Ansiedad e insatisfacción corporal en universitarios

MARÍA BEGOÑA MEDINA-GÓMEZ*

Universidad de Burgos, España

ORCID: https://orcid.org/0000-0002-4772-7798

MARÍA ÁNGELES MARTÍNEZ-MARTÍN

Universidad de Burgos, España

ORCID: https://orcid.org/0000-0001-6295-7340

MARÍA CAMINO ESCOLAR-LLAMAZARES

Universidad de Burgos, España

ORCID: https://orcid.org/0000-0003-2448-0267

YOLANDA GONZÁLEZ-ALONSO

Universidad de Burgos, España ORCID: https://orcid.org/0000-0003-0818-1996

ELVIRA MERCADO-VAL

Universidad de Burgos, España

ORCID: https://orcid.org/0000-0001-6142-0154

How to quote this article: Medina-Gómez, M.B., Martínez-Martín, M.A., Escolar-Llamazares, M.C., González-Alonso, Y. & Mercado-Val, E. (2019). Anxiety and body dissatisfaction in university students. *Acta Colombiana de Psicología*, 22(1), 22-30. doi: http://www.dx.doi.org/10.14718/ACP.2019.22.1.2

Resumen

La ansiedad y la insatisfacción corporal son factores de riesgo para los trastornos de conducta alimentaria y de la ingesta de alimentos. La presente investigación busca analizar los niveles de ansiedad e insatisfacción corporal, y su relación con las diferencias en función del género, curso y centro de estudios en 516 universitarios de Burgos, España -el 42.8 % fueron varones y el 57.2 %, mujeres; M=21.7 años (DT=4.1)—, utilizando un muestreo aleatorio estratificado. Para ello, se realizó un estudio descriptivo transversal en el que se aplicó el Cuestionario de Ansiedad Estado-Rasgo y la subescala Insatisfacción Corporal del Inventario de Trastornos xde Conducta Alimentaria. Como resultados, alrededor del 20 % de los participantes presentó niveles altos de ansiedad, aunque no se encontraron diferencias por género, curso o centro; adicionalmente, el 61.4 % presentó alta o moderada insatisfacción corporal, principalmente si eran mujeres, personas ansiosas, o de segundo curso en la universidad. También se encontró interrelación entre estos factores, por lo cual en algunos universitarios se pudo identificar determinado riesgo para la aparición de trastornos de la conducta alimentaria y de la ingesta de alimentos. Palabras clave: ansiedad, insatisfacción corporal, universitarios, género.

Anxiety and body dissatisfaction in university students

Abstract

Anxiety and body dissatisfaction are risk factors for eating behavior disorders (ACT). This research analyzes the levels of anxiety and body dissatisfaction, the relationship between these variables, and the differences according to gender, course and center in 516 university students of Burgos (Spain), using a stratified random sampling. 42.8 % were males and 57.2 % females, M = 21.7 years (SD = 4.1). Was carried descriptive study a cross-sectional. The State-Trait Anxiety Inventory and the subscale Body Dissatisfaction of the Eating Disorders Inventory are applied. About 20 % of participants have high levels of anxiety, not finding differences by gender, course and center. 61.4 % present high and median body dissatisfaction, mainly women, the more anxious and those of 2nd. In addition, there is an interrelation between factors. Therefore, in some students there are conditioning factors that are risk factors for the appearance of eating behavior disorders. *Keywords*: anxiety, body dissatisfaction, university, gender.

^{*} Departamento de Ciencias de la Educación, Facultad de Educación, Universidad de Burgos, C/Villadiego n. º 1. 09001, Burgos, España, +34947111422, bmedina@ubu.es

Ansiedade e insatisfação corporal em universitários

Resumo

A ansiedade e a insatisfação corporal são fatores de risco dos transtornos de comportamento alimentar e da ingestão de alimentos. Esta pesquisa procura analisar os níveis de ansiedade e de insatisfação corporal, bem como sua relação com as diferenças em função do gênero, do curso e do centro de estudos em 516 universitários de Burgos, Espanha — 42.8 % homens e 57.2 %, mulheres; M = 21.7 anos (DP = 4.1) —, utilizando uma amostra aleatória estratificada. Para isso, foi realizado um estudo descritivo transversal, no qual foi aplicado o Inventário de Ansiedade Traço-Estado e a subescala Insatisfação Corporal do Inventário de Transtornos de Comportamento Alimentar. Como resultados, ao redor de 20 % dos participantes apresentaram níveis altos de ansiedade, embora não se tenham encontrado diferenças por gênero, curso ou centro de estudos; além disso, 61.4 % apresentaram alta ou moderada insatisfação corporal, principalmente mulheres, pessoas ansiosas ou de segundo curso na universidade. Também foi encontrada inter-relação entre esses fatores, razão pela qual, em alguns universitários, pôde ser verificado determinado risco para o surgimento de transtorno de comportamento alimentar e da ingestão de alimentos. *Palavras-chave*: ansiedade, insatisfação corporal, universitários, gênero.

