

Brief report

Body weight: The male and female perception

Ingrid Kiefer, Barbara Leitner, Rosemarie Bauer, Anita Rieder

Institut für Sozialmedizin der Universität Wien

Summary

The aim of the present study was to examine the relationship between actual body weight, characterization of one's weight, and satisfaction with it. 246 students of medicine in the third (clinical) stage of their studies at the University of Vienna responded to a questionnaire asking about their weight and attitudes regarding their personal body weight. The results indicate that many young women and men are either unable to characterize their weight (as normal, underweight, overweight, or obese) or guess incorrectly. The results point to the fact that a lot of women and men do not estimate their body weight in correspondence to the valid definition of the BMI. Women in particular seem to model themselves more on the current beauty ideal than men. Women seem to be more influenced by the current ideal of slenderness than their male counterparts. Women are more frequently dissatisfied with their weight, and see themselves as considerably heavier than they actually are. Because of this perception, women attempt to reduce weight more often than men. This type of dissatisfaction with one's body weight and excessive attention paid to body image, particularly weight, are considered as risk factors for the development of eating disorders. Not surprisingly, women are significantly more prone to these conditions than are men.

A growing proportion of young people have difficulty in correctly characterizing their body weight. Young women in particular see themselves as being too heavy and are dissatisfied with their weight¹. As a consequence they try to reduce weight more often than men. This obsession with slenderness is increasingly seen as the cause of eating disorders.

The primary objective of this study was to look for possible differences between actual and self-characterized body weight, paying particular attention to gender-specific behavior in this relationship. A secondary objective was to determine how satisfied the subjects were with their current weight.

Sampling and Methods

246 students of medicine in the third (clinical) stage of their studies at the University of Vienna responded to a questionnaire asking about their weight and attitudes regarding their personal body weight.

The questionnaire included questions on height and weight. All the anthropometric data were self-reported. The body mass index (BMI; weight in kg/height in m²) was calculated from the data provided by the participants. The questionnaire also included questions regarding body weight satisfaction. The data was assessed during the social medical practical, the return ratio therefore amounted to 100%.

Descriptive statistical analysis was performed using SPSS (Version 8). Significance was determined by the chi-square test, and, when each cell had an expected frequency under five, we applied Fisher's exact test (Fisher-Yates Test).

Subject characteristics are found in Table 1. The mean age was 25 ± 3 years, 46% (113) of the subjects were male and the remaining 54% (133) were female.

The BMI is the core measurement used both in the clinic as in epidemiologic studies concerning

	Men		Women		Total	
	Mean	SD	Mean	SD	Mean	SD
Age	25.28	± 3.94	24.29	± 2.37	24.75	± 3.23
Weight in kg	75.44	± 8.99	59.28	± 9.80	66.70	± 12.4
Height in m	1.8	± 6.98E-02	1.688	± 5.91E-02	1.74	± 8.05E-02
BMI in kg/m ²	23.1	± 2.33	20.76	± 3.025	21.84	± 2.996
	%	n	%	n	%	n
BMI: ≤ 17.9 kg/m ²	0	0	9.0	12	4.5	12
BMI: 18.0 – 24.9 kg/m ²	87.6	99	82.0	109	84.8	208
BMI: 25.0 – 29.9 kg/m ²	11.5	13	7.5	10	9.5	23
BMI: ≥ 30.0 kg/m ²	0.9	1	1.5	2	1.2	3

Table 1. Subject characteristics (mean, SD and percent).

the review and classification of body weight².

The BMI was classified into four groups: underweight, normal, overweight and obese. A BMI of up to 17.9 kg/m² is considered underweight, values between 18.0 kg/m² and 24.9 kg/m² are normal, values from 25.0 kg/m² to 29.9 kg/m² are overweight, and, finally, a BMI of 30.0 kg/m² or above represents obesity³.

Results

About 80% of the subjects characterized their body weight as normal (80% of the men and 81% of the women). A total of 13% (14% of the men and 11% of the women) considered themselves to be overweight, while about 6% (6% of the men and 5% of the women) thought they were underweight. There was another 1% who believed themselves to be very overweight. Although none of the male participants felt they were obese, in contrast, 2% of the women felt they fit into this category ($p = ns$).

