ARTIGO ORIGINAL

EATING DISORDERS, BODY IMAGE AND MEDIA INFLUENCE IN UNIVERSITY STUDENTS TRANSTORNOS ALIMENTARES, IMAGEM CORPORAL E INFLUÊNCIA DA MÍDIA EM UNIVERSITÁRIAS TRASTORNOS ALIMENTARIOS, IMAGEN CORPORAL E INFLUENCIA DE MEDIOS EN ESTUDIANTES UNIVERSITARIAS

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ABSTRACT

Objective: to evaluate, in university students in the health field, signs of eating disorders, satisfaction with body image and media influence. **Method:** this is a quantitative, descriptive, cross-sectional, observational study, with 61 university students, aged 20 years or over, using the Eating Attitudes Test, Body Shape Questionnaire, Body Image Test questionnaire, Sociocultural Attitudes Toward Appearance, Periodic Eating Compulsion Scale and anthropometric data. Descriptive analysis of the variables was carried out. **Results:** it was observed that, of the 45 university students most had an adequate Body Mass Index; 26.7% showed signs of eating disorders; 4.4%, severe body dissatisfaction and the influence of the media and binge eating were 2.2% of the total sample studied. **Conclusion:** it is understood that the early diagnosis of these disorders, as well as their clinical complications, is not always possible. It is essential that the treatment of complications is carried out concurrently with psychotherapeutic and nutritional monitoring. **Descriptors:** Eating Disorders; Body Image; University Students; Anorexia; Bulimia; Periodic Eating Disorder.

RESUMO

Objetivo: avaliar, em universitárias da área da saúde, indícios de transtornos alimentares, satisfação com a imagem corporal e influência da mídia. **Método:** trata-se de um estudo quantitativo, descritivo, transversal, observacional, com 61 universitárias, com idade superior ou igual aos 20 anos de idade, aplicando-se os questionários *Eating Attitudes Test*, *Body Shape Questionnaire*, questionário de Teste de Imagem Corporal, Atitudes Socioculturais em Relação à Aparência, Escala de Compulsão Alimentar Periódica e dados antropométricos. Realizou-se a análise descritiva das variáveis. **Resultados:** observou-se que, das 45 universitárias, a maioria apresentou Índice de Massa Corporal adequado; 26,7% apresentaram indícios de transtornos alimentares; 4,4%, insatisfação corporal grave e a influência da mídia e a compulsão alimentar periódica apresentaram-se em 2,2% do total da amostra estudada. **Conclusão:** entende-se que o diagnóstico precoce desses distúrbios, assim como de suas complicações clínicas, nem sempre é possível. Torna-se essencial que o tratamento das complicações seja realizado de maneira concomitante ao acompanhamento psicoterápico e nutricional. **Descritores:** Transtornos Alimentares; Imagem Corporal; Universitárias; Anorexia; Bulimia; Transtorno Alimentar Periódico.

RESUMEN

Objetivo: evaluar, en estudiantes universitarias en el campo de la salud, signos de trastornos alimentarios, satisfacción con la imagen corporal e influencia de los medios. **Método:** este es un estudio cuantitativo, descriptivo, transversal, observacional, con 61 estudiantes universitarias, de 20 años o más, utilizando el Test de Actitudes Alimentarias, el Cuestionario de Forma Corporal, el cuestionario del Test de Imagen Corporal, Actitudes socioculturales hacia la apariencia, Escala de compulsión alimentaria periódica y datos antropométricos. Se realizó un análisis descriptivo de las variables. **Resultados:** se observó que, de las 45 estudiantes universitarias, la mayoría tenía un Índice de Masa Corporal adecuado; 26.7% mostró signos de trastornos alimentarios; 4.4%, la insatisfacción corporal severa y la influencia de los medios de comunicación y los atracones fueron 2.2% de la muestra total estudiada. **Conclusión:** se entiende que el diagnóstico temprano de estos trastornos, así como sus complicaciones clínicas, no siempre es posible. Es esencial que el tratamiento de las complicaciones se realice simultáneamente con el monitoreo psicoterapéutico y nutricional. **Descriptores:** Trastornos de la Alimentación; Imagen Corporal; Estudiantes Universitarios; Anorexia; Bulimia; Trastorno Alimentario Periódico.