Introduction

Students attending university have to adapt to new routines, psychosocial changes and academic and social demands with a view to their professional preparation. The university world presents certain organizational and academic characteristics and requirements that on occasions lead to a certain level of anxiety (Angelucci, Cañoto, & Hernández, 2017; Emond et al., 2016; Martínez & Bilbao, 2015). Anxiety is a natural adaptive mechanism that can help us to face up to the challenges of life, but when it is intense, disproportionate and continuous, and when it interferes with day-to-day activities, it is considered maladaptive (Riveros, Hernández, & Rivera, 2007; Serrano-Pintado & Escolar-Llamazares, 2015).

According to Lazarus and Folkman (1986), anxiety is defined as an unpleasant emotional state that arises as a consequence of an individual cognitive assessment in reaction to a threatening situation. In other words, the individual analyses the environmental conditions and the personal resources that are available to confront that situation. Spielberger, Gorsuch and Lushene (1982) differentiated between State- Anxiety (S-A) and Trait- Anxiety- (T-A). The first, S-A, refers to the subjective feelings of tension and apprehension that can vary over time and fluctuate in intensity. The second, T-A, points to the relatively stable tendency of the person to perceive situations as threatening.

Over recent years, interest has increased considerably in analyzing anxiety and its effects on the university students collective, as research centered on this topic have highlighted (Agudelo-Vélez, Casadiegos-Garzón, & Sánchez-Ortiz, 2015; Bayram & Bilgel, 2008; Doumit, Khazen, Katsounari, Kazandjian, Long, & Zeeni, 2017). The rates of maladaptive anxiety in universities fluctuate between 23-25% for males

and between 36-42% for females, which, if compared with the population in general, is two-to-three times higher (8% and 15%, respectively) (Andrews, Hejdenberg, & Wilding, 2006). With regard to age, the results are not conclusive, as some of them show that the youngest university students are more anxious than the oldest, due to difficulties in adjusting to a new environment (Bayram & Bilgel, 2008). Another study completed in the United Kingdom, in which 16,460 students participated and that mapped out the longitudinal course of anxiety throughout the college career, revealed that the scores for students' anxiety reached their maximum level in the first and the last year. In addition, at no time in their passage through university psychological stress decreased to the levels prior to admission in the same (Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010).

It is known that pathological anxiety constitutes one of the emotions most commonly associated with eating behavior disorders (EBD) (Escolar-Llamazares, 2015; Gitimu et al., 2016; Pineda-García, Gómez-Peresmitré, Velasco-Ariza, Platas-Acevedo, & Áramburo-Vizcarra, 2014). Although the role that anxiety plays in these disorders is not well known, it is a reality that people with eating disorders experience higher levels of anxiety than those with no pathological eating disorders. Most research about the cause-effect relationships between anxiety and EBD consider anxiety as a risk factor in the emergence of those disorders (Solano-Pinto & Cano-Vindel, 2012). Various studies have analyzed the incidence of anxiety in ED, pointing to morbidity rates of 33 to 48% (Doumit et al., 2017).

Moreover, dissatisfaction with body image and its impact on eating disorders in young people as well as its relationship with gender is widely recognized (Baños & Miragall, 2015; Doumit et al., 2017; Lim & You, 2017; Trujano, De Gracia, Nava, & Limón, 2014). In a study

with Spanish university students, García, Solbes, Expósito, and Navarro (2012) highlighted that although women were more dissatisfied with their bodies than men, men were also concerned and that concern arose at all ages. In this sense, Lameiras, Calado, Rodríguez and Fernández (2003) noted that 38.6% of women and 19.1% of men followed weight controls to improve their body image over the six months of their study. Although it cannot be assumed, according to the same authors, that dissatisfaction with body image is in itself the cause of eating disorders, it is definitely a risk factor responsible for the onset of extreme behaviors to control weight and to maintain it. These behaviors can lead to the development of eating disorders in vulnerable people and constitute one of the factors that with greater consistency and robustness contributes to the diagnosis, onset, and development of eating disorders in university students (Berengüí, Castejón, & Torregrosa, 2016; García et al., 2012). Body dissatisfaction is characterized by the presence of value judgments on the body that are not coincident with the real characteristics (Berengüi et al., 2016).

Body dissatisfaction and anxiety have been associated in various studies (Cruz, Pascual, Salaberria, & Echeburua, 2015; Cruz, Pascual, Wlodarczyk, Polo, & Echeburúa, 2016; Doumit, et al., 2017; Koronczai et al., 2013). Cruz et al., (2016) indicated that the greater the body dissatisfaction the greater the level of anxiety. Therefore, satisfaction with one's own body could be considered a factor that protects against anxiety symptomatology (Dooley, Fitzgerald, & Giollabhui, 2015). Moreover, body dissatisfaction is related to EBD when the level of anxiety is high (Doumit, et al., 2017). These contributions suggest the existence of a link between dissatisfaction with body image and anxiety. Hence, a deficient body image can contribute to greater anxiety and in turn, anxiety can lead to eating behavior disorders (Doumit, et al., 2017).

