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# How realistic are the goals of subjects starting a complex weight loss program?

Czy oczekiwania osób rozpoczynających udział w kompleksowym grupowym programie leczenia otyłości są realne?

## ABSTRACT

**INTRODUCTION:** The aim of this study was to assess the expected goals of subjects starting participation in a three-month complex weight loss program.

**MATERIAL AND METHODS:** The study group involved 80 subjects starting participation in a three-month complex group weight loss program (age  $41.8 \pm 11.9$  years, BMI  $35.7 \pm 5.3$  kg/m<sup>2</sup>). Weight and height were measured at the beginning of the program, and BMI was calculated. Duration of obesity was established based on anamnesis. All patients were asked to assess their current body shape (a) and the body shape they expected at the end of the program (b) in a BFPQ scale (adapted by Stunkard). The expected goals were calculated based on the differences between figures a and b.

**RESULTS:** Realistic goals ( $\leq 10\%$  weight loss) were expected by 7.5% of subjects (age  $50.0 \pm 17.0$  years, BMI  $35.8 \pm 5.8$  kg/m<sup>2</sup>, duration of obesity  $14.4 \pm 10.7$  years, duration of obesity to age ratio  $0.3 \pm 0.2$ ), moderately-realistic goals (15–20% weight loss) by 52.5% of subjects (age  $42.4 \pm 11.0$  years, BMI  $35.6 \pm 5.9$  kg/m<sup>2</sup>, duration of obesity  $13.0 \pm 7.4$  years, duration of obesity to age ratio  $0.3 \pm 0.2$ ), and unrealistic goals ( $\geq 20\%$ ) by 40.0% of subjects (age  $39.4 \pm 11.5$  years, BMI  $35.7 \pm 4.7$  kg/m<sup>2</sup>, duration of obesity  $12.0 \pm 9.1$  years, duration of obesity to age ratio  $0.3 \pm$

$\pm 0.3$ ). The BMI, duration of obesity, and duration of obesity to age ratio were similar in these subgroups, whereas subjects with realistic goals were significantly older when compared to the both remaining subgroups.

**CONCLUSIONS:** The majority of patients starting participation in a three-month complex group weight loss program had unrealistic goals; it seems that the aims materialize with age regardless of duration of obesity.

**Key words:** expected goals, weight loss, BFPQ

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## STRESZCZENIE

**WSTĘP:** Celem pracy była ocena realności oczekiwań osób rozpoczynających udział w 3-miesięcznym kompleksowym grupowym programie leczenia otyłości.

**MATERIAŁ I METODY:** Grupę badaną stanowiło 80 osób rozpoczynających udział w 3-miesięcznym kompleksowym grupowym programie leczenia otyłości (wiek  $41,8 \pm 11,9$  lat, BMI  $35,7 \pm 5,3$  kg/m<sup>2</sup>). Zmierzono masę ciała i wzrost oraz obliczono BMI. Na podstawie wywiadu określono czas trwania otyłości. Wszystkich badanych poproszono o zaznaczenie na skali BFPQ w adaptacji Stunkarda sylwetki odpowiadającej ich obecnemu wyglądowi (a) oraz sylwetki jaką chcieliby mieć po zakończeniu programu (b). Oczekiwania badanych określono na podstawie różnicy między sylwetką a i b.

**WYNIKI:** Realne oczekiwania ( $\leq 10\%$  ubytku masy ciała) miało 7,5% badanych (wiek  $50,0 \pm 17,0$  lat, BMI  $35,8 \pm 5,8$  kg/m<sup>2</sup>, czas trwania otyłości  $14,4 \pm 10,7$  lat, stosunek czasu trwania otyłości do