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INTRODUCTION

It is known that the constant search for modification of appearance by individuals leads them to use harmful measures to health, such as the use of anorectic agents, aesthetic treatments and practices such as inducing vomiting, prolonged fasting and restricted diets, with the objective of obtaining quick results, which increases the risks for Eating Disorders (EDs), which seriously affect psychological, physical and social functioning.¹

The incidence of ED and the dissatisfaction of Body Image (BI) in the female public are highlighted, where university students represent a risk group due to the gain of academic responsibility, inclusion in social groups and self-criticism, in which the increasing increase of dissatisfaction with the body affects about 20% of women and increases to 35% in Nutrition students.²

It is explained that EDs are psychiatric syndromes with a multifactorial etiology.³ These disorders are determined by a variety of biological, genetic, psychological, sociocultural and family factors that interact to produce and perpetuate the disease.⁴

It is detailed that the main types of ED are: anorexia nervosa, bulimia nervosa and Binge Eating Disorder (BED). Such disorders are defined as changes in eating behavior that lead to changes in the individual's weight.⁵

It is warned that people with EDs deny having the disease and use several justifications for their symptoms, they usually say that they chose to have an alternative lifestyle, an option they consciously took to deal with their concerns about the body and, consequently, minimize potential risks, including death.⁶

Anorexia nervosa is characterized by BI distortion, where the individual is overweight, which leads to dietary restrictions and intense weight loss, usually with a below normal Body Mass Index (BMI). These disorders can compromise health and well-being, triggering conditions such as amenorrhea, bradycardia, low body temperature, lower limb edema, constipation, peripheral cyanosis, cardiac arrhythmias, loss of bone mass and, in more severe cases, can lead to hospitalizations and death.⁷

Bulimia nervosa is identified by the objective of losing weight quickly and individuals with bulimia have episodes of heavy food intake followed by compensatory behaviors, such as self-induced vomiting to prevent weight gain, and may have up to 20 episodes of vomiting per day. It is also associated with the use of laxatives and diuretics, excessive use of caffeine and / or inadequate diets. In bulimia nervosa, individuals are kept close to their normal weight or even above it, and

their BI distortion is generally less than in individuals with anorexia.⁸

BED is characterized by eating more food than other people would consume at similar times, in a period of two hours. It is described that, during binge episodes, the individual eats faster than normal until he feels "uncomfortably full", even physiologically without hunger. These people report feelings of shame and guilt due to the amount of food eaten, such as the feeling of lack of control over the act of eating.⁹

The perception of BI is defined by the ability that each being has of mental interpretation about the size and shape of its own body, being always linked to several social, interpersonal and biological factors.¹⁰⁻¹

It is shown that, over the years, eating behavior has undergone changes and influences by cultural and media standards, with this, BI is affected and directly reflects on eating habits, in an attempt to obtain the idealized body.¹²

It is reported that, in Brazil, television is the main source of information, followed by the internet, in which users have access at any time through cell phones, smartphones and tablets¹. It is added that there are still other means of influence, such as billboards and points of sale, such as shopping malls, super and hypermarkets.¹³

Publicity influences the promotion and appreciation of having a body within the standards of beauty spread today, thus, there is an increase in the search for the idealized. Places, spaces and definitions that influence individuals are demarcated and reflected at all times by the media, pointing to the formation of images that are not always consistent with a BI already built by them or that fits their standard biological.¹

In this scenario, an immediate search for sculpted and artificial bodies, signs of status and perfection is triggered, even if it is through the adoption of habits that are harmful to health in the long term¹⁴. People feel frustrated, with low self-esteem and discriminated against, and these conditions are relevant to the appearance of EDs.¹⁵

BI disorder is considered one of the main reasons for the development of EDs, which are also associated with personal characteristics (self-esteem, mood, depressive symptoms and perfectionism), with body morphology characterized by BMI and the percentage of Body Fat (%BF).¹⁶⁻⁷

It is noticed that the beauty standard imposed as the ideal does not respect the various existing biotypes and encourages women to feel ugly and to desire weight loss.¹⁸ It leads to concerns and dissatisfactions with the BI itself, which justifies a higher prevalence in females and which highlights the importance of work on the theme.

OBJECTIVE

- To evaluate, in university students in the health field, signs of eating disorders, satisfaction with body image and media influence.

METHOD

This is a quantitative, descriptive, cross-sectional, observational study, whose adopted sample design was the non-probabilistic for convenience. The research was carried out at the State University of Minas Gerais (UEMG), Passos Unit, with students from the Nutrition, Aesthetics and Physical Education courses.

The study included 61 students enrolled in the above courses, aged 20 years or over, who agreed to participate in the research by signing the Free and Informed Consent Term (FICT). Data was collected in March and April 2019.

