

Body dissatisfaction and coexisting behaviors. Comparative study of adolescent and young women from the general population, dancers and women with an ED diagnosis

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Abstract:

Body dissatisfaction in adolescence is one of the factors predisposing to the development of eating disorders (ED). The dancers are a risk group for ideal physical characteristics and aspiration of "dominating her body" turning the body into a working tool and a midst of artistic expression. Objective: To analyze the degree of body dissatisfaction and possible conditions associated behaviors in adolescent and young girls, comparing three groups: students (general population), dancer students and girls diagnosed with ED. Methods: We administered the Body Shape Questionnaire (BSQ) to 566 female students: 247 of the general population, 175 were professional dancer students and 143 with a ED diagnosis. Descriptive and comparative analyses were performed. **Results and conclusions:** The concern for the body image was moderate to extreme in 19.8% - 6.1% of the general population students and 17.7% - 9.7% in dancers. In the dance students, concern and dissatisfaction with their own body image can be increased reaching a clinically significant degree of concern, but are not derived from a high BMI.

Keywords: body dissatisfaction, eating disorders, dance students.

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INTRODUCTION

Body dissatisfaction has been the focus of numerous investigations among clinical populations, the general population and risk groups (i.e. adolescents who may or may not practice an artistic activity and/or sports). This is because body dissatisfaction is an important risk factor for depression, low self-esteem and eating disorders. The physical changes that occur in adolescent girls often cause significant weight gain, which in many cases distances these young women from the dominant beauty ideals in our culture. This is why adolescence is considered the life stage when individuals are most at risk of becoming dissatisfied with their own body, and dissatisfaction is one of the most significant predictors of an ED, though it is not the only one (Stice, 2002). Del Río, Borda, Torres and Lozano (2002) have found that an important number of adolescent girls resort to behaviors detrimental to their health: self-induced vomiting, the use of laxatives and/or intense exercise, and dieting (the most common practice) in order to lose weight and reduce their body dissatisfaction. The percentage of girls who practice one or more of these

strategies ranged from 50-80% for dieting, 5-15% for vomiting, 2-6% for laxatives and 20-56% for physical exercise (Killen *et al.*, 1986; Unikel and Gómez, 1999; del Río, Borda, Torres and Rodríguez, 2000; del Río *et al.*, 2002, and others).

Regular exercise is considered fundamental to both physical and mental health. However, in scientific literature we find a high prevalence of ED and body dissatisfaction among adolescent women and youth who practice some sort of physical exercise in which thinness takes precedence. Thinness in these activities is associated with both the performance and the aesthetics: dance, ice skating and rhythmic gymnastics (Garner and Garfinkel, 1980; Ringham *et al.*, 2006; Sundgot-Borgen and Torstveit, 2004; Patel, Greydanus, Pratt and Phillips, 2003; Thomas, Keel and Heatherton, 2005). It seems that ballet is an activity where the conditions for developing EDs are particularly strong, due to the pressure to be thin and the high competitiveness, especially for vulnerable adolescents (Ackard, Henderson and Wonderlich, 2004; Anshel, 2004). Few comparative studies have been done on body dissatisfaction among adolescents in the general population, young women with an ED and high risk groups (specifically dance students). Rutzstein *et al.* (2010) concluded that for the diverse characteristics associated with EDs, dance students were more similar to middle school adolescents than to patients except in terms of their distorted body image, which was higher.

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Our research focuses on analyzing the degree of body dissatisfaction and the possible coexisting behaviors associated with it among female students from the general population in comparison with others who take professional dance classes and others who have been diagnosed with an ED.

METHOD

Participants. 566 women (ages 12 to 22), of which 247 were from the general population (high school, pre-university or university students), 144 had been diagnosed with some eating disorder according to DSM-IV criteria (outpatients from Hospital Universitario in Ciudad Real) and 175 were dance students from two professional dance conservatories in Andalusia (47 studied ballet, 22 modern dance, 57 flamenco and 49 Spanish dance) (see Table 1).

Instruments. The Spanish-language version of the Body

Shape Questionnaire (BSQ) by Cooper, Taylor, Cooper and Fairburn (1987) was used (adapted to Spanish by Raich, Mora, Soler *et al.*, 1996). **Procedure.** The young women and their parents (in the case of minors) were informed of the research objective and informed consent was obtained following the recommendations of Del Río (2005). All the participants completed the BSQ and weight and height were measured to determine their BMI. Participants who responded “many times”, “almost always” or “always” were selected in order to eliminate cases in which body dissatisfaction was isolated (“sometimes” or “almost never”). A cut-off point of 105 on the BSQ was considered (Table 1 and 2). To study the degree of body dissatisfaction, four levels were distinguished: *none, slight, moderate* and *extreme*, based on the scores obtained on the BSQ (Table 3).

