



Original paper

Co-occurrence of depression, anxiety disorders, and obesity. Comparison of overweight and obese patients with patients with correct body weight in terms of expansion of depression-anxiety symptoms

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Abstract

Introduction: Depression, anxiety disorders, and obesity are commonly co-occurring disorders. Due to the scarcity of research on the expansion of depression-anxiety disorders in the group of people with body mass index (BMI) ≥ 25 , the objective of this paper is to analyse the level of depression and anxiety in a group of obese patients of the Obesity Treatment Ward, and to compare the group to patients with correct body weight.

Material and methods: The research covered two equal research groups. The first research group comprised 54 obese female patients of the Obesity Treatment Ward. The second research group comprised 54 female patients with correct body weight from the Non-Public Health Centre in Butryny (Warmińsko-Mazurskie Province). The applied research tool was the Hospital Anxiety and Depression Scale HADS.

Results: The statistical analysis of results of the present study showed a significantly higher level of depression: $t(52) = 4.81, p < 0.05$, and anxiety: $t(52) = 3.64, p < 0.05$, in the HADS scale among overweight or obese persons in comparison to those with correct body weight.

Conclusions: The results of the study showed significantly higher intensity of depression-anxiety disorders among obese persons in comparison to those with correct body weight. Obese persons should receive standard psychological support during weight loss treatments due to the level of anxiety and/or depression.

Key words: obesity, depression, anxiety.

Introduction

Depression, anxiety disorders, and obesity are commonly co-occurring disorders. This may be determined by their common biological background [1]. Moreover, depression and obesity have been determined to potentially represent the same pathological process. Particularly, atypical forms of depression are related to an increase in appetite, regulation of emotions by means of food, reduction of physical activity, and therefore an increase in body weight [2]. Moreover, psychological consequences resulting from social stigmatisation of obesity cause the occurrence or intensification of pre-existing depression-anxiety problems [3,4]. Results of long-term

research also emphasise the strong mutual correlation between obesity and depression. It shows that depression increases the probability of the development of obesity. An opposite dependency also exists, where being obese causes depression. Moreover, efficient reduction of weight turns out to be a factor in decreasing the level of depression. Being depressive makes it difficult to change one's eating habits, and therefore – to lose excessive weight [5].

Due to the scarcity of research on the expansion of depression-anxiety disorders in the group of people with BMI ≥ 25 , the objective of this paper is to analyse the level of depression and anxiety in a group of obese patients of the Obesity Treatment Ward, and to compare the group to patients with correct body weight.



Material and methods

The research covered two equal research groups. All participants gave verbal consent to participate, and the study was approved by the Bioethics Committee of University of Warmia and Mazury, Olsztyn, Poland. The first research group comprised 54 obese female patients of the Obesity Treatment Ward. The mean age of the patients amounted to 48.1 (range: 23-63) years of age. The mean body mass index amounted to 36.4 (range: 25-51). The second research group comprised 54 female patients with correct body weight from the Non-Public Health Centre in Butryny (Warminsko-Mazurskie Province). The mean age of the patients amounted to 46.7 (range: 24-65) years of age. The mean body mass index (BMI) amounted to 23.8 (range: 22.3-24.8). The applied research tool was the Hospital Anxiety and Depression Scale HADS [6]. The questionnaire is applied to analyse the level of anxiety and depression in hospitalised patients and outpatients. This research employed the HADS scale in the Polish adaptation by de Walden-Gałuszko and Majkowicz [7].

Results

Results of the study were verified in the statistical program SPSS 22 on the basis of Student *t*-test. Based on the conducted research, it was observed that in the group of obese patients (group I), increased anxiety level occurred in 30% of the patients, including 10% showing anxiety at a pathological level. An increased level of depression was recorded among 32% of patients, including 15% with pathologically intensified depression symptoms. For comparison, an increased anxiety level occurred in 12% of patients with correct body weight (group II), and increased level of depression – in 16%. No cases of pathological anxiety or depression were recorded in group II. The statistical analysis of results of the present study showed a significantly higher level of depression and anxiety in the HADS scale among overweight or obese persons in comparison to those with correct body weight:

- anxiety level: M (group 1) = 5.66; SD = 3.37, M (group 2) = 3.48; SD = 2.57; $t(52) = 3.64$, $p < 0.05$ (Figure 1),
- depression level (HADS): M (group 1) = 6.38; SD = 3.12, M (group 2) = 3.56; SD = 2.74; $t(52) = 4.81$, $p < 0.05$ (Figure 2).

