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## Postrzeganie otyłości a zachowania zdrowotne pracowników medycznych

### Streszczenie

**Wprowadzenie.** Postawy i osobiste nawyki prozdrowotne pracowników medycznych mogą wpływać na uzyskiwanie pożądaných efektów w zakresie profilaktyki i terapii chorób cywilizacyjnych. W polskim systemie opieki medycznej zarówno lekarze klinicyści, jak i lekarze pierwszego kontaktu nie stosują działań profilaktycznych i leczniczych wobec pacjentów z nadwagą lub otyłością, co może wynikać z postrzegania tego problemu przez pryzmat własnych postaw i nawyków zdrowotnych.

**Cel.** Celem pracy jest określenie zależności pomiędzy postrzeganiem otyłości a zachowaniami zdrowotnymi pracowników medycznych, na których spoczywa odpowiedzialność za promowanie zdrowego stylu życia.

**Materiał i metody.** Badanie zostało przeprowadzone w okresie od stycznia do marca 2009 roku. Zbadano 94 osoby wykonujące nieprzerwanie, od co najmniej trzech lat zawód lekarza lub pielęgniarki. Osoby badane mieściły się w przedziale wiekowym od 26 do 45 lat. Średnia wieku w grupie personelu medycznego wynosiła 31,89 lat (SD=5,077). Większość respondentów stanowiły kobiety: przebadano 61 kobiet (64,9%) oraz 33 mężczyzn (35,1%). Zastosowano dwa narzędzia badawcze: Skalę Wyobrażenia i Percepcji Choroby (IPIS) autorstwa J. Saka oraz Inwentarz Zachowań Zdrowotnych autorstwa Z. Juczyńskiego.

**Wnioski.** Pracownicy medyczni postrzegają otyłość przede wszystkim przez pryzmat destrukcji sfery fizycznej oraz destrukcji sfery psychicznej. Nie wykazano istotnych statystycznie różnic w postrzeganiu otyłości pomiędzy kobietami i mężczyznami wykonującymi zawody medyczne. Postrzeganie otyłości przez pracowników medycznych jest uzależnione od deklarowanych zachowań prozdrowotnych. Zachowania i przekonania prozdrowotne pracowników medycznych sprzyjają lepszemu rozumieniu sfery psychologicznej pacjentów chorych na otyłość. Osoby wykonujące zawody medyczne częściej stosują prawidłowe praktyki zdrowotne oraz profilaktykę, gdy traktują otyłość jako będącą istotnym obciążeniem dla otoczenia. Promowanie prawidłowych nawyków zdrowotnych przeciwdziałających otyłości wśród personelu medycznego powinno akcentować zależność osoby otyłej od pomocy udzielanej przez rodzinę oraz obciążenia, jakie ta choroba może nieść ze sobą dla osób najbliższych.

**Słowa kluczowe:** otyłość, postrzeganie, zachowania zdrowotne, pracownicy medyczni.

## Perception of obesity and health-oriented behaviours in the group of medical employees

### Abstract

**Introduction.** The attitude and the personal health-oriented habits of medical employees may have significant impact on achieving desired targets of prophylaxis and therapy of civilisation diseases. It is common in the Polish healthcare system that neither clinical physicians nor GPs apply any prophylaxis or treatment to their overweight or obese patients. It may result from healthcare workers' perception of obesity as regards their own health behaviours and habits.

**Aim.** The aim of this work is to identify the correlation between the perception of obesity and health-oriented behaviours among people responsible for the promotion of the healthy life style.

**Materials and methods.** The study was carried out from January 2009 to March 2009 and 94 persons who had been working as healthcare workers (medical doctors or nurses) for at least three years were tested. The age of the questioned individuals ranged from 26 to 45 years. The medium age in the group was M=31.89 (SD=5.077). Women were the majority of the medical staff members: 61 women (64.9%) compared to 33 men (35.1%). Two questionnaires were used in the study: the Imagination and Perception of Illness Scale, by J. Sak and the Inventory of Health Behaviours by Z. Juczyński.

**Conclusions.** Medical employees perceive obesity mainly as the destruction of physical sphere and psychical sphere. No statistically significant differences have been found between male and female healthcare workers with regard to their perception of obesity. Medical employees' perception of obesity is dependent on their commitment to health-oriented behaviours. Medical employees' health-oriented behaviours and beliefs are conducive to better understanding of psychological nature of people with obesity. Medical employees perform health-oriented behaviours and preventive practices more often if they perceive obesity as a burden for a patient's environment. Promoting good health habits in order to prevent medical staff from obesity should focus on obese patient's dependence on help from relatives and on burden they may pose on society.

