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ORIGINAL

Weight bias among dietitians: does the weight status of the patients change the dietary approaches?

Viés de peso entre os nutricionistas: o status do peso dos pacientes altera as abordagens dietéticas?

İrem KAYA CEBIOĞLU[1] 0000-0002-0135-2011
Gözde DUMLU BILGIN[1] 0000-0001-6385-0190
Binnur OKAN BAKIR[1] 0000-0002-0448-4300
Açelya GÜL KOYUNCU[1] 0000-0003-1776-1829

ABSTRACT

Objective

Since obesity is a multifactorial disease, some health professionals may esteem that weight control is a matter of personal willpower and stigmatize individuals. These weight-based attitudes seem quite common even among dietitians. This study aimed to determine whether the level of weight bias affects the dietary approaches of the dietitians.

Methods

Two hypothetical cases with obese and normal weight vignettes were created to be evaluated, and the explicit weight bias was assessed by the fat phobia scale among 99 dietitians via an online questionnaire.

Results

The majority of the dietitians demonstrated mild or moderate levels of weight bias (59.6% and 32.3%, respectively). The obese vignette had the highest agreement for nearly all adjectives and was perceived as having poorer diet quality, general health status, and insufficient physical activity level.

[1] Yeditepe University, Faculty of Health Sciences, Department of Nutrition and Dietetics. İnönü Mah, Kayışdağı Cd.: 326A, 34755 Istanbul, Turkey Correspondence to: I KAYA CEBIOĞLU. E-mail: <irem.cebioglu@yeditepe.edu.tr>.

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Conclusion

Overall, as weight bias is a concerning issue among most dietitians, necessary steps are required for the reduction of prejudice and thus protect the patients from stigmatizing attitudes.

Keywords: Nutritionists. Obesity. Stereotyping. Weight prejudice.

RESUMO

Objetivo

Visto que a obesidade é uma doença multifatorial, alguns profissionais de saúde podem defender que o controle de peso é uma questão de força de vontade pessoal e estigmatizam os indivíduos. Essas atitudes baseadas no peso parecem bastante comuns mesmo entre os nutricionistas. Este estudo teve como objetivo determinar se o nível de viés de peso afeta as abordagens dietéticas dos nutricionistas.

Métodos

Dois casos hipotéticos com vinhetas de obesidade e peso normal foram criados para serem avaliados e o viés de peso explícito foi avaliado pela escala de fobia de gordura Fat Phobia Scale entre 99 nutricionistas por meio de um questionário online.

Resultados

A maioria dos nutricionistas demonstrou níveis leves ou moderados de viés de peso (59,6% e 32,3%, respectivamente). A vinheta de obesidade teve a maior concordância pela maioria e foi percebida como tendo a pior qualidade da dieta, o pior estado geral de saúde, e níveis de atividade física insuficientes.

Conclusão

Em suma, sendo esta uma questão que preocupa a maior parte dos nutricionistas e um problema que continua a afetar tantas pessoas, é urgente a criação de medidas que permitam diminuir o preconceito e proteger os pacientes de atitudes estigmatizantes.

Palavras-chave: *Nutricionistas. Obesidade. Estereotipagem. Preconceito de Peso.*

INTRODUCTION

Obesity prevalence increased approximately 7 times among adults, and 10 times among children and adolescents, and 1/5 of individuals will expect to be obese by 2030 [1]. It is a disease that might be induced by several factors, including environmental, sociocultural, physiological, medical, behavioral, genetic, and epigenetic factors besides excessive energy consumption [2]. Despite all these contributors, those who focus on only the behavioral causes of obesity may perceive that weight control is a matter of personal willpower. It is widely assumed that individuals with obesity are unable to control themselves, "do not eat wisely" or "do not want to be healthier" and even stigmatized by negative perceptions including being lazy, sloppy, unhappy, unintelligent, less competent, stupid, ugly, unsuccessful, unmotivated or having a lack of self-discipline [3-8].