Male students and women under the age of 20, pregnant women, people with physical disabilities and previously diagnosed illness were excluded.

Six self-administered and validated questionnaires were adopted for data collection: Eating Attitudes Test questionnaire (EAT-26); Binge Eating Scale (BES); Body Shape Questionnaire (BSQ); the BI test questionnaire and the Sociocultural Attitudes towards Appearance (SATAQ-3), as well as a questionnaire with demographic data and nutritional profile according to self-reported weight and height.

EAT-26 was constituted as one of the most applied instruments for the tracking of symptoms and risk behavior for the development of EDs.¹⁹⁻²⁰ It is a self-administered questionnaire composed of 26 questions in the form of a Likert scale of points (always = 3; often = 2; often = 1; rarely, almost never and never = 0). Question 25 presents an inverted score, that is, the alternatives are always, often and frequently evaluated with a weight of 0; the answer rarely weighs 1; almost never, weight 2 and never, value 3. The score is calculated from the sum of the responses for each item, ranging from zero to 78 points, and the higher the score, the greater the risk of developing EDs.¹⁹ Scores greater than 21 are considered to be indicative of risky eating behavior for EDs. The questionnaire consists of three subscales, each evaluating different factors of eating behavior: diet (13 items), bulimia and concern about food (six items) and oral self-control (seven items).²¹

It is clarified that the BES is an acceptable questionnaire, composed of a list of 16 items and 62 statements, from which one must select, in each item, the one that best represents the individual's response, and each statement corresponds to a number of zero to three, ranging from the absence ("0") to the maximum severity

("3") of Binge eating (BE). It is added that the final score is the result of the sum of the points of each item. Individuals with scores less than or equal to 17 without BE are considered; with scores between 17 and 30 are considered with moderate compulsion and those with scores greater than or equal to 30 with the severe form.²²

BSQ is used to assess concern and dissatisfaction with body shape²³ and it has been validated for Brazilian university students²⁴. It is a self-administered questionnaire, with Likert scale, composed of 34 items. The answers are given in value scales: one (never), two (rarely), three (sometimes), four (often), five (very often) and six (always), with the sum of the value of each item the scale result. Results are classified into four levels of body dissatisfaction: free of body dissatisfaction (below or equal to 110); mild dissatisfaction (between 111 and 138); moderate dissatisfaction (between 139 and 167) and severe body dissatisfaction (equal to or above 168).²⁵

The scale composed of nine human silhouettes in a schematic form was used for the BI test.²⁶ The scale of figure of figures is used enough to gauge dissatisfaction with body size. The silhouettes gradually increase in size, with a BMI interval of 2.5 kg / m² in each image and a BMI between 17.5- 37.5 kg / m² (1 (H) - 17.5 kg / m², 2 (B) - 20 kg / m², 3 (C) - 22.5 kg / m², 4 (D) - 25 kg / m², 5 (E) - 27.5 kg / m², 6 (F) - 30 kg / m², 7 (G) - 32.5 kg / m², 8 (H) - 35 kg / m², 9 (I) - 37.5 kg / m²). It is an instrument validated for different ethnicities and aims to assess body satisfaction related to BMI.²⁷

In assessing the accuracy of body size estimation, participants should choose the figure that best represents their current body size (Current BMI); the dissatisfaction assessment was accessed by requesting the choice of the figure that best represented the size they would like to have (BMI Desired). BI distortion is assessed by calculating the difference between the current BMI (indicated by the individual on the silhouette scale) and real BMI (measured by the researcher). It is calculated, to assess the degree of dissatisfaction with BI, by the difference between the desired BMI (indicated by the volunteer on the scale of silhouettes) and current BMI,²⁸ logo: distortion = current BMI - real BMI; dissatisfaction = desired BMI - current BMI.²⁹

The results are presented in the form of means and standard deviation ($\pm$ SD): the closer to zero the result, the less dissatisfaction. Negative results indicate distortion or dissatisfaction due to thinness and positive results indicate distortion or dissatisfaction due to excess.²⁹

The Sociocultural Attitudes to Appearance Questionnaire - SATAQ-3 is used to assess the influence of media and pre-established body patterns on individuals' BI²⁵. The questionnaire

consists of 30 questions, which aim to investigate the general internalization of socially established standards; ideal athletic body; pressure exerted by these standards, evaluating the media as a source of information about the appearance, with a response in the form of a Likert scale, which varies between one (strongly disagree) and five (strongly agree), designed to estimate the influence of socio-cultural aspects in relation to the body. The total score of the questionnaire is calculated by the sum of the answers and, the higher the final score value, the greater the influence of the media in the internalization of the exposed patterns.³⁰