**Key words:** obesity, perception, health-oriented behaviour, medical employees.

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## INTRODUCTION

Physician's behaviour and verbal or non-verbal information given to a patient are very important to the latter. For this reason, the bio-psycho-sociological model indicates that amongst the elements that influence the relation between a physician and a patient there are medical personnel's health-oriented beliefs and behaviours [1]. Medical employees' opinions about prophylaxis of civilisation diseases may to a great extent influence a patient's attitude to the idea of changing his/her lifestyle. The influence may be exerted by verbal indications offered by a physician to a patient, the guidelines additional to the main explanations of diagnostic or therapeutic procedures, as well as by non-verbal messages. In the bio-psycho-sociological model, beliefs and habits related to health are considered to be the components of medical personnel's self-monitoring. Medical employees' attitude and their personal health-oriented habits may have significant impact on achieving desired targets of prophylaxis and therapy of civilisation diseases. In Poland and the European Union the most common disorder in the group of civilisation diseases is obesity. Obesity is said to be an epidemics because of its omnipresence and serious health after effects [2-4]. The research WOBASZ conducted in Poland revealed that 40% of men and 27% of women between the ages of 20 and 74 are overweight and 20% of both, men and women, are obese [5]. Treating obesity and its negative after-effects is a serious financial burden on the healthcare system [6].

Wrong eating habits, sedentary life style [7,8] and genetic factors, especially the mutations of the codifying gene IGF-1 and IGF-2 (insulin-like growth factors -1, -2), are considered to be significant in the pathogenesis of obesity [9,10]. The prospective population research, conducted as the WHO MONICA project, indicate a strong relation between the increase of the average BMI in a given population and the increased consumption of highly energetic products (per capita) [11].

Medical literature ascribes major significance in prophylaxis and fighting obesity to health providers [12] and healthcare workers (physicians and nurses) [13]. It is common in the Polish healthcare system that clinical physicians and GPs do not apply any prophylaxis or treatment to their overweight or obese patients. Obesity, if it is not perceived by a patient as problematic or causing troubles in his or her everyday life, is tolerated by medical staff. One of the possible causes of the personnel's attitude may be a common social approval of excessive weight or even of obesity. Another cause may be deficiencies of the proper (preventing obesity) life style and the healthy diet even among medical staff. Only physicians or nurses who understand and accept requirements of obesity prophylaxis and therapy are able to apply these requirements to their patients. Therefore, in latest research the problem of the life style and the perception of obesity among medical staff representatives have been investigated [14]. It has also been pointed out that some representatives of the medical staff demonstrate prejudices about noticeably obese people. Research conducted on this issue aims to define influence

of the way medical staff perceives obesity on their commitment to popularising a healthy diet and to obesity prophylaxis. It also should be emphasised that research conducted on the perception of obesity and other disease entities has been intensively carried out in the area of medical psychology since the early 1950s [15].

## AIM

The aim of this work has been defined having taken into account all the facts mentioned above: to identify correlations between perception of obesity and health behaviours among people responsible for the promotion of a healthy life style.

## MATERIALS AND METHODS

The study was carried out from January to March 2009 and 94 persons who had been working as nurses or physicians for at least three years were tested. All the respondents were informed about the scope of the study and signed the written consent to participate in the research. The study was done anonymously.

Two questionnaires were used in the study: Imagination and Perception of Illness Scale, IPIS (Polish: Skala Wyobrażenia i Percepcji Choroby) by J. Sak and The Inventory of Health Behaviours (Polish: Inwentarz Zachowań Zdrowotnych, IZZ) by Z. Juczyński [16].

The Imagination and Perception of Illness Scale (IPIS) designed by J. Sak refers to the semantic differential technique. The IPIS scale factors, which were worked out in the previous research, describe: loss of motivation (8 items), psychic sphere destruction (6 items), physical sphere destruction (8 items), pessimism (4 items), being a burden on others (3 items) and loss of control over the disease (3 items). The scale includes 32 pairs of opposite attributes that are used to test how various diseases are perceived by healthy as well as sick people. The results are shown as an arithmetical averages calculated for each of the six factors separately, due to different numbers of items for each factors. The seven-grade scale describes possible answers included between the opposite attributes: 0 means the choice of the most positive attribute and 6 means the choice of the most negative attribute. Therefore, the higher the result is, the more negative the perception of the disease is.