Very few studies, have analyzed the relation between anxiety and body dissatisfaction in terms of academic year and area of study and these have not been conclusive (Escolar-Llamazares, Martínez, González, Medina, Mercado, & Lara, 2017). Guedea, Ornelas, Rodríguez and Gastétum. (2012) revealed that students of physical education expressed higher levels of anxiety in relation to their body than students of health sciences Aguiar, Rodrigues and de Pinho (2014) pointed out that the incidence of factors associated with a risk of presenting eating disorders was greater among university students pursuing careers in the area of health (Nutrition and Diet, Physical Education, Nursing and Medicine), where physical appearance and concern over wellbeing are very important.

Given the important relationship between anxiety and body image dissatisfaction as risk factors for eating disorders in university student population, this study focuses on the analysis of the following issues: 1) if students from the University of Burgos (Spain) have high levels of anxiety and show dissatisfaction regarding their own body; 2) if there is a relation between the variables S-A, T-A and body dissatisfaction; and, 3) if the anxiety and body image dissatisfaction of these students differs according to gender, academic year and educational center.

Method

Type of study

A cross-sectional, descriptive study was carried out using a questionnaire administered to a probabilistic sample of university students (Montero & León, 2007).

Participants

A stratified random sampling was conducted among the 26 career programs offered at the seven centres of the University of Burgos, with a population of 6,277 students. The sample consisted of 516 participants. The calculation was done using the formula for stratified finite samples, at a confidence level of 95.6% and with a margin of error of 4%. 42.8% were men (n = 240) and 57.2% women (n = 240)321), all of them aged between 17 and 75 years old (M =21.7, DT = 4.1). 75% of the university students were from Burgos and its province, 12% came from other Spanish provinces and 13% from other countries (China, Mexico and France). 37.1% of students were enrolled in the fourth academic year, 28.5% on the second year, 21.7% on the third year, and 12.7% on the first. Frequencies and percentages of students by year and by educational center are presented below, in Table 1.

Instruments

An ad-hoc questionnaire was prepared which was named "Questionnaire: Information on Eating Disorders, Anxiety, and Depression," consisting of two parts: one, aimed at gathering sociodemographic data (gender, age, place of residence, center, degree, and academic year), and another, comprising two standardized instruments: the State-Trait Anxiety Inventory (STAI E/R) by Spielberger et al. (1982) and the Eating Disorder Inventory-Referral Form (EDI-3-RF) by Garner (2004). This paper presents the results from the STAI E/R analysis and the subscale of Body Dissatisfaction (BD) from the EDI-3-RF.

The State-Trait Anxiety Inventory, STAI, Spielberger et al., 1982, adapted by Seisdedos, 1994, is a self-administered report of 40 items for the evaluation of two types

Table 1. Frequency and percentage of students by academic year and educational center

Year	Sciences	DRL	Economics	Education	HPS	HAC	Health
	n(%)						
1	-	6 (7.1)	1 (1.5)	28 (23.3)	5 (3.4)	9 (17.0)	22 (46.8)
2	14 (33.3)	-	3 (44.8)	49 (40.8)	57 (38.5)	9 (17.0)	1 (2.1)
3	28 (66.7)	7 (8.33)	22 (32.8)	6 (15)	27 (18.2)	8 (15.1)	24 (51.1)
4	<u>-</u>	71 (84.5)	14 (20.9)	-	59 (39.9)	27 (50.9)	-

Note: LLR (Law and Labor Relations), HPS [Higher Polytechnic School), HAC (Humanities and Audiovisual Communication).

of anxiety: S-A (transitory emotional condition) and T-A (relatively stable anxious tendency). The two subscales consist of 20 items in a Likert-type system of 4 points: 0 = no anxiety, 1 = some anxiety, 2 = quite a lot, 3 = a lot. The test was designed for both individual and collective self-administration. Samples from the Spanish population showed high indices of internal consistency (between .90 and .93 in S-A and between .84 and .87 in T-A) and high correlations with Cattell's Anxiety Scale (between .73 and .85). There is no indication in the test manual of the percentile range at which anxiety is considered high, so the criterion of Martínez-Otero (2014) that assumes high percentiles of over 75 as the threshold for anxiety is taken into account.