Statistical analysis. For the statistical calculations, the predictive analytics software SPSS 20.0 was used. We did a descriptive analysis, a comparison of means (single factor

Table 1. Characteristics of the sample

	N		Age Mean (DT)		BMI Mean (DT)		BSQ Meam (DT)	
	GP	Whith ED	GP	Whith ED	GP	Whith ED	GP	Whith ED
							89,91 (47,65)	
							78,71 (31,77)	
Students	Sophomores	11	14	14 (0)	16,00 (1,17)	20,34 (2,47)	16,92 (2,60)	92,71 (42,30)
	Juniors	35	16	14,37 (0,60)	17,63 (1,85)	19,53 (2,11)	22,94(10,40)	123,44 (28,79)
	Seniors	30	50	15,83 (1,87)	17,78 (1,76)	19,56 (1,65)	19,50 (3,96)	123,56 (44,31)
	Pre-u 1	98	16	17,65 (1,39)	18,44 (,81)	20,92 (2,65)	19,62 (2,63)	144,75 (25,46)
	Pre-u 2	30	2	18 (1,33)	19,50 (,70)	20,97 (1,90)	18,25 (0,46)	144,00 (41,01)
	Job training	33	19	19,98 (1,63)	20,53 (1,43)	22,48 (3,10)	18,32 (1,74)	143,68 (31,72)
	University	10	27	21,60 (0,69)	20,22 (1,25)	21,50 (2,80)	20,45 (5,72)	135,11 (32,47)
							82,70 (36,91)	
							78,30 (43,95)	
							78,23 (33,92)	128,01 (39,10)**
	Total	247	144	17,32 (2,36)**	18,51 (1,42)**	20,77 (2,59)*	19,66 (5,18)*	
Dancers	Ballet	47		15,04 (2,33)		19,01 (1,99)*		83,26 (37,51)
	Modern	22		14,00 (2,37)		18,73 (1,99)*		70,32 (32,73)
	Flamenco	57		15,81 (2,43)		21,16 (2,66)*		82,35 (41,63)
	Spanish	49		15,35 (2,26)		19,88 (3,86)		75,47 (37,67)
	Total	175		15,25 (2,39)**		19,92 (2,96)*		79,16 (38,36)
Total sample	566		16,98 (2,61)		20,23 (3,56)		91,18 (42,48)	

Table 2. Body concern and dissatisfaction *p<0.05; **P<0.001

		N (%)		BSQ > 104	
				Mean (DT)	
		General population	Whith ED	General population	Con tca
Students	Sophomores	4 (6,9)	7 (6,4)	147,50 (20,20)	129,14 (23,86)
	Juniors	6 (10,3)	12 (11)	134,66 (19,80)	136,33 (18,88)
	Seniors	7 (12,1)	34 (31,2)	118,14 (1,46)	149,64 (21,58)
	Pre-u 1	23 (39,7)	15 (13,8)	129,43 (21,45)	148,00 (22,66)
	Pre-u 2	3 (5,2)	2 (1,8)	134,33 (11,71)	144,00 (41,01)
	Job training	12 (20,7)	17 (15,6)	123,66 (11,83)	151,64 (21,90)
	University	3 (5,2)	22 (20,2)	140,00 (18,52)	146,45 (23,23)
	Total	58(23,48)	109(75,69)	129,46 (18,25)**	146,20 (22,52)**
Dancers	Ballet	14 (32,6)		132,71 (20,12)	
	Modern	4 (9,3)		124,25 (16,05)	
	Flamenco	15 (24,9)		142,27 (24,31)	
	Spanish	10 (23,3)		139,10 (21,93)	
	Total	43 (24,6)		136,74 (21,61)*	
Total sample		210 (22,35)		139,64 (22,35)	

*p<0.05; **p<0.001

Table 3. Level of body concern and dissatisfaction

Age Group		None (BSQ < 81) N (%)	Slight (81 > BSQ < 100) N (%)	Moderate (100 > BSQ < 140) N (%)	Extreme (BSQ > 140) N (%)
Estudiantes Pop. General (N=247)	Preadolescents (ages 12 -14) (n=35)	22 (62,9)	5 (14,3)	4 (11,4)	4 (11,4)
	Adolescents (ages 15-18) (n=146)	92 (63)	16 (11)	32 (21,9)	6 (4,1)
	Youth (ages 19-22) (n=66)	39 (59,1)	9 (13,6)	13 (19,7)	5 (7,6)
	Total	153 (61,9)	30 (12,1)	49 (19,8)	15 (6,1)
Bailarinas (N=175)	Preadolescents (ages 12 -14) (n=73)	55 (75,3)	8 (11)	8 (11)	2 (2,7)
	Adolescents (ages 15-18) (n=85)	44 (51,8)	8 (9,4)	22 (25,9)	11 (12,9)
	Youth (ages 19-22) (n=17)	9 (52,9)	3 (17,6)	1 (5,9)	4 (23,5)
	Total	108 (61,7)	19 (10,9)	31 (17,7)	17 (9,7)
Pacientes Con tca (N=144)	Preadolescents (ages 12 -14) (n=1)	0 (0)	0 (0)	1(100)	0 (0)
	Adolescents (ages 15-18) (N=79)	16 (20,3)	6(7,6)	25 (31,6)	32 (10,5)
	Youth (ages 19-22) (N=64)	2 (13,3)	7 (10,9)	23 (35,9)	29 (45,3)
	Total	21 (14,6)	13 (9)	49 (34)	61 (42,4)

Table 4. BSQ items representative of high body concern and dissatisfaction

Certain coexisting behaviors	Kruskal Wallis		Mann Whitney		
	H(3)	p	U	p	z
Item 1 Has feeling bored made you brood about your shape?	6,53	0,038	1784,00 (Dance and GP) 912,000 (GP and ED)	0,041 0,024	-2,044 -1,808
Item 2 Have you been so worried about your shape that you have been feeling you ought to diet?	5,92	0,015	609,500 (Dance and ED)	0,015	-2,435
Item 3 Have you thought that your thighs, hips or bottom are too large for the rest of you?	18,46	0,000	1321,39 (ED and GP) 825,500 (Dance and ED)	0,000 0,000	-3,689 -4,314
Item 4 Have you been afraid that you might become fat (or fatter)?	18,20	0,000	1339,50 (ED and GP) 998,50 (Dance and ED)	0,000 0,000	-3,766 -4,146
Item 5 Have you worried about your flesh