The Inventory of Health Behaviours (Polish: IZZ) allows to estimate practicing various kinds of health behaviours categorized into four groups: 1. diet habits (eating vegetables, fruit and wholemeal bread; limiting consumption of food containing preservatives, salt and sugar); 2. preventive behaviours (regular attending medical examinations, complying with physician's recommendations, improving the knowledge on health and illnesses); 3. positive psychological attitude (avoiding strong emotions, anger, fear and depressive situations; maintaining relationships and a positive attitude to life); and 4. health practices (habit of a daily relax, sleep, body weight control and limiting the amount of cigarettes). The inventory consists of 24 items that are evaluated

according to the five point Likert scale where: 1 means 'almost never' and 5 'almost always'. There are 6 statements assigned to each of the already discussed dimensions of the inventory. The statements refer to the intensity of the selected health behaviour. The intensity of the behaviour is evaluated according to the 5-point Likert scale.

Statistica 6.0 (StatSoft Poland) and SPSS Statistics 16.0 (SPSS Poland) software was used to analyse the data. Descriptive statistics (mean – M and standard deviation – SD), Pearson's correlations and nonparametric U Mann-Whitney tests were applied. A statistically significant level was accepted at  $p=0.05$ .

## RESULTS

The age of the questioned individuals ranged from 26 to 45 years. The medium age in the group of medical employees was  $M=31.89$  ( $SD=5.077$ ). Women were a majority in this group: 61 women (64.9%) to 33 men (35.1%).

The U Mann-Whitney test has been used to analyse the collected data in order to find if there exist any differences between men and women with regard to the tested aspect. A nonparametric test has been used because of the unequal number of men and women. The comparison of the gender groups has shown only one statistically significant difference ( $Z=2.517$ ;  $p=0.012$ ). It appears that women working as doctors or nurses indicate more preventive behaviours ( $M=19.20$ ;  $SD=4.218$ ) than men do ( $M=17.00$ ;  $SD=2.556$ ) (Table 1). No statistically significant differences have been found in obesity perception. It might be worth pointing out that in both groups (of men and women) the

highest scores have been observed in perceiving obesity as related to the destruction of physical and psychological spheres. A very common component of the medical personnel's representation of obesity is also pessimism. Psychological aspects have also appeared in declared health-oriented behaviours; the highest scores have been observed in a positive psychological attitude and good dietary habits.

The Pearson's correlations have been used in determining relations between obesity perception assessed in the IPIS scale and health-oriented behaviours assessed in the IZZ questionnaire. Table 3 shows the correlations between the analysed variables for the group of medical staff representatives. It is worth emphasizing that the IPIS dimension of perceiving obesity as a burden for the society correlates to statistically significant degree with almost all IZZ factors. The more troublesome obesity is for the physicians and nurses in the study, the more willing they are to perform preventive behaviours ( $r=0.269$ ;  $p=0.024$ ) and health practices ( $r=0.292$ ;  $p=0.005$ ). The dimension of obesity perceived as a burden also correlates positively with the IZZ positive psychological attitude ( $r=0.332$ ;  $p=0.005$ ). The level of the assumed statistical significance has not been reached only in the case of healthy diet habits. The observed correlation here can be interpreted merely as a statistical tendency ( $r=0.214$ ;  $p=0.075$ ).

In respect to other dimensions of the IPIS's scales, there has been revealed a distinct positive correlation between the belief that obesity makes patient pessimistic about his/her life and the respondents willingness to perform preventive behaviours ( $r=0.388$ ;  $p=0.001$ ).

