According to some authors, factors that would help address the issue better are: relevant information on effective weight control models; the availability of additional educational materials for patients; and continuous staff training [10]. Continuing and postgraduate education of physicians from different specialties and

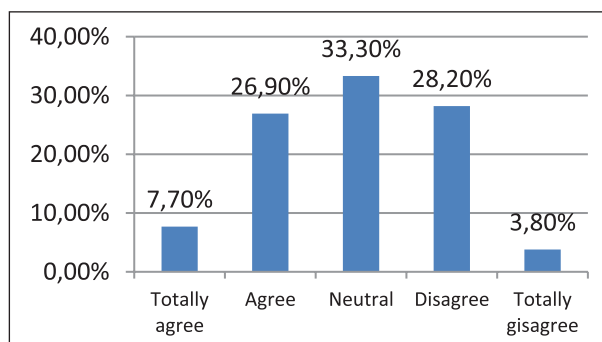


Figure 7. Distribution of participants according to the answer to the question "I feel professionally prepared to treat an overweight /obese patient"

other health professionals in the implementation of modern behavioral models for counseling patients with risk factors would also can be useful [9].

Another reason for the doctors not to participate in the prevention of obesity that we identified in our study is the lack of professional training and confidence in the ability to control the condition (Figure 7). Only 7.7% say they fully agree with the statement, "I feel professionally prepared to treat a patient with overweight and obesity". Almost half of those surveyed (47.4%) agree that overweight and obesity are associated with poor quality of life for patients and 21.8 fully agree with this statement.

4. Conclusions

- Epidemiological data on overweight and obesity define them as one of the world's leading public health issues. Doctors from hospital and outpatient medical care realize the need to better addressing of this socially significant health problem, but they are not always able to do it in their practice.

- A better understanding of this public health problem and further professional qualification for ethical management are factors for good medical practice. The implementation of various preventive programs in the field of healthy nutrition should also be recognized as a duty by medical professionals. Their direct engagement in Health Promotion Projects during their Medical High School training is a useful practice that will help to establish positive attitudes towards promotional activities [7].

- Continuing education of physicians in models for counseling patients with behavioral risk factors is also recommended.

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