Discussion

The results of the presented study are of great importance for clinical practice in obesity treatment. Similar results were obtained among others in research by Svenningsson *et al.* [8], where depression and anxiety disorders were diagnosed in 25% of obese patients. Also in the study of Hung-Yen *et al.* [9] different types of mood disorders were observed in 27.1% of patients. The most common disorder was dysthymia, and anxiety disorders were found in 18.2% of people. The results of both studies, although methodologically different, seem to correspond with each other. The coexistence of obesity with the problems of depression and anxiety has been shown in numerous scientific studies [10-12].

Moreover, results of the presented study showed significantly higher intensity of depression-anxiety disorders among obese persons in comparison to those with correct body weight. The above results are in accordance with the studies of Hung-Yen *et al.* [9] and Heo *et al.* [12]. Obese persons should receive standard psychological support during weight-loss treatments due to the frequently increased level of anxiety and/or depression in the group. Moreover, particular attention should be paid to patients in whom the level of anxiety and/or depression is at a pathological level. They may require pharmaceutical intervention. It is probably also a group particularly prone to failures in the scope of change of eating habits. Psychological condition is evidently a factor determining the efficiency and sustainability of the change of lifestyle associated to the goal of body weight reduction [9]. Taking the individual psychosocial context of the patient into consideration in treatment permits the implementation of the objective of, among others, achievement of internal psychological bal-

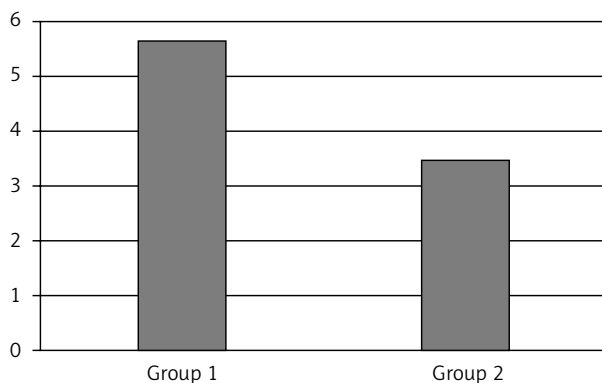


Figure 1. Level of anxiety in group 1 and group 2

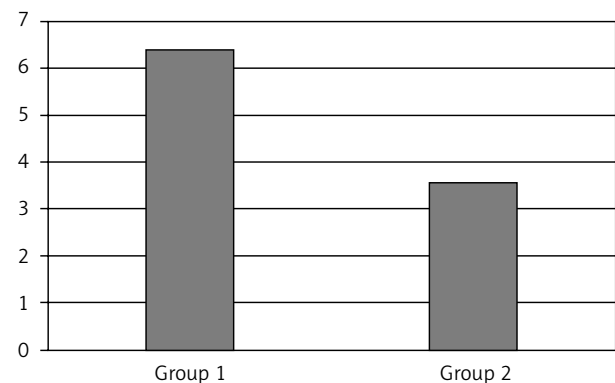


Figure 2. Level of depression in group 1 and group 2

ance by the patient. Psychological practice in the scope of therapy of overweight persons shows that psychological destabilisation leading to a decrease in the quality of life of an individual frequently results in excessive eating. Unfortunately, such a form of compensation directly results in overweight or obesity, and sometimes also in the appearance of deeper psychopathological disorders [13].

Conclusions

The results of the study showed significantly higher intensity of depression-anxiety disorders among obese persons in comparison to those with correct body weight.

Obese persons should receive standard psychological support during weight loss treatments due to the level of anxiety and/or depression.

Disclosure

Author reports no conflict of interest.

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