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Weight stigma of nutrition and dietetics students towards people with obesity

El estigma de peso de los estudiantes de nutrición y dietética hacia las personas con obesidad

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ABSTRACT

Weight bias is present in different scenarios, one of them is the area of health on the part of its professionals. For this reason, the aim of this descriptive, observational and cross-sectional study was to determine whether weight bias towards people with obesity was observed among students of the Nutrition and Dietetics career of the Catholic University of Temuco and to provide corrective measures to prevent the bias. The participants of this study were 94 nutrition and dietetics undergraduate students from different years of study. Students answered the GAMS 27-Obesity. According to the results obtained in this study, future nutritionists have a predisposition to weight bias towards people with obesity, this can have a negative impact on the care of these patients. Implementing corrective measures, during professional training, can prevent weight bias towards people with obesity by future professionals, thus improving their quality of care and positively impacting the health of these people.

Keywords: Nutrition students; Obesity; Weight Stigma.

RESUMEN

El sesgo de peso está presente en diferentes escenarios, uno de ellos es el área de la salud por parte de sus profesionales. Por tal motivo el objetivo de este estudio observacional, descriptivo y transversal fue determinar si existe presencia de sesgo de peso hacia las personas con obesidad, por parte de estudiantes de la carrera de Nutrición y Dietética de la Universidad

Católica de Temuco y brindar medidas correctivas para prevenir este sesgo. Los participantes de este estudio fueron 94 estudiantes de pregrado en nutrición y dietética, de diferentes generaciones a quienes se les aplicó el GAMS 27-Obesidad. Según los resultados obtenidos en este estudio, los futuros nutricionistas tienen una predisposición al sesgo de peso hacia las personas con obesidad, esto puede repercutir negativamente en el cuidado de estos pacientes. La implementación de medidas correctivas, durante la formación profesional, puede evitar el sesgo de peso hacia las personas con obesidad por parte de los futuros profesionales, mejorando así su calidad asistencial e impactando positivamente en la salud de estas personas.

Palabras clave: Estigma de peso; Estudiantes de nutrición; Obesidad.

INTRODUCTION

Obesity is a chronic disease of multifactorial origin associated with potentially serious health complications. Globally, at least 2.8 million people die each year from obesity or overweight (WHO, 2017). Currently, obesity is considered to be one of the main causes of health-related and social problems of the 21st century^{1,2}. Obesity has physical and psychological health consequences throughout the life cycle, it is directly related to chronic non-communicable diseases (NCDs) and contributes to the appearance of psychological disorders, since people with obesity tend to anticipate rejection due to weight prejudice attitudes, undermining their self-esteem, increasing social isolation and promoting negative emotions about themselves^{3,4,5}. It was determined that identifying with a negative stereotype can accentuate the behavior associated with it, increasing the consumption of snacks, high prevalence of eating disorders and emotional distress⁶. These weight bias experiences occur to a large extent in the home, leading to a substantial weakening of cognitive functioning associated with poorer performance in specific domains^{6,7,8,9,10}. In addition to the home, weight bias is present in different settings including among professionals of the health area. It has been determined that these professionals are predisposed to act on the basis of weight prejudices toward people with obesity, which can negatively impact medical care and affect therapeutic prognosis. This attitude increases anxiety in patients with obesity, limiting their ability to ask for help^{11,12,13}.

The aim of this study was to determine whether weight bias toward people with obesity is present in undergraduate students of the Nutrition and Dietetics career.

MATERIAL AND METHODS

Selection of the sample of strong prejudice attitudes

This descriptive, observational and cross-sectional study involved 94 Nutrition and Dietetics undergraduate students belonging to the Catholic University of Temuco, Chile. Regular students of the Nutrition and Dietetics major were invited to participate; students who had withdrawn from the major or suspended attendance for a year or more could not participate. Students were contacted and made aware of the purpose of this project,

the voluntary nature of participation and the anonymous and confidential nature of the information provided by them; participants completed an informed consent. This study was approved by the Research Ethic Committee of Universidad Católica de Temuco.

Evaluation of attitudes of weight prejudice

The GAMS 27- Obesity Prejudice Scale (OPS) developed by Ercan et al.^{14,15}, was used for the evaluation of negative attitudes regarding excess weight. The screening proved to be highly reliable, exhibiting a Cronbach α coefficient of 0.85. The 27 questions on the OPS have a 5-point Likert scale, with the options "strongly agree", "agree", "undecided", "disagree" and "strongly disagree". Scores range from 27 to 135, where higher scores represent greater negative attitudes toward obesity. A score between 27 and 68 indicates no prejudice, between 68.01 and 84.99 indicates a predisposition to present prejudice and a score of between 85 and 135 indicates a weight bias.