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wieku  $0,3 \pm 0,2$ ), średnio realne oczekiwania (15–20% ubytek masy ciała) miało 52,5% badanych (wiek  $42,4 \pm 11,0$  lat, BMI  $35,6 \pm 5,9$  kg/m<sup>2</sup>, czas trwania otyłości  $13,0 \pm 7,4$  lat, stosunek czasu trwania otyłości do wieku  $0,3 \pm 0,2$ ), nierealne oczekiwania ( $\geq 20\%$ ) miało 40,0% badanych (wiek  $39,4 \pm 11,5$  lat, BMI  $35,7 \pm 4,7$  kg/m<sup>2</sup>, czas trwania otyłości  $12,0 \pm 9,1$  lat, stosunek czasu trwania otyłości do wieku  $0,3 \pm 0,3$ ). Podgrupy te nie różniły się pod względem BMI, czasu trwania otyłości, stosunku czasu trwania otyłości do wieku, podczas gdy osoby mające realne oczekiwania były istotnie starsze w porównaniu z obiema pozostałymi grupami.

WNIOSKI: Większość pacjentów rozpoczynających udział w 3-miesięcznym kompleksowym grupowym programie leczenia otyłości ma nierealne oczekiwania, wydaje się że cele urealnijają się z wiekiem niezależnie od czasu trwania otyłości.

**Słowa kluczowe:** oczekiwania, redukcja masy ciała, BFPQ

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## Introduction

Obesity is a growing clinical, social, and economic problem [1]. Obtaining long-term weight loss is very difficult. Based on recently obtained results, a 5–10% weight loss during the first six months of weight reduction therapy is recommended, with subsequent maintenance of this effect during the following few months, and, if necessary, body mass reduction should be continued [2]. It is well known that small (5%) but long lasting weight reduction has a beneficial metabolic effect even if BMI remains in the range of obesity [3–5]. Greater (10%) weight loss of initial body mass is achievable by most people, but it is more difficult to attain [6, 7]. However, many people attempt to reduce their body mass not for health reasons but through dissatisfaction of their body image. Therefore, their goals may be unrealistic because diet and physical activity do not bring the anticipated results [8]. It is estimated that about 40% of women and 25% of men try to change their appearance constantly without satisfactory effects [9–15].

This lack of realistic and easily achievable goals is a major reason to give up at the first failure and develop a yo-yo effect during self-reliant attempts to lose weight. The greater the expectations and lack of anticipated results, the higher the frequency of treatment discontinuation.

Determination of realistic goals of weight reduction treatment is one commendation — the so-called rule of five 'a's: assess, ask, advise, assist, and arrange [16]. The assignment of realistic goals from the start may prevent dissatisfaction with obtained effects and, consequently, therapy discontinuation.

Therefore, the aim of this study was to assess how realistic patients' goals are when starting participation in a three-month complex weight loss program.

## Material and methods

The study group included 80 subjects (72 women and 8 men) starting a 3-month complex group weight loss program (age  $41.8 \pm 11.9$  years, weight  $93.6 \pm 14.8$  kg, BMI  $35.7 \pm 5.3$  kg/m<sup>2</sup>). All measurements were performed before the first meeting when the patients should not have a great deal of knowledge about the program except information they may have received from previous participants. Body mass and height were measured, and body mass index was calculated by the standard formula. The current body image (a) and that expected at the end of program (b) were assessed on the basis of the nine-degree images scales in Stunkard's adaptation of the Body Figure Perception Questionnaire (BFPQ) prepared in separate versions for men and women [17]. The time in which to make the choice of body figure was unlimited. Duration of obesity was established based on anamnesis, and the duration of obesity to age ratio was calculated.

The expected goals of body weight reduction were estimated based on differences between the current and expected body image chosen by the patients (a–b).

## Statistical analysis

All statistical analyses were performed using Statistica 8.0 software. The results are presented as means with standard deviations or percentages. The  $\chi^2$  test was used for comparison of quality variables. The *U*-Mann-Whitney test was used for comparison of numerical variables such as age, BMI, and duration of obesity. The results were considered statistically significant with a *p* value of less than 0.05.

## Results

The average goal of expected body mass reduction was 17.5% of the initial body mass. The study group was divided into three subgroups according to the value of the goal. The subgroups included subjects with realistic goals (weight loss  $\leq 10\%$ , *n* = 6 — 7.5%), a subgroup moderately realistic goals (weight loss 15–20%, *n* = 42 — 52.5%), and a subgroup with high, unrealistic goals (weight loss  $\geq 20\%$ , *n* = 32 — 40%). The characteristics of the study subgroups are presented in table I.