The term weight bias indicates negative attitudes, stereotypes, beliefs, assumptions, and judgments about weight towards individuals with overweight and obesity [3]. The weight stigma is the social sign of weight bias experienced by a victim, and weight discrimination is the obvious behavioral manifestation of it [3,9]. It has been suggested that in the United States of America, 20% of those with overweight or obesity may experience weight stigma multiple times [8]. Weight discrimination is the most common discrimination, which is reported to be experienced by approximately 40% of the adults with a Body Mass Index (BMI) above 35 kg/m^2, and it is reported relatively high as racial discrimination among women [10,11]. As a consequence of this discrimination, they become more vulnerable to health risks, as they may suffer from

other risk factors including social anxiety, depression, low self-esteem, poor body image, maladaptive eating patterns, the persistence of weight gain and as a result avoidance of preventive health behaviors that may worsen poor health status and decrease quality of life [7,11-14].

As the frequency and intensity of weight bias increase, it has become a major concern for public health [6,9,10]. Studies indicated that weight-based stigmatization may occur in multiple areas of daily life and particularly in the inner circle of the individuals, and it also seems quite common among health care professionals, including physicians, nurses, medical students, psychologists, and even dietitians [15-18]. As dietitians are the only degree-qualified health professionals that assess, diagnose and treat nutrition-related problems, their weight bias attitudes may have devastating consequences [7,13,19-21].

It has been indicated that 37% of patients with obesity experienced weight bias by dietitians and nutritionists [6]. Furthermore, they perceived individuals with obesity as greedy, unattractive, ungainly, weak in willpower, and lazy and they evaluated patients with a higher BMI negatively compared to those in the normal range [22,23].

Thus, we firstly aimed to assess fat phobia by using the 14-item Fat Phobia Scale (FPS) which measures explicit weight bias that represents conscious bias [24]. The scale was developed in 1993, revised and shortened in 2001 (α=0.87), and validated in Turkish in 2005 (α=0.82) [25-27]. The total score is calculated as the average of the 14 items. While an FPS score of ≤2.5 indicates neutral/positive attitudes, the scores >2.5 were classified into three groups; low (2.51-3.45), moderate (3.46-4.39), and high (≥4.4) fat phobia levels [24,26,28,29].

Together with the fat phobia level, it was aimed to reveal its reflection on the treatment protocols of dietitians, which has not yet been performed previously to our knowledge and to determine whether the weight bias of dietitians affects their evaluations of patients.

METHODS

In this cross-sectional descriptive study, data were collected via an online questionnaire which was sent to all dietitians working in private hospital settings in Turkey and having an available e-mail address, after the ethical approval, participants were provided with written informed consent. Of those 271 dietitians, 154 accepted the e-mail, and 99 completed the questionnaire in full. According to the posthoc power analysis, the power of the sample was 89.7% with a 67.2% effect size and α=0.05.

Similar to the design of other studies [4,20,23,24,30], two hypothetical cases with vignettes were created for this study. In addition to all quantitative properties, the questions were identical with the same order, but vignettes were differentiated only in their weight and BMI. The Obese Vignette (OV) and the Normal Weight Vignette (NWV) questionnaires were sent randomly to the dietitians.

The first part of the questionnaire consisted of occupational and anthropometric questions, the second part included the hypothetical case with the photograph of the vignette and related questions about treatment and dietetic practices. Similar to the previous studies [24] lactose intolerance in which the dietetic management is the same in all BMI ranges regardless of body weight, was chosen as the consulting reason of the patient [31]. Dietitians were asked to express their recommendations by scoring 5-point Likert questions; "strongly recommend to reduce, recommend to reduce, neutral, recommend to increase, strongly recommend to increase" for the weight status, macronutrient and fiber consumption, portion sizes, physical activity status, and "very poor, poor, acceptable, good, very good" for the evaluation of the health and diet status of the vignettes. Lastly, dietitians completed the 14-item fat phobia Scale.

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All statistical tests were conducted by using the SPSS®IBM® software, with a 95% confidence interval, and the results were considered statistically significant for $p<0.05$. Descriptive variables were indicated as mean and nominal variables were given using frequency and percentages (%). The correlations were indicated by Spearman's rho (r_s).

RESULTS

Participants had a mean age of 27.7±4.26 years, and the majority of them were women (94.9%). The mean duration of experience in the field of the dietitians was 4.3±4.3 years (ranging between 1 to 27), and their mean BMI was 20.3±1.9 kg/m^2 (ranging between 17 to 26.3 kg/m^2), and predominantly they were within the normal BMI range (84.4%). Moreover, the mean BMI, age, and years of professional experience of the dietitians were not significantly correlated with the mean FPS scores ($p>0.05$) (Table 1).