Of the men with normal weight 90% characterized their weight cor-

rectly, while among the overweight men 80% guessed right. As for the women, 90% of those whose weight is normal estimated their weight correctly as did 90% of those overweight.

There were considerable differences between men and women regarding their body perception as 23% of the overweight men thought their weight was normal, while 83.3% of underweight women believed their weight to be normal (Table 2).

The results from the questionnaires showed that 49% of women and 23% of men who considered their weight to be normal had attempted to lose weight at least once during their lifetime. Of the study subjects who considered themselves to be overweight 87% of the women and 50% of the men had tried to reduce their weight.

How satisfied are men and women with their weight?

Over 80% of the subjects stated that they were satisfied or very satisfied with their weight. About 19% were somewhat dissatisfied or dissatisfied. The responses were sex-dependent ($p < 0.0001$). The answer "very satisfied" was given

by 30% of the men but only 13% of the women.

Regardless of actual body weight, only 1% of the men, but 73.7% of the women were dissatisfied with their stated weight. There were sex-specific differences concerning weight satisfaction in relation to actual weight (Table 2).

Both men and women who see themselves as being of normal weight are overwhelmingly either satisfied (65% and 73%, respectively) or very satisfied (34% and 15%, respectively). Differences show up in the categories underweight and overweight. Of the women and men who characterized themselves as overweight, fewer women were satisfied (13% vs 31%) and more were dissatisfied (27% vs 6%). The majority of those being overweight, both women and men, were somewhat dissatisfied (60% and 63%, respectively) (Table 2).

In response to their marked dissatisfaction with their weight, many of the respondents had made attempts to reduce their body weight. At the time of the survey 39% of the subjects had tried at least once to lose weight, with women trying far more frequently than men (52% vs 25%; $p < 0.0001$).

Characterization of body weight, by body weight expressed as BMI (in percent)			
	Male n = 112	Female n = 132	p
BMI: ≤ 17.9 kg/m²		16.7% underweight (n = 2) 83.3% normal weight (n = 10)	
BMI: 18.0–24.9 kg/m²	7.1% underweight (n = 7) 87.8% normal weight (n = 86) 5.1% overweight (n = 5)	4.6% underweight (n = 5) 89.8% normal weight (n = 97) 5.6% overweight (n = 6)	ns
BMI: 25.0–29.9 kg/m²	23.1% normal weight (n = 3) 76.9% overweight (n = 10)	90.0% overweight (n = 9) 10.0% obese (n = 1)	ns
BMI: ≥ 30.0 kg/m²	100.0% overweight (n = 1)	100.0% obese (n = 2)	ns
statistic data	p < 0.0001 Pearson's Chi-Square: 54.47	p < 0.0001 Pearson's Chi-Square: 63.02	
Satisfaction with body weight, by actual body weight (in percent)			
	Male n = 113	Female n = 131	p
BMI: ≤ 17.9 kg/m²		16.7% very satisfied (n = 2) 75.0% satisfied (n = 9) 8.3% somewhat dissatisfied (n = 1)	
BMI: 18.0–24.9 kg/m²	33.3% very satisfied (n = 33) 60.6% satisfied (n = 60) 5.1% somewhat dissatisfied (n = 5) 1.0% dissatisfied (n = 1)	14.0% very satisfied (n = 15) 67.3% satisfied (n = 72) 15.0% somewhat dissatisfied (n = 16) 3.7% dissatisfied (n = 4)	< 0.05
BMI: 25.0–29.9 kg/m²	7.7% very satisfied (n = 1) 38.5% satisfied (n = 5) 53.8% somewhat dissatisfied (n = 7)	10.0% satisfied (n = 1) 70.0% somewhat dissatisfied (n = 7) 20.0% dissatisfied (n = 2)	ns
BMI: ≥ 30.0 kg/m²	100.0% somewhat dissatisfied (n = 1)	50.0% somewhat dissatisfied (n = 1) 50.0% dissatisfied (n = 1)	ns
statistic data	p < 0.0001 Pearson's Chi-Square: 35.16	p < 0.0001 Pearson's Chi-Square: 37.02	

Table 2. Characterization of body weight and satisfaction with body weight.