The prevalence of realistic goals was significant lower than the frequency of moderately realistic and unrealistic goals ( $\chi^2 = 36.5$ , *p* = 0.001 and  $\chi^2 = 21.6$ , *p* = 0.001, respectively).

The BMI, duration of obesity and duration of obesity to age ratio were similar in the study subgroups.

Table 1. Characteristics of study subgroups

	Weight goals		
	≤ 10%	10–20%	≥ 20%
N	6 (7.5%)	32 (52.5%)	42 (40.0%)
Goal of weight reduction (%)	4.0	13.2	24.0
Age (years)	50.0 ± 17.0*#	42.4 ± 11.0	39.4 ± 11.5
BMI [kg/m <sup>2</sup> ]	35.8 ± 5.8	35.6 ± 5.9	35.7 ± 4.7
Duration of obesity (years)	14.4 ± 10.7	13.0 ± 7.4	12.0 ± 9.1
Duration of obesity to age ratio	0.3 ± 0.2	0.3 ± 0.2	0.3 ± 0.3

\*p < 0.05 — ≤10% vs. 10–20%; #p < 0.01 — ≤10% vs. ≥ 20%

Subjects with realistic goals were significantly older when compared to both remaining subgroups.

## Discussion

Majority of subjects participating in our program had moderately realistic or unrealistic goals of expected weight reduction. More than half of the study subjects expected 13.2% weight reduction during the three-month period, and 40% of the study subjects expected 24% weight reduction during same period. Similar results were presented by Dalle Grave et al. [18], who examined 1,891 subjects from 25 medical centres in Italy. In this study more than 50% of the study subjects had unrealistic weight reduction goals. Our study subjects had more unrealistic goals than other published series of subjects. Subjects studied by Foster et al. [19] expected a 23% weight loss during 12 months, and those examined by Matthews et al. [20] expected 33% weight loss.

The high percentage of subjects with unrealistic goals could be partially explained by selection bias. As demonstrated by O'Neil et al. [8], subjects who seek medical assistance in weight reduction have higher expectations than those who are experimenting with different diets themselves.

Perhaps in some subjects the goal was overestimated. It could be that, regardless of the precise question formulation, some of our subjects misunderstood the question and ticked the final expected body image.

Contrary to the results obtained by Dalle Grave et al. [18] and Foster et al. [19], we did not observe any relationship between the grade of obesity and unrealistic goal expectations.

In our study, the subjects with realistic expectations were significantly older than those with moderately realistic and unrealistic goals. Perhaps more realistic

goals in older subjects might be related to other health problems and not only aesthetic reasons, as in younger subjects, which were important in deciding to participate in the weight loss program [21–23].

Motivation is an important factor in order to obtain long-term effects, while lack of satisfaction is a frequent cause of therapy discontinuation [24]. Unrealistic goals may decrease motivation and cause a loss of effect [18]. On the other hand, unrealistic optimism may also exert a positive influence on the dieter's mental state, especially when the person gets negative feedback [25].

To the best of our knowledge, the BFPQ has not yet been used for the assessment of the expectation of subjects starting participation in a group weight loss program. Previously, expectations were determined on the basis of direct questions (how many kilograms [8, 9, 12, 20, 26, 27] or tenths of kilograms [18] of body weight would the subjects like to lose), or they were based on the Goals and Relative Weights Questionnaire (GRWQ) [19, 28–32]. We used the BFPQ because the GRWQ is not available in a Polish version and is not validated in our country. We hypothesized that, despite the fact that the BFPQ was created to measure perceived body image and body image dissatisfaction, it may be also a good tool for the assessment of patients' expectations. Despite the lack of validation of this tool for the measurement of expectations, our results are similar to those obtained by others [18, 19]. This supports our hypothesis that the BFPQ may be a useful tool in such assessment.

## Conclusions

The majority of patients starting participation in a three-month complex group weight loss program had unrealistic goals; it seems that the aims materialize with age regardless of duration of obesity.

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