Body Dissatisfaction Subscale (BD) of the Eating Disorder Inventory-Referral Form (Eating Disorder Inventory, EDI-3-RF, Garner, 2004, adaptation by Elosua, López, & Sánchez, 2010). This subscale is comprised of 10 self-administered items and it assesses dissatisfaction with the general shape of the body and with the size of specific body parts (e.g., stomach, hips, thighs, and buttocks). The range of direct scores goes from 0 to 40. In addition, this subscale has a qualitative range: low (0-6), medium (7-27), and high (28.40) body dissatisfaction. The psychometric data yielded values between .82 and .96 for internal consistency (Cronbach's alpha) with the Spanish adaptation in Spanish clinical samples and between .64 and .92 in non-clinical samples. In the sample from the present study, the value of internal consistency for the Body Dissatisfaction Subscale (BD) was .84.

Procedure

The tests were organized at the different centers over the months of November and December 2015, having previously contacted teachers from the randomly selected groups. A member of the research team together with the class teacher distributed the forms with the instruments to the participants. The approximate duration of the test administration was 15-30 minutes.

Ethical considerations

Before the students responded the questions on the form, one of the researchers informed the participants about the aims and the confidentiality policy of the study, Emphasizing that collaboration was voluntary, the researcher requested the signature of the informed consent from those involved and remained in the classroom to resolve any possible doubts.

Data analysis

Having applied the tests and having followed the norms on correction of the questionnaires, the direct score and the percentiles for the STAI were obtained. The scores for the BD were categorized into three qualitative ranges. The data were codified and analyzed with the SPSS v.22 statistics program.

First of all, the percentage of students who obtained high levels in the tests was analyzed. The (Pearson) correlations calculation on the scores of the subscales and a linear regression study with the successive steps method were performed. The confidence interval used in the analysis was 95% with a significance level of p < .05.

Before completing the study of the differences in accordance with gender, academic year and educational center, it was confirmed with the Kolmogorov-Smirnov test that the variables could not be fitted to a normal distribution: in S-A (Z = .12; p = .00), in T-A (Z = .09; p = .00), and in BD (Z = .10; p = .00). Subsequently, it was verified that the signs of symmetry: S-A (-.01), T-A (-.29) and BD (-1.34) and kurtosis: S-A(1.41) T-A (.91) and BD (.43) tend to be close to normality (values <2) (Curran, West & Finch, 1996). In the cases where no equality of variance was assumed (Levene Test), Mann Whitney non-parametric U tests were employed on the variables with two levels of (gender) comparison, and Kruskal Wallis tests on the variables with more than two alternative responses (academic year and center). When equality of variance was assumed, the Student-t test (gender) was applied. All the results had a significance level of .05 or less.

Results

The description of the results is made from the statistics of the values of the different scales: STAI S/T and the Body Dissatisfaction (BD) Subscale of the EDI-3-RF.

In relation to the first objective of this study -the analysis of the levels of anxiety and body dissatisfaction of university students- Table 2 shows the frequency and percentage of students from the total sample in each percentile of the two STAI scales and in the ranges established in the BD subscale.

Table 2. Frequency and percentage obtained by students in the anxiety and body dissatisfaction subscales

		Anxiety	,		
Percentiles -	S-A		T-A		
refceililles -	n	%	n	%	
< 25	190	33.8	160	28.5	
26-50	119	21.2	136	24.2	
51-75	150	26.7	148	26.3	
76-90	83	14.8	89	15.8	
> 91	20	3.6	29	5.2	
	Body	Dissatisfac	tion (BD)		
F	Rango	n	%		
Lo	w (0-6)	217	38.6		
Mode	rate (7-2	329	58.5		
Hig	16	2.9			

Note: S-A State Anxiety Subscale; T-A Trait Anxiety Subscale.

Under anxiety, 18.4% and 21% of students from the University of Burgos obtained scores over the profile of 75 for S-A and for T-A, , respectively. Under body dissatisfaction, 61.4% presented high and moderate values, against 38.6% of the university students who expressed satisfaction with their body.

The second objective was to establish whether there was a relation between the variables S-A, T-A and body dissatisfaction. A significant correlation was obtained between both types of anxiety (r = .704; p < .000). When completing a linear regression, 49.5% of the variance in S-A was explained by T-A (B = .698, $\beta = .704$; t = 23.428; p < .001). When analyzing the correlation between body dissatisfaction with the other two variables, although not very high, there was an observable relation between body dissatisfaction and S-A (r = .345; p = .000) and body dissatisfaction and T-A (r = .386; p = .000). In the first case, if a linear regression is performed, 12% of the variance in personal dissatisfaction was explained by S-A (B = .093; $\beta = .345$: t = 8.676; p < .001) and 15% by T-A (B = .103; $\beta = .386$, t = 9.906; p < .001).

The third objective of this study consisted of analyzing whether anxiety and body image dissatisfaction of these students differed according to gender, academic year and educational center. With regard to gender, the results of the Levene Test were as follows: S-A (F = .535; p = .469), T-A (F = 2.550; p = .111) and BD (F = 18.532; p = .000). No significant differences for anxiety between men and women were found with the Mann Whitney U test, but they were found when using the Student-t test for body dissatisfaction (Table 3). Women obtained higher scores on the BD subscale (M = 11.61; DT = 8.112) than men (M = 7.83; DT = 6.613), when calculating Cohen's d-effect size, a value of .51 was obtained, in other words, a moderate effect (Cohen, 1988).