Satisfaction with weight, by characterization of own weight (in percent)			
	Male n = 112	Female n = 130	p
Underweight	57.1% very satisfied (n = 4) 14.3% satisfied (n = 1) 28.6% somewhat dissatisfied (n = 2)	14.2% very satisfied (n = 1) 42.9% satisfied (n = 3) 42.9% somewhat dissatisfied (n = 3)	ns
Normal weight	33.7% very satisfied (n = 30) 65.2% satisfied (n = 58) 1.1% somewhat dissatisfied (n = 1)	15.2% very satisfied (n = 16) 73.3% satisfied (n = 77) 10.5% somewhat dissatisfied (n = 11) 1.0% dissatisfied (n = 1)	< 0.05
Overweight	31.3% satisfied (n = 5) 62.4% somewhat dissatisfied (n = 10) 6.3% dissatisfied (n = 1)	13.3% satisfied (n = 2) 60.0% somewhat dissatisfied (n = 9) 26.7% dissatisfied (n = 4)	ns
Obese		33.3% somewhat dissatisfied (n = 1) 66.7% dissatisfied (n = 2)	
statistic data	p < 0.0001 Pearson's Chi-Square: 63.83	p < 0.0001 Pearson's Chi-Square: 70.72	

Table 2 (continued).

Of those who reported having made attempts to reduce, 46% tried at least four times (35% of the men and 51% of the women; $p = ns$), about 13% made three attempts, close to 20% had made two, and 22% had made only a single attempt.

To break this down further, 22% of normal weight males and nearly 39% of those overweight had tried to reduce at least once. Whereas 16% of underweight women, 51% of normal weight, and 90% of overweight women had tried at least once to lose weight. All the obese subjects, women and men, had attempted to reduce at least once.

Discussion

The purpose of this study was to determine sex-specific differences in how men and women characterize their body weight and how satisfied they are with their weight. The results show that men and women see their bodies differently

and that women seem to be more strongly influenced by existing ideals of slenderness than men are⁴. It has to be stated that the result of those studied cannot be generalized due to their age, educational level, and the fact of their specialized studies.

Most of the men and women whose weight is normal also characterized their weight as normal. Overweight and obese women more frequently judged their weight correctly than did men. Of the underweight women, as many as 8% thought their weight was normal. Thus, it appears that women feel that they are heavier than they actually are and wish to be thinner. In comparison to men normal weight women are significantly more dissatisfied with their weight. In this regard, our survey confirms the results of previous studies⁵⁻⁷. Furthermore women have been shown to have a more negative attitude toward their bodies than do men⁸.

The desire to be thin is an important factor in women's attitudes

toward their bodies⁷ and thus in their self-image. This does not seem to be the case for men. A study by Rand et al.⁶ found that men find a greater variety of body shapes to be socially acceptable than do women.

Consequently, women more frequently than men attempt to lose weight (see also Page et al.⁹). A study by Ortega et al.¹⁰ showed that women wish to lose weight despite their weight being normal or underweight.

Generally speaking, strong deviations from the social ideal are accompanied by a high degree of dissatisfaction, that is, social expectations influence bodily self-perception. This is particularly true for women⁷.

Dissatisfaction with one's weight, as well as overemphasis on weight and slenderness, are seen as risk factors for eating disorders¹. Hence it is imperative that these issues regarding body image perception are addressed and solutions are proposed.