Table 1 – The descriptive characteristics, the scores, and the classification of the FPS of the dietitians. Turkey, 2020.

Variables	Overall (n=99)		OV (n=46)		NWV (n=53)		*p*
	Mean±SD		Mean±SD		Mean±SD		
Age	27.7±4.3		27.8±4.5		27.6±4		0.840
Professional experience years	4.3±4.3		4.3±4.3		4.2±4.3		0.387
BMI (kg/m²)	20.3±1.9		20.4±1.9		20.1±1.7		0.718
FPS score	3.3±0.5		3.5±0.6		3.1±0.4		0.001
Fat phobia Level	n	%	n	%	n	%	
Neutral	5	5.1	2	4.3	3	5.7	0.007
Mild	59	56.6	20	43.5	39	73.6	
Moderate	32	32.3	21	45.7	11	20.8	
High	3	3	3	6.5	–	–	

Note: NWV: Normal Weight Vignette, OV: Obese Vignette, SD: Standard Deviation.

The dietitians who encountered the OV showed a significantly higher level of weight bias ($p<0.01$), while the mean fat phobia score of all dietitians was 3.3±0.5, which was considered as a low-fat phobic attitude. According to the classification of the FPS scores, the majority of the group demonstrated mild or moderate levels of fat phobic attitude (59.6% and 32.3%, respectively); only 3 participants (3.0%) showed high levels, whereas 5.1% of them were neutral/positive. All of those who demonstrated high levels of fat phobic attitude displayed the OV; the NWV predominantly indicated mild fat phobia (73.6%) ($p<0.05$).

As shown in Figure 1, OV had the highest agreement for all adjectives except "low self-esteem" and "weak". Particularly, dietitians showed the highest percentages of agreement that the OV "likes food (78.2%)", is "shapeless (71.7%)","overeats (67.4%)", is "inactive (69.6%)", and "lazy (60.3%)".

Dietitians' emphasis on reducing body weight for the OV was statistically higher ($p<0.01$). Regarding macronutrient consumption, dietitians suggested OV should reduce their carbohydrate ($p<0.05$) and fat intakes ($p<0.01$). However, they recommended increasing their protein intake ($p<0.001$). Moreover, dietitians rated similar scores in both cases regarding their fiber and total energy intakes ($p>0.05$). Even dietitians suggested that both vignettes should minimize their portion sizes; the difference was significant ($p<0.01$). Furthermore, the OV was rated to have poorer exercise status ($p<0.01$) (Table 2).

Regarding diet quality and general health status, the OV was rated to have poorer status ($p<0.01$). Although dietitians evaluated the Physical Activity Levels (PALs) of both, vignettes were slightly close to each other; the OV was rated as more insufficient ($p<0.01$).