**TABLE 1. The intensity of the health behaviours performed by medical employees (IZZ scale).**

Categories of health-oriented behaviors (IZZ scale)	Medical employees						U Mann-Whitney Test	
	Total		Women		Men		Z	p
	M	SD	M	SD	M	SD		
Good diet habits	19.36	4.344	19.93	4.079	17.44	4.788	1.664	0.096
Preventive behaviors	18.70	3.994	19.20	4.218	17.00	2.556	2.517*	0.012
Positive psychological attitude	19.67	3.517	19.81	3.802	19.19	2.344	0.527	0.598
Health practices	18.60	3.858	18.83	4.101	17.81	2.857	0.772	0.440

\*\*  $p<0.01$ , \* $p<0.05$

**TABLE 2. The perception of obesity among medical employees (IPIS scale).**

Dimensions of the obesity perception (IPIS scale):	Medical employees						U Mann-Whitney Test	
	Total		Women		Men		Z	p
	M	SD	M	SD	M	SD		
The loss of motivation to activity	3.74	0.802	3.75	0.863	3.69	0.566	-.077	.939
Psychical sphere destruction	4.01	0.793	4.00	0.770	4.03	0.895	-.512	.609
Physical sphere destruction	4.10	0.970	4.06	1.050	4.24	0.633	-.770	.441
Pessimism	3.90	1.006	3.89	1.090	3.92	0.675	-.112	.911
Being a burden on others	1.77	1.130	1.86	1.170	1.46	0.950	-1.344	.179
The loss of control of the disease	1.85	0.956	1.87	1.033	1.77	0.652	-.373	.709

\*\*  $p<0.01$ , \* $p<0.05$

**TABLE 3. Obesity perception and health-oriented behaviours in the group of medical employees (Pearson's correlations).**

	Good diet habits		Preventive behaviours		Positive psychological attitude		Health practices	
	r	p	r	p	r	p	r	p
The loss of motivation to activity	0.138	0.255	0.176	0.146	0.034	0.780	-0.136	0.261
Psychical sphere destruction	0.052	0.667	0.025	0.838	-0.020	0.867	-0.109	0.369
Physical sphere destruction	-0.009	0.943	0.098	0.418	-0.052	0.668	-0.109	0.369
Pessimism	0.216	0.073	0.388(**)	0.001	0.226	0.060	0.216	0.072
Being a burden on others	0.214	0.075	0.269(*)	0.024	0.332(**)	0.005	0.292(*)	0.014
The loss of control of the disease	0.089	0.463	0.192	0.112	0.265(*)	0.026	0.201	0.096

\*\* p<0.01, \*p<0.05

## DISCUSSION

The analysis of the results reveals the relationships between opinions declared by medical employees and health-oriented behaviours, on one hand, and their perception of obesity as a disease, on the other. The stronger their commitment to health-oriented practices is, the greater burden on others and the more conducive to pessimism the obesity seems to be in their opinion. Both, patient's perception of his/her relationships with society and his/her pessimism, appear to be essential aspects of patient's personal experience of being ill. Therefore, it may be concluded that those individuals of medical staff who are greatly committed to their health oriented and prophylactic activities should be more sympathetic to psychological problems of people with obesity.

The character of correlations between the dimensions of the IZZ and the IPIS observed in the group of medical employees (Table 3) may be explained by specific characteristics of the staff's duties, including everyday contacts with patients. People working in healthcare sites more frequently show good health practices and preventive behaviours if they perceive obesity as an essential burden for the patient's relatives and society in general (e.g. the necessity of caring of the obese patient). Private health-oriented behaviours performed by medical employees are modified mostly by those elements of obesity perception that relate to the obese patient's dependence on his/her entourage. Medical employees constantly observe the dependence of patients with various diseases on other people's help (e.g. relatives or friends). In the light of the observed results it seems reasonable to consider creating health promoting program addressed to medical staff and aimed to overweight and obesity prevention.

One should not overlook the useful character of programmes aimed to stimulate medical personnel to practice health-oriented activities. The aim of such programmes should include not only preventing civilisation diseases amongst medical employees, but also improve their apprehension of psychological problems of patients with obesity.

## CONCLUSIONS

The obtained research findings and the analysis of the literature allow for drawing the following conclusions:

1. Medical employees perceive obesity mainly as destruction of physical sphere and psychical sphere.
2. No statistically significant differences have been found between male and female medical employees with regard to their perception of obesity.
3. Medical employees' perception of obesity is dependent on their commitment to health-oriented behaviours.
4. Medical employees' health-oriented behaviours and beliefs are conducive to better understanding of psychological nature of people with obesity.
5. Medical employees more often perform health-oriented behaviours and preventive practices if they perceive obesity as a burden for a patient's environment.
6. Promoting good health habits in order to prevent medical workers from obesity should focus on obese patient's dependence on help from relatives and on burden it poses on society.

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