Based on the BMI calculation using the formula Weight (Kg) / Height² (m), the classification of nutritional status was adopted, adopting the cut-off points of the World Health Organization (WHO), being classified as low weight BMI <18.5kg/m²; eutrophic - BMI between 18.5 and 24.9 kg / m²; overweight - BMI between 25 and 29.9 kg/m² and obesity - BMI> 30 kg/m².³¹

This research was part of a scientific initiation project of the State University of Minas Gerais-UEMG in 2019, following Resolution 466/12.

Data was analyzed using the Microsoft® Excel® program, version 2013. First, a descriptive analysis of the variables was carried out. For variables with normal distribution, data were presented as mean and standard deviation, and for variables with abnormal distribution, data were presented as median, minimum and maximum. It is detailed that the tests used were ANOVA, for data with normal distribution, and Kruskal-Wallis, for non-normal distribution, and, for comparisons of proportions, the chi-square test or Fisher's exact test was used.

RESULTS

61 university students were evaluated and, of these, 16 were excluded for not completely answering the questionnaire. Thus, the final sample of the study with 45 students was counted, 30 (67%) of the Nutrition course; nine (20%), from Aesthetics and six (13%), from Physical Education, with an average age of 27.2 ± 10.1 years (Figure 1).

Table 1 shows the distribution of students according to the variables considered in the study related to nutritional status.

Table 1. Association between BMI and the EAT-26, BES, BSQ, BI and SATAQ-3 questionnaires. Passos (MG), Brazil, 2019.

			LW (n=4)		EUT (n=30)		OW (n=7)		OBE (n=4)	
Variables	n	%	n	%	n	%	n	%	n	%
EAT-26										
Without risk	4	100	25	83.3	3	42.9	1	25.0	33	73.3
With risk	0	0	5	17.7	4	57.1	3	75.0	12	26.7
BES										
Free	4	100	24	80	3	42.9	3	75.0	34	75.6
Moderate	0	0	6	20	4	57.1	0	0	10	22.2
Severe	0	0	0	0	0	0	1	25.0	1	22.2
BSQ										
Free	4	100	26	86.7	3	42.9	1	25.0	34	75.6
Light	0	0	2	6.7	3	42.9	0	0	5	11.1
Moderate	0	0	1	3.3	1	14.2	2	50.0	4	8.9
Severe	0	0	1	3.3	0	0	1	25.0	2	4.4
Silhouette test										
Satisfaction	2	50	15	20	0	0	0	0	17	37.8
D or I Thinness	0	0	7	23.3	6	85.7	4	100	17	37.8
D or I Excess	2	50	8	26.7	1	14.3	0	0	11	24.4
SATAQ-3										
Low	2	50	6	20	1	14.3	1	25.0	10	22.2
Moderate	2	50	23	76.7	6	85.7	3	75.0	34	75.6
High	0	0	1	3.3	0	0	0	0	1	2.2

Note: Table prepared by the author based on the results obtained in the research.

LW = Low weight; EUT = Eutrophic; OW = Overweight; OBE = Obesity.

EAT-26 = Eating Attitudes Test; BES = Binge Eating Scale; BSQ = Body Shape Questionnaire; D or I = Distortion or dissatisfaction; SATAQ-3 = Sociocultural Attitudes Towards Appearance Questionnaire.

DISCUSSION

It is noted that eating behavior disorders had their worldwide incidence practically doubled in the last 20 years, demonstrating that there is growing concern of the population with their BI.³² The main studies are carried out in relation to body dissatisfaction in young and university women, as these fall into a high-risk population.³³ It contributes, through the knowledge of new eating habits and the influence of new people, for the modification of the nutritional status.³⁴ It becomes possible to face the reality of the overload of academic activities, which makes it impossible to have meals at home, leaving the student dependent on the commercial establishments surrounding the university.³⁵

Students of Nutrition, Aesthetics and Physical Education become prone to develop concerns related to the body, because where the highest prevalence of EDs and dissatisfaction with BI occur is among students in the health field, when compared to other areas, for dealing with directly with the physical appearance.^{25,36}

It was observed that the majority of university students (n = 30 = 66.7%) are in eutrophic nutritional status according to the BMI. Similar studies were found in around 70% of eutrophic participants.^{10,37}