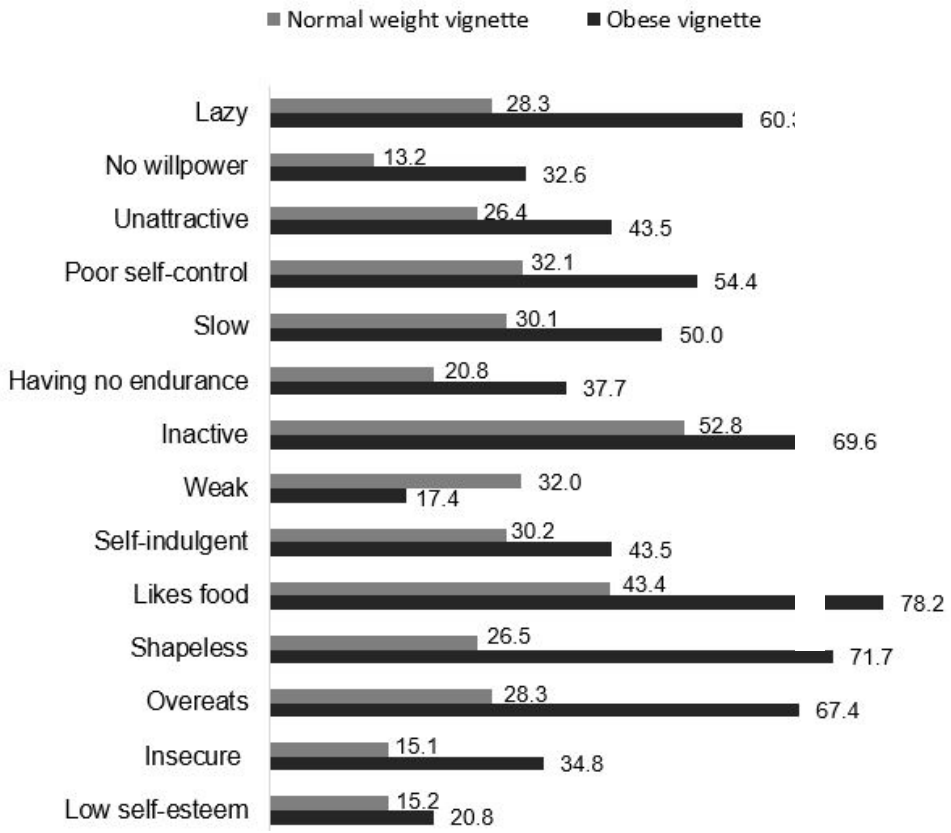

Figure 1 – The percentages of agreement of the dietitians with negative adjectives. Turkey, 2020.

Table 2 – The recommendations and evaluations of dietitians for the hypothetical cases. Turkey, 2020.

Vignettes	Overall	OV	NWV	*p*
	Mean±SD	Mean±SD	Mean±SD	
Weight status	4.1±0.8	4.8±0.4	3.5±0.6	0.000
Carbohydrate intake	3.8±0.6	4±0.6	3.7±0.6	0.008
Fat intake	3.3±0.8	3.5±0.8	3.1±0.7	0.000
Protein intake	3.1±0.9	2.7±0.9	3.4±0.7	0.000
Fiber intake	4±0.6	4.2±0.6	3.9±0.6	0.051
Total daily calorie	3.4±0.8	3.5±0.7	3.3±0.7	0.158
Portion size	3.7±0.7	4±0.7	3.5±0.6	0.000
Exercise status	4.3±0.6	4.5±0.5	4.1±0.6	0.009
Diet status	2.9±0.8	3.3±0.8	2.7±0.7	0.000
Health status	2.6±0.8	2.9±0.9	2.4±0.7	0.000
PAL	4.2±0.8	4.5±0.8	4±0.7	0.000

Note: NWV: Normal Weight Vignette, OV: Obese Vignette, SD: Standard Deviation.

The level of the weight bias was positively correlated with the recommendation for reducing weight, carbohydrate, fat intake, and portion sizes, but for increasing protein intake and exercise status ($p<0.05$). As the stigmatizing attitudes of the dietitians increased, negative evaluations about the diet and health status also increased ($p<0.01$). It was observed that dietitians rated lower scores for PALs of the vignettes, as their fat phobic attitude increased ($p<0.01$) (Table 3).

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Table 3 – Correlations between the FPS scores and the evaluations of the vignettes. Turkey, 2020.

Variables		Weight status	CHO intake	Fat intake	Protein intake	Fiber intake	Portion sizes	Energy intake	Exercise status	Diet quality	Health status	PAL
FPS	r_s	0.350	0.298	0.229	-0.211	-0.048	0.316	0.159	0.296	0.301	0.336	0.432
	p	0.000	0.003	0.023	0.036	0.637	0.001	0.116	0.003	0.002	0.001	0.000

Note: CHO: Carbohydrate, FPS: Fat Phobia Scale, PAL: Physical Activity Levels, r_s: Spearman's rho.

DISCUSSION

This study demonstrated that Turkish dietitians working at private hospitals had mild levels of weight bias, which was consistent with previous findings that have been reported among other dietitian populations [23,24]. However, some comparative studies conducted on nutrition and dietetic students and dietitians have identified slightly higher mean FPS scores, indicating moderate levels of weight bias [15,20,32,33]; and a study reported that dietitians tended to be less tolerant of obesity than those among the general population [19]. In addition to these findings, more studies also reported the stigmatizing attitudes of other health professionals or students [21,23,34]. However, the comparison of the findings of those studies is not applicable, as they used different types of scales that measure implicit or explicit weight bias. A review indicated that the measures of implicit weight bias more commonly report weight bias than explicit measures [13]. Since the FPS is an explicit measure, a higher weight bias could be determined if an implicit measure was used in this study [35]. Moreover, the weight-based stigmatizing attitudes among the general Turkish population were not established, and the levels of health professionals were not comparable.