Zusammenfassung

Körpergewicht und Einstellung zum Körpergewicht bei Frauen und Männern

Ziel der vorliegenden Untersuchung war es, die Zusammenhänge zwischen Körpergewicht, Einschätzung des Körpergewichtes und die Zufriedenheit mit dem Körpergewicht bei 246 MedizinstudentInnen des 3. Studienabschnittes (klinischer Studienabschnitt) der Universität Wien aufzuzeigen. Die Ergebnisse deuten darauf hin, dass viele junge Frauen und Männer ihr Körpergewicht nicht in Übereinstimmung zur gültigen Definition des BMI einschätzen. Frauen scheinen sich bei ihrer Selbsteinschätzung stärker auf das gesellschaftliche Schönheitsideal zu stützen als Männer. Frauen sind auch häufiger unzufrieden mit ihrem Körpergewicht, sie schätzen sich wesentlich dicker ein als sie tatsächlich sind und sie versuchen auch häufiger das Körpergewicht zu reduzieren als Männer. Unzufriedenheit mit dem eigenen Körpergewicht, Überbetonung von Körpergewicht und Schlankheit werden jedoch als Risikofaktoren für die Entstehung von Essstörungen angesehen, von denen Frauen signifikant häufiger betroffen sind als Männer.

Résumé

Poids corporel objectif et évaluation subjective du surpoids par les deux sexes

La présente étude, basée sur un échantillon de 246 étudiantes et étudiants en médecine (3e cycle – enseignement clinique) de l'Université de Vienne/Autriche, a analysé la relation entre le poids corporel objectif, l'évaluation subjective du surpoids et le degré de satisfaction avec le poids corporel. Les résultats obtenus montrent que chez un grand nombre de jeunes adultes des deux sexes, l'auto-évaluation du poids corporel ne coïncide pas avec la classification de l'obésité établie en fonction du B.M.I. (Body Mass Index). Dans l'image qu'elles se font d'elles-mêmes, les femmes semblent se référer plus nettement que les hommes aux canons de beauté de la société dans laquelle elles vivent. Elles sont aussi plus fréquemment mécontentes de leur poids corporel, elles tendent à surestimer leur surpoids et elles entreprennent plus souvent que les hommes des programmes de réduction de poids. Un sentiment d'insatisfaction à l'égard de son poids corporel et un attachement trop intense à un idéal de minceur sont cependant considérés comme des facteurs de risque pouvant déclencher des troubles du comportement alimentaire qui constituent une pathologie frappant les femmes nettement plus souvent que les hommes.

References

1 Smith DE, Thompson JK, Raczyński JM, Hilner JE. Body image among men and women in a biracial cohort: the CARDIA-Study. *Int J Eat Disord* 1999; 25: 71–82.

2 Selberg O, Müller MJ. Ernährungsmedizinische Untersuchungen. In: Müller M.J., ed., Ernährungsmedizinische Praxis, Methoden, Prävention, Behandlung. New York; Berlin: Springer, 1998: 52–4.

3 Garrow JS, Webster J. Quetelet's Index as a measure for fatness. *Int J*

Obes Relat Metab Disord 1988; 9: 147–53.

- 4 Deutsche Gesellschaft für Ernährung. Ernährungsbericht. Frankfurt a. M.: DGE, 1992.
- 5 Haberman S, Luffey, D. Weighing in college students' diet and exercise behaviors. *J Am Coll Health* 1998; 46: 189–91.
- 6 Rand CSW, Resnick JL, Seldman, RS. Assessment of socially acceptable body sizes by university students. *Obes Res* 1997; 5: 425–9.
- 7 Monteath SA, McCabe MP. The influence of societal factors on female body image. *J Soc Psychol* 1997; 137: 708–27.
- 8 Cullari S, Rohrer JM, Bahm, C. Body image perceptions across sex and age groups. *Percept Mot Skills* 1998: 839–46.
- 9 Page A, Fox KR. Is body composition important in young people's weight management decision – making? *Int J Obes Relat Metab Disord* 1998; 22: 786–90.
- 10 Ortega RM, Requejo AM, Quintas E, Sanchez-Quiles B, Lopez-Sobaler AM, Andres P. Estimated energy balance in female university students: differences with respect to body mass index and concern about body weight. *Int J Obes Relat Metab Disord* 1996; 20: 1127–9.

Address for correspondence

Dr. rer. nat. Ingrid Kiefer
 Institut für Sozialmedizin
 der Universität Wien
 Alser Strasse 21/12
 A-1080 Wien
 Tel.: ++43 1 408 56 81
 Fax: ++43 1 408 88 33
 Ingrid.Kiefer@univie.ac.at