With regard to the academic year, no variance homogeneity was found for any of the variables: S-A (F = .816; p = .485), T-A (F = .546; p = .651) and BD (F = .361; p = .781). The non-parametric Kruskal Wallis test was applied and it may be observed in Table 3 that differences of means for body image dissatisfaction were only found among the 2^{nd} and 3^{rd} year students (M = 11.61; DT = 8.109 y M = 9.00; DT = 7.293, respectively).

With respect to the center where the studies were carried out, having tested for non-homogeneity of variances: S-A (F = .995; p = .428), T-A (F = 1.498; p = .177) and BD (F = 1.299; p = .256), the Kruskal-Wallis test was applied at a significance level of .05 and no significant differences were observed for any of the variables (seeTable 3).

Table 3. Differences in the anxiety and body satisfaction subscales by gender, academic year, and educational center

	S-A		T-A	BD		
	U	p	U	p	t	p
Gender	36794.500	.363	38512.000	.997	5.910	.000
	χ^2	p	χ^2	p	χ^2	p
Curse Year	2.104	.147	.426	.514	4.747	.029
Center	3.227	.072	.015	.903	.220	.639

Note: S-A State Anxiety Subscale; T-A Anxiety Trait Subscale

Discussion

The present study analyzes the relationship between the variables anxiety and body dissatisfaction, considering them as factors that increase the risk of suffering from EBD. With this objective in mind, the study was focused on examining the presence of both variables in the group of students at the University of Burgos; the relationship that exists between the two types of Anxiety (S-A and T-A) and body dissatisfaction; and the differences in these variables as a function of some sociodemographic characteristics (gender, academic year, educational center).

The results observed in this study pointed to high levels of S-A (18.4%) and T-A (21%) among an important proportion of university students. These data were similar to those obtained in another study with Spanish university students that recorded percentages of 13.20% in S-A and 16% in T-A (Martínez-Otero, 2014). This finding may be due, on the one hand, to university students having to face situations with levels of emotional demand that are qualified as emotionally threatening; and on the other, that they believe themselves to be without the personal strengths needed to face up to them. It should also be taken into account that the people with high T-A presented a higher S-A, because they tended to perceive daily situations as more threatening or dangerous (Spielberger et al., 1982). With regard to the variable body dissatisfaction, a high percentage of students (61.4%) expressed both moderate and high levels of body dissatisfaction, which is in line with previous studies where over 60% of university students manifest high body dissatisfaction (García et al., 2012; Soto-Ruiz et al., 2015). The results for both anxiety and dissatisfaction with one's own body indicated that an important group of universities presented high scores in the tests that were applied, with the risk that those results suggest for their health.

As expected, interaction was observed between the two types of anxiety (S-A and T-A), in such a way that the environmental influences of the university setting that generated emotional stress among university students would be greater in those students with a personality characterized by more anxious features. When analyzing the relation between anxiety and body dissatisfaction, it was found that although the levels of anxiety were low, possibly due to the multicollinearity between the variables, the higher the levels of anxiety (S-A and T-A), the higher the likelihood of dissatisfaction with one's own body; all the more so if anxiety is characteristic of a less stable personality (T-A). Therefore, the more anxious students could be more dissatisfied with their body and that dissatisfaction would lead to the practice of unhealthy habits that could provoke EBD. These results are consistent with those obtained in a sample of 765 Spanish women aged between 16/20 years old, according to which the higher the level of anxiety, the greater the body dissatisfaction, which leads to an increase in unhealthy behavior for weight control (Cruz-Sáez et al., 2016).

Studying the influence of sociodemographic characteristics, the results obtained by other authors were not confirmed by the present research. In those studies, women exhibited higher anxiety levels which were attributed to the

influence of physiological factors, social difficulties, the assignation of various social roles and/or the stress caused by the environment (Riveros et al., 2007). It is likely that female students at the University of Burgos experienced a university setting that was not more threatening for them than it was for male students and, therefore, the gender variable has no influence on their anxiety level. This absence of any effect may be due to similar social difficulties and academic demands for the students of both sexes and, in addition, because the social roles assigned to women at that age were not substantially different to those attributed to men. In this sense, it should be considered that 75% of the sample were residents in or nearby Burgos, and therefore, the daily routines would hardly have changed very much.