Along with the FPS score, the biased attitudes of the dietitians about OV were also investigated by their stereotypical agreements. In line with the literature, the dietitians also thought that OV overeats and likes food [15,20]. These agreements on negative adjectives indicated that dietitians perceived that the causes of obesity might be controllable by willpower and preference. According to the attribution theory, attributions of controllability are considered to be an important cause of weight-based prejudice [36] and it supposes that the belief that weight results from personal control and willpower increases, so does the negative prejudice towards individuals living with obesity [12,21]. Health care professionals are expected to focus on not only controllable causes but also all manner of causes of obesity (*i.e.* genetically, biological, environmental, and sociocultural) and to demonstrate the lowest weight bias attitudes than the general population [20,29]. Although both hypothetical cases had the same levels of biochemical parameters that were in healthy ranges, the OV was attributed to higher negative adjectives.

Our results indicated similarity with current literature regarding that dietitians make an inference automatically while counseling patients with obesity, and more tend to suggest healthy lifestyle changes, including dietary adaptations and increasing physical activity [15,24,30]. Even if the dietitian evaluates how much the patient would benefit from losing weight, which promotes healthy status, this unsolicited advice may be perceived by the patient as a kind of discrimination [24]. Stigmatizing attitudes towards obesity may be considered a barrier to weight management which results in avoidance of health screenings, cancellation of appointments, demonstrating maladaptive eating behaviors, and experiencing poorer outcomes by the patients and also reveal the weight counseling behaviors of the health care providers, despite the best intentions of them to provide high-quality care [37,29,30,38].

Certain words in weight-based terminology used to describe weight in adults may be perceived as stigmatizing. Thus, particularly health care providers should prefer more neutral language and this should be emphasized to the students during undergraduate education by updating the curricula to reduce weight bias among health professionals [20].

Finally, since the weight bias among Turkish dietitians is a concern as in other populations, necessary steps are required to the reduction of prejudice and thus prevention of the patients from stigmatizing attitudes. Within this scope, the awareness of the dietitians should be increased by implementing the approaches to reduce weight bias in the guidelines. It is still not possible to assume from these results that health education promotes stigmatizing attitudes or that the current education curriculum warrants neutral or positive language and attitudes [15,21]. Dietitians should be educated on the major aspects of weight bias and how it may affect the patients' compliance with treatment.

Although this was the first study investigating the weight bias among Turkish dietitians with adequate sample size, only those working in private hospitals and with e-mail available participated since the majority of dietitians are employed in private hospitals in Turkey [39]. Also, due to the low number of men dietitians in the profession, the participation of men dietitians was low in this study, and the fat phobia status of males was not adequately represented [40]. This type of cross-sectional study, which is designed based on a hypothetical case in a virtual environment, cannot reflect the actual dietitian-patient interactions. Additionally, the FPS may not adequately reflect the actual bias as it is a self-report and an explicit measure of weight bias, and it was also responded consciously, but bias occurs unconsciously [24]. Further studies are recommended to investigate weight bias regarding sex in an evenly distributed study design with a control group.

CONCLUSION

Turkish dietitians pose mild negative attitudes toward the patient with obesity who had identical characteristics to NWV. These attitudes were also reflected in their suggestions and evaluations as they demonstrated negative attitudes during the counseling. Interventions to reduce weight bias among Turkish dietitians should be one of the major concerns to the success of weight-based treatments. To increase this awareness, updating the concept of the national guidelines is required and the use of neutral/positive language should be emphasized by health professionals from the very beginning of their education life. It might be beneficial to investigate the change of weight bias not only during nutrition and dietetic education but also after the professional experience with longitudinal studies to distinguish at which stages education/experience-specific attitudes and to monitor them in order to make appropriate interventions for these stages.

CONTRIBUTORS

All authors equally contributed to the design of the study. I KAYA CEBIOĞLU, G DUMLU BILGIN and B OKAN BAKIR were responsible for the collected data. I KAYA CEBIOĞLU conducted the statistical analysis. I KAYA CEBIOĞLU and G DUMLU BILGIN were responsible for the interpreted results. All authors equally contributed to the writing process of the manuscript.

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