Analysis

A non-metric multidimensional scaling (nMDS) analysis was performed to visualize the pattern of responses observed for the different generations based on the set of questions studied calculated from the Bray Curtis similarity matrix, the software PRIMER v6 (PRIMER-E Ltd.) were used for nMDS data analysis.

RESULTS

Characteristics of the sample

Ninety-four students belonging to different generations of the Nutrition and Dietetics major of the Catholic University of Temuco were evaluated. The percentage of students corresponding to each generation was 2.1% (2013), 7.4% (2014), 12.8% (2015), 14.9% (2016), 17.0% (2017), 16% (2018), 20.2% (2019) and 9.6% (2020) (Figure 1).

Evaluation and comparison of weight bias attitudes in the participating generations

The scores collected through the GAMS 27-OPS showed that the weight bias score of the total sample was 68.01-84.99, indicating a predisposition to weight bias. In terms of results by generation, we found that

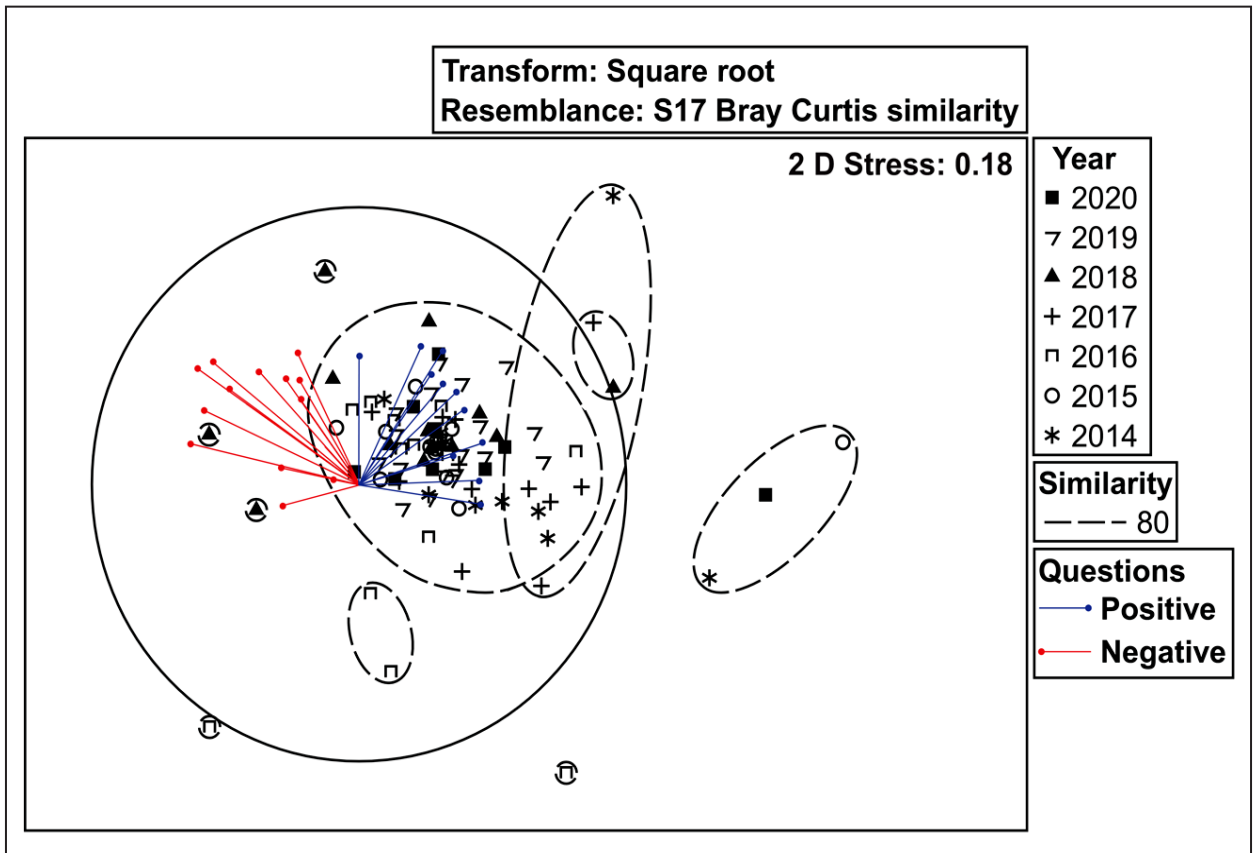


Figure 1: Non-metric multidimensional scaling (nMDS) for observed bias in the questions listed in table 1 based on Bray-Curtis similarity. The symbols indicate the career year of the respondents (2014 to 2020). The vectors indicate the correlation to the questions with positive bias (blue) and negative bias (red).