In contrast, unease and dissatisfaction with their body image was greater among female university students. It is likely that general social pressure and dissatisfaction with body image for not complying with social standards, surpasses the influence that the university environment had over female students. The results coincided with those of other authors who affirmed that female students showed greater dissatisfaction with their physique and perceived their body image less positively than male students (Clode, Lewis, & Fuller-Tyszkiewicz, 2016). These scores should especially be taken into account as body dissatisfaction is one of the most consistent and robust factors that contribute to the development of eating disorders in university students (Baños, & Miragall, 2015). Dissatisfaction with one's own body, together with high anxiety levels can lead to unhealthy behavior that implies damaging consequences in the daily life of women, such as following diets with no medical supervision (Olesti-Baiges et al. 2007).

Regarding the year of study, no significant differences were appreciated for anxiety, based on the results of the present study. With respect to S-A, Bayram and Bilgel (2008) found that students on the first year of their career felt greater anxiety over the need to adjust to the new environment. These data were not consistent with those obtained in our study; the lack of variability in S-A might be due to the time when the questionnaire was administered, since this took place during the months of November and December, and the academic demands at that time are not the same as in other exam periods. Macht, Haupt and Eligring (2005) found that students showed increased anxiety levels during exam times. At the time of completing this study, the students of the University of Burgos had already gone through the period of adjustment. On the contrary, Shamsuddin et al. (2013) point out higher anxiety levels among students on the last college year because of their concerns over the future. Neither was greater anxiety observed among students from Burgos University on the fourth year of college, probably

because when the questionnaires were administered they were not going through the pressures of searching for employment and envisaging their medium-term future. It may perhaps be assumed that the assessments of the academic demands were similar among all students, regardless of the course in which they were enrolled, at least during the teaching period. It would be of interest to apply the assessment instruments at different times during the academic year to analyze whether the S-A was influenced by specific events of university life (for example, the start of the course, the exam period, the end of college studies). The highest average for body dissatisfaction corresponded to students on the second year of the course, with a significant difference only with regard to those in the third year, but no justification was found for this fact.

With regard to whether differences in body dissatisfaction and anxiety exist by educational center, in this case no difference was found for neither type of anxiety or for body dissatisfaction. There was no sign that the college year is a determinant characteristic when making unpleasant cognitive assessments of a threatening situation, or subjective assessments on body image. The data from the present study are not coincident with those found by Aguiar et al. (2014), who affirmed that university students pursuing health-related college courses had higher levels of risk factors concerning eating disorders.

In conclusion, it may be pointed out that some students attending the University of Burgos experience high levels of anxiety, and there is a higher number of students with moderate to high level of body dissatisfaction. ,As it is known, these factors increase the risk of EBD. In addition, body dissatisfaction and anxiety (in its two manifestations) showed significant correlations, which confirmed the presence of vulnerabilities within this group. These were higher among women, since they presented important levels of body dissatisfaction, as was also corroborated in previous research (Escolar-Llamazares et al., 2017; Martínez & Bilbao, 2015). Hence, a series of determinant conditions that can provoke health problems were identified in one group of university students. Consequently, a swift intervention is needed as soon as possible.

This information is of great interest, given that it facilitates tackling both variables (anxiety and body dissatisfaction) in a joint manner, at a preventive level. Early identification of possible anxiety problems, which on certain occasions are linked to moderate and high body dissatisfaction, would prevent the development of other pathologies such as those related to eating behavior disorders. From a public health perspective, knowledge of the prevalence of mental health problems among young Spanish university students is essential. It is necessary to continue investigating in this area

with a view to gaining greater information that will help alert society to the risk to which our university students are exposed and to be able to propose appropriate and early detection and intervention programs aimed at improving their quality of life and their academic performance, but above all, their personal satisfaction.

This work is not free from limitations, one of which consisted of not having carried out a follow up period to evaluate whether the results obtained would be maintained over time. Likewise, it is important to point out that although the present study has focused on analyzing the relationship between anxiety and body dissatisfaction, it would be interesting to study the relation between anxiety and other variables involved in the appearance of an EBD such as obsession with slimness and bulimic behavior, aspects which will form the subject of future works. Although the results of some of the variables under analysis were not conclusive, one contribution of this study is the visibility given to possible mental health problems that are hidden at some university students.

References

- Agudelo-Vélez, D. M., Casadiegos-Garzón, C. P., & Sánchez-Ortíz, D. L. (2015). Características de ansiedad y depresión en estudiantes universitarios. *International Journal of Psychological Research*, 1(1), 34-39.
- Aguiar, J., Rodrigues, C. R., & De Pinho, L. (2014). Factors associated with the risk of eating disorders among academics in the area of health. *Revista Gaúcha de Enfermagem*, 35(2), 73–78.
- Andrews, B., Hejdenberg, J., & Wilding, J. (2006). Student anxiety and depression: comparison of questionnaire and interview assessments. *Journal of Affective Disorders*, 95(1), 29-34. doi.org/10.1016/j.jad.2006.05.003
- Angelucci, L. T., Cañoto, Y., & Hernández, M. J. (2017). Influencia del estilo de vida, el sexo, la edad y el IMC sobre la salud física y psicológica en jóvenes universitarios. *Avances en Psicología Latinoamericana*, *35*(3), 531–546. doi: http://dx.doi.org/10.12804/10.12804/revistas.urosario.edu. co/apl/a.4454
- Baños, R. M. & Miragall, M. (2015). Los trastornos alimentarios y sus causas. In Autor (Ed.), *Todo sobre los Trastornos de la Conducta Alimentaria. Una visión multidisciplinar desde la experiencia y la evidencia científica* (pp. 49–96). Tarragona: Altaria
- Bayram, N. & Bilgel, N. (2008). The prevalence and sociodemographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, *43*(8), 667-672. doi:10.1007/ s00127-008-0345-x