It is pointed out that, although the majority of students are eutrophic, such prevalences regarding the risk of EDs indicate that

professionals, such as dancers, models, health professionals, especially nutritionists, have a higher risk of developing EDs.¹⁵

It was found, for the EAT-26 questionnaire, that 12 (26.7%) presented with evidence for the development of EDs. It is reported that the same occurred in another study, which found that, in 167 university students from the courses of Aesthetics, Physical Education and Nutrition, 41 (24.1%) presented a positive risk for ED.²⁵

It should be noted that, among Nutrition students, the prevalence of behaviors suggestive of EDs is high when EAT-26 is applied, probably because they feel pressured to have a thin body and associate it with professional success.³⁷ In this study, it was found that the Nutrition course was the one with the most signs of ED in relation to the other courses, with seven (23.3%) students at risk, while Aesthetics had three (33.3%) and Physical Education, two (33.3%).

It was found, according to the BEDS, that the Nutrition course had a higher prevalence for binge eating: six students (20%) of the course presented with suggestive criteria for BED. In another study with 20 students of the Nutrition course, it was found that eight (40%) women presented with suggestive criteria for BED.³⁹ It was found that individuals considered obese obtained higher scores when compared to eutrophic, suggesting that a high BMI may be associated with the development of BED.^{38,40}

According to the results of the BSQ test in this work, 11 (24.4%) university students with some degree of BI dissatisfaction, ranging from mild, moderate to severe dissatisfaction, and the sum of moderate and severe dissatisfaction with BI in three (75.0%) students, who were classified according to their BMI with obesity. It is noticed, in similar studies, that university students with some degree of excess weight had a higher prevalence of moderate dissatisfaction with BI⁴¹⁻² and greater vulnerability among Nutrition students for dissatisfaction with BI and the development of EDs.⁴³

It is observed, for the scales of silhouettes, in this work, that two (50%) underweight students chose ideal figures larger than the one they point to as current, whereas those overweight chose smaller figures than the current one. It is noted, according to the sample characteristics regarding BMI classification and correlation values, that the higher the BMI and body weight, the greater the negative dissatisfaction. It is noteworthy that women had a higher percentage of negative dissatisfaction when compared to men, even though most of them had adequate weight.⁴⁴⁻⁶

It was identified, in research that used the evaluation through the scale of silhouettes, that, of 125 female adolescents, 61.6% of them presented dissatisfaction with BI, which reinforces the importance of studies on this theme, since body dissatisfaction can trigger EDs,⁴⁷ and these deserve attention as psychiatric, multifactorial disorders that affect nutritional status and can result in more serious organic damage in their course⁴⁶.

It was observed, from SATAQ-3, that one (2.2%) university student is influenced by the media regarding the imposed and disseminated aesthetic standards, classified with high internalization of the media, while 34 (75.6%) were classified with moderate influence. It was shown, in a study where men and women from the same courses were evaluated, that 48.8% (83) of women and 48.8% (20) of men were classified with high internalization of the ideal body exposed in the media.²⁵

Women showed greater internalization of beauty standards, as they suffer greater pressure for “perfect” aesthetics and use the media as a source of information.²⁵ It is caused, by the exposure of bodies of models and actresses, an immediate impact on the socio-cultural morphological idealization, mainly in female subjects.

The standard of thin body beauty is conveyed to messages of success, control, acceptance and happiness, thus, women believe that, being thin, they will be able to reach all their goals where weight loss is the solution to all their problems of

internalization of body images that distance themselves from reality.^{18,48}

CONCLUSION

It was found that BI distortion did not prevail among the students who participated in the research. It is known, however, that media interference in the acceptance of BI and eating habits is prevalent, since academics feel the need to constantly seek a physical pattern that is not in accordance with the reality disseminated by the media and social media.

The presence of BED is observed in eutrophic students, which can trigger an excess weight gain, as well as the emotional feeling of guilt and which, over time, can trigger other EDs and comorbidities.

It is concluded that the evidence of EDs, even in smaller proportions, draws attention due to its importance as a health problem and that it deserves attention in that the external factors interfere in the personal acceptance itself, which generates physical and psychological problems with negative outcomes in the course of these disorders. The importance of early identification and due multidisciplinary follow-up for an effective approach are emphasized.

CONTRIBUTIONS

It is informed that all authors contributed equally in the design of the research project, collection, analysis and discussion of data, as well as in the writing and critical review of the content with intellectual contribution and in the approval of the final version of the study.

CONFLICT OF INTERESTS

Nothing to declare.

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