50% of the 2013 generation presented a score of ≤ 68 (no prejudice) and the remaining 50% had values between 68.01 and 84.99 indicating a predisposition to prejudice. On the other hand, the 2014 generation presented a marked tendency towards prejudice, where 57.1% of the students of this generation obtained a score ≥ 85 . The 2015 generation presented a marked predisposition to prejudice, with 75% of participants having a score between 68.01 and 84.99. This predisposition to present prejudice was repeated in the other generations: 57.1% of the participants of the 2016 generation, 87.5% of the 2017 generation, 73.3% of the 2018 generation and 84.2% of the 2019 generation were in this score range.

As shown in table 1, the response with the highest percentage in the vast majority of items was undecided. In items 1 and 15, 41.5% and 37.2% respectively of the total sample surveyed strongly disagreed, whereas 66.0% of the total participants strongly agreed with item 6. In turn, items 12, 14, 18, 19, 21, 23 and 26 showed

a higher percentage of participants in agreement with the statements made.

The results did not show significant differences in weight bias among the different generations. This is reflected in figure 1, where it is evident that the sample of this study is uniform. In fact, in the non-metric multidimensional scaling (nMDS, Figure 1) a high similarity was evidenced in the response pattern with a stress value of 0.18 (> 0.2 : good representation in reduced dimensions). This pattern of student responses presented between 80% similarity. According to figure 1, there was a relationship between the different career years studied indicated by a similarity of 80% and a positive correlation in the pattern of responses for the questions of a positive bias character. This correlation in the response pattern indicated that under the questions asked in this study, students, regardless of the year of study, tended to associate a positive prejudice against persons with obesity.

Table 1. Responses to statements indicating weight bias among nutrition students.

Statements	Absolutely agree		Agree		Undecided		Disagree		Absolutely disagree	
	n	%	n	%	n	%	n	%	n	%
Q1: People with obesity are selfish	4	4.3	4	4.3	18	19.1	29	30.0	39	41.5
Q2: People with obesity have pretty face	17	18.1	29	30.9	39	41.5	4	4.3	5	5.3
Q3: People with obesity are not beautiful	2	2.1	11	11.7	34	36.2	24	25.5	23	24.5
Q4: People with obesity are joyful	14	14.9	25	26.6	42	44.7	7	7.4	6	6.4
Q5: People with obesity are undecided	3	3.2	20	21.3	42	44.7	16	17.0	13	13.8
Q6: People with obesity are prone to getting sick	62	66.0	25	26.6	3	3.2	2	2.1	2	2.1
Q7: People with obesity are happy	9	9.6	20	21.3	50	53.2	10	10.6	5	5.3
Q8: People with obesity don't like to eat in public	3	3.2	10	10.6	36	38.3	29	30.9	16	17.0
Q9: People with obesity are shy	3	3.2	16	17.0	44	46.8	22	23.4	9	9.6
Q10: People with obesity are friendly	6	6.4	32	34.0	45	47.9	7	7.4	4	4.3
Q11: People with obesity are attractive	6	6.4	26	27.7	48	51.1	11	11.7	3	3.2
Q12: People with obesity have limited mobility	18	19.1	46	48.9	17	18.1	8	8.5	5	5.3
Q13: People with obesity smell like sweat	3	3.2	13	13.8	32	34.0	30	31.9	16	17.0
Q14: People with obesity are funny	18	19.1	40	42.6	29	30.9	2	2.1	5	5.3
Q15: People with obesity look healthy	3	3.2	4	4.3	18	19.1	34	36.2	35	37.2
Q16: People with obesity don't like to move	5	5.3	33	35.1	37	39.4	10	10.6	9	9.6
Q17: People with obesity have self-confidence	7	7.4	12	12.8	44	46.8	25	26.6	6	6.4
Q18: People with obesity have poor quality of life	16	17.0	41	43.6	22	23.4	11	11.7	4	4.3
Q19: People with obesity look older than they are	14	14.9	34	36.2	24	25.5	16	17.0	6	6.4
Q20: People with obesity have strong social relationships	6	6.4	24	25.5	47	50.0	14	14.9	3	3.2
Q21: People with obesity tire quickly	28	29.8	49	52.1	11	11.7	4	4.3	2	2.1
Q22: People with obesity are good listeners	9	9.6	26	27.7	52	55.3	4	4.3	3	3.2
Q23: People with obesity are slow in their movements	16	17.0	43	45.7	22	23.4	8	8.5	5	5.3
Q24: People with obesity are lazy	3	3.2	17	18.1	37	39.4	19	20.2	18	19.1
Q25: People with obesity are good at cooking	5	5.3	18	19.1	47	50.0	17	18.1	7	7.4
Q26: People with obesity are not preferred in love relationships for their appearance	9	9.6	28	29.8	26	27.7	15	16.0	16	17.0
Q27: People with obesity are amicable	17	18.1	29	30.9	42	44.7	2	2.1	4	4.3
Positive question	117	38.2	285	42.2	503	55.4	137	36.1	86	32.0
Negative question	189	61.8	390	57.8	405	44.6	243	63.9	183	68.0

DISCUSSION

In this study, different generations of students belonging to the Nutrition and Dietetics major at the Catholic University of Temuco were analyzed. Using the GAMS 27- OPS, we

observed a predisposition to weight bias (Table 1). This result is consistent with other findings reported among university students from different health areas of study that demonstrate a weight bias towards people with obesity^{11,16}.

Although there were no significant differences between generations (Figure 1), a large percentage (66%) of the total students who participated in this study indicated that they strongly agree with the statement that individuals with obesity are prone to disease, and 37.2% of the total sample strongly disagree with the statement that individuals with obesity look healthy. These results are worrying, because the association between obesity and health reinforces the prejudices displayed by healthcare personnel¹⁷, where the perception of greater weight is significantly associated with a decline in the physical and mental health of these patients¹⁸. This is due to the belief in the causal attribution of obesity, in which excess weight is exclusively related to a positive energy balance, through a high intake of unhealthy foods and a precarious activity factor¹⁹, therefore, it is assumed that the responsibility belongs to the person with obesity, due to their lack of willpower, as well as their insatiable level of gluttony and laziness²⁰. In our study, 48.9%, 52.1% and 45.7% of participants agreed with the statements that describe people with obesity as individuals who have limited mobility, fatigue quickly and are slow in their movements, respectively. When comparing these results with those of the Fat Phobia Scale (FPS) survey applied to populations in the United States and Germany, an inclination towards a negative stereotype of people with obesity is evident, perceiving them as slow in their movements, inactive and weak²¹. All these beliefs and prejudices about obesity are what enhance the weight bias in health providers and those that promote a reductionist and incomplete understanding of obesity and its approach²².

On the other hand, the results obtained showed that 29.8% of participants agreed with the statement that the physical appearance of people with obesity contributes to their not being preferred in romantic relationships. The results obtained in the FPS indicate a tendency to consider these people unattractive²¹, which is consistent with the findings of the weight-IAT, where participants tend to respond more quickly when the categories displayed are positive adjectives towards "thin" and negative towards "people with obesity"²³. Regardless of the generation to which the Nutrition and Dietetics students belonged there were no significant differences regarding the presence of weight bias, since it is a feature shared by all. In nutrition students and professionals, it has been documented that the levels of weight bias are not lower than those of the general population and, compared with other health providers, the weight bias has been shown to be even higher²⁴, despite the fact that the opposite might be expected, since nutrition professional may have more contact with overweight patients, and thus should have a more comprehensive and less stigmatizing approach²⁵. Studies indicate that this is because nutrition students and professionals feel pressured to demonstrate their abilities through weight indicators of patients consulting for treatment. In addition, there is a social pressure of complying with physical and health stereotypes that is contrary to large bodies²⁶.

It has been shown that attitudinal change can be achieved with simulated educational interventions and awareness workshops related to emotions, thus pointing to the need to devote more time and attention to addressing the needs of patients with obesity in the curriculum²⁷. In this regard, it should be noted that health academics often have highly prejudiced attitudes and beliefs, such as teasing, poorly conceived theoretical arguments of obesity that, in turn, are used as a model in the training of students^{28,29}. That is why it is considered important to implement corrective measures throughout the Nutrition and Dietetics major and also providing continuous training and awareness to academics. Students should be taught to provide better care to people with obesity, highlighting the importance of weight bias management by students in health care careers through sensitivity training, early contact with patients with obesity and assertive communication techniques. This will allow future health professionals to work more effectively with people with obesity, prioritizing fair treatment and intervention that includes the complex multifactorial nature of obesity^{30,31}. It is important to note that weight bias seems to increase when education on obesity treatment is limited solely to intervening in diet, as is usually taught in more traditional curricula^{32,33}.

CONCLUSION

This descriptive, observational and cross-sectional study examined the existence of prejudice toward people with obesity. The preliminary results showed that the students of the Nutrition and Dietetics major of the Catholic University of Temuco have a predisposition to present a weight bias toward people with obesity.

Greater effort is needed to reduce weight prejudice in students of the Nutrition and Dietetics major, through research, education and understanding of obesity as a multidimensional disease, as these future professionals will have the responsibility to prevent or reduce weight prejudice and thus positively influence the health of patients with obesity. Weight bias should be made evident and should not influence access to quality care for patients who need optimal treatment for this widespread chronic disease.

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