- Berengüí, R., Castejón, M. Á., & Torregrosa, M. S. (2016). Body dissatisfaction, risk behaviors and eating disorders in university students. *Revista Mexicana de Trastornos Alimentarios*, 7(1), 1–8. https://doi.org/10.1016/j.rmta.2016.02.004
- Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., & Barkham, M. (2010). Changes in undergraduate students' psychological well-being as they progress through university. *Studies in Higher Education* 35(6), 633-645. doi. org/10.1080/03075070903216643
- Clode, J., Lewis, V., & Fuller-Tyszkiewicz, M. (2016). Body Image Concerns as Predictors of Psychology Students' Confidence with Clients. *Journal of Applied Biobehavioral Re*search, 21(4), 253-261.
- Cohen, M. A. (1988). Some new evidence on the seriousness of crime. *Criminology*, 26(2), 343-353. doi: 10.1111/j.1745-9125.1988.tb00845.x
- Cruz, S., Pascual, A., Salaberria, K., & Echeburúa, E. (2015). Normal-weight and overweight female adolescents with and without extreme weight-control behaviours: Emotional distress and body image concerns. *Journal of Health Psychology*, 20(6), 730-740.
- Cruz, S., Pascual, A., Wlodarczyk, A., Polo-López, R., & Echeburría, E. (2016). Insatisfacción corporal y conductas de control del peso en chicas adolescentes con sobrepeso: papel mediador de la ansiedad y la depresión. *Nutrición Hospitalaria*, 33(4), 935-940. http://dx.doi.org/10.20960/nh.395
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, *1*(1), 16. doi.org/10.1037/1082-989X.1.1.16
- Dooley, B., Fitzgerald, A., & Giollabhui, N. M. (2015). The risk and protective factors associated with depression and anxiety in a national sample of Irish adolescents. *Irish Journal of Psychological Medicine*, *32*(1), 93-105.
- Doumit, R., Khazen, G., Katsounari, I., Kazandjian, C., Long, J., & Zeeni, N. (2017). Investigating vulnerability for developing eating disorders in a multiconfessional population. *Community Mental Health Journal*, *53*(1), 107-116.
- Emond, M., Ten Eycke, K., Kosmerly, S., Robinson, A. L., Stilar, A., & Van Blyderveen, S. (2016). The effect of academic stress and attachment stress on stress-eaters and stress-undereaters. *Appetite*, 100, 210-215.
- Escolar-Llamazares, M. C. (2015). TCA y su comorbilidad con los trastornos depresivos y de ansiedad. In M. Á. Martínez Martín (Ed.), *Todo sobre los Trastornos de la Conducta Alimentaria. Una visión multidisciplinar desde la experiencia y la evidencia científica.* (pp. 215–232). Madrid: Altaria.
- Escolar-Llamazares, M. C., Martínez, M. Á., González, M. Y., Medina, M. B. Mercado, E., & Lara, F. (2017). Factores de riesgo de trastornos de la conducta alimentaria entre universitarios: Estimación de vulnerabilidad por sexo y edad. *Revista Mexicana de Trastornos Alimentarios*, 8(2), 105-112.

- García, J., Solbes, I., Expósito, E., & Navarro, E. (2012). Imagen corporal y riesgo de trastornos de la conducta alimentaria en población universitaria española: diferencias de género. Revista de Orientación Educacional, 26(50), 31-46.
- Garner, D. M. (2004). Eating Disorder Inventory-3. Referral Form Manual. Psychological Assessment Resources, Inc. Florida, EEUU (Spanish adaptation, Elosua, P., López, A., & Sánchez, F (2010). Inventario de trastornos de la Conducta Alimentaria. Cuestionario de Revisión). Madrid: TEA.
- Gitimu, P. N., Jameson, M. M., Turel, T., Pohle-Krauza, R., Mincher, J., Rowlands, Z., & Elias, J. (2016). Appearance issues, depression, and disordered eating among college females. *Cogent Psychology*, 3(1). doi.org/10.1080/2331190 8.2016.1196512
- Guedea, J., Ornelas, M., Rodríguez, J. M., & Gastétum, G. (2012). Invarianza factorial de la escala de ansiedad asociada a la imagen corporal en estudiantes universitarios de Educación Física y Ciencias de la Salud. *Formación Universitaria*, *5*(6), 39-50. doi.org/10.4067/S0718-50062012000600005
- Koronczai, B., Kökönyei, G., Urbán, R., Kun, B., Pápay, O., Nagygyörgy, K., ... & Demetrovics, Z. (2013). The mediating effect of self-esteem, depression and anxiety between satisfaction with body appearance and problematic internet use. *The American Journal of Drug and Alcohol Abuse*, 39(4), 259-265.
- Lameiras, M., Calado, M., Rodríguez, Y., & Fernández, M. (2003). Hábitos alimentarios e imagen corporal en estudiantes universitarios sin trastornos alimentarios. *International Journal of Clinical and Health Psychology, 3*(1), 23-33.
- Lazarus, R. S. & Folkman, S. (1986). *Estrés y procesos cogniti*vos. Barcelona: Ediciones Martínez Roca, S.A.
- Lim, S. A. & You, S. (2017). Effects of self-esteem and depression on abnormal eating behavior among Korean female college students: mediating role of body dissatisfaction. *Journal of Child and Family Studies*, 26, 176-182.
- Macht, M., Haupt, C., & Ellgring, H. (2005). The perceived function of eating is changed during examination stress: a field study. *Eating Behaviors*, 6(2), 109-112.
- Martínez, M. A. & Bilbao, M. C. (2015). Los trastornos de la conducta alimentaria en el contexto universitario. In M. A. Martínez-Martín (Eds.), *Todo sobre los trastornos de la conducta alimentaria: Una visión multidisciplinar desde la experiencia y la evidencia científica* (pp. 535-564). Tarragona, España: Altaria.
- Martínez-Otero, V. (2014). Ansiedad en estudiantes universitarios: estudio de una muestra de alumnos de la Facultad de Educación. *Revista de la Facultad de Educación de Albacete*, 29(2), 63-78. doi.org/10.18239/ensayos.v29i2.384
- Montero, I. & León, O. G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology*, 7(3), 847-862.

- Olesti-Baiges, M., Martín-Vergara, N., Riera-Solé, A., de la Fuente-García, M., Bofarull-Bosch, J. M., Ricomá-de Castellarnau, G., & Moreso, J. L. P. (2007). Valoración de la propia imagen corporal en adolescentes femeninas de 12 a 21 años de la ciudad de Reus. *Enfermería clínica*, 17(2), 78-84.
- Pineda-García, G., Gómez-Peresmitré, G., Velasco-Ariza, V., Platas-Acevedo, S., & Áramburo-Vizcarra, V. (2014). Riesgo de anorexia y bulimia en función de la ansiedad y la edad pubertad en universitarios de Baja California-México. Revista Mexicana de Trastornos Alimentarios, 5, 80-90.
- Riveros, M., Hernández, H., & Rivera, J. (2007). Niveles de depresión y ansiedad en estudiantes universitarios de Lima Metropolitana. *Revista de Investigación en Psicología*, 10(1), 91-102.
- Serrano-Pintado, I. & Escolar-Llamazares, M. C. (2015). *Cómo vencer tus problemas de ansiedad ante los exámenes*. Madrid: Ediciones Pirámide.
- Shamsuddin, K., Fadzil, F., Ismail, W. S. W., Shah, S. A., Omar, K., Muhammad, N. A., & Mahadevan, R. (2013). Correlates of depression, anxiety and stress among Malaysian university students. *Asian Journal of Psychiatry*, *6*(4), 318-323.

- Solano-Pinto, N., & Cano-Vindel, A. (2012). Ansiedad en los trastornos alimentarios: Un estudio comparativo. *Psicothe*ma, 24(3), 384-389.
- Soto-Ruiz, M. N., Marin-Fernández, B., Aguinaga-Ontoso, I., Guillén-Grima, F., Serrano-Mozó, I., Canga-Armayor, N., ... Annaa, J. (2015). Análisis de la percepción de la imagen corporal que tienen los estudiantes universitarios de Navarra. *Nutrición Hospitalaria*, *31*(5), 2269-2275. doi:10.3305/nh.2015.31.5.7418.
- Spielberger, C. D. Gorsuch, R. I., & Lushene, R. E. (1970). STAI, Manual for the State-Trait Anxiety Inventory (Self Evaluation Questionnaire). California: Consulting Psychologists Press, Inc [Adaptación española de Seisdedos, N. (1994). Cuestionario de ansiedad Estado-Rasgo, STAI. Madrid: TEA].
- Trujano, P., De Gracia, M., Nava, C. & Limón, G.R. (2014). Sobrepeso y obesidad en preadolescentes mexicanos: estudio descriptivo, variables correlacionadas y directrices de prevención. *Acta Colombiana de Psicología*, 17(1), 119-130. doi: 10.14718/ACP.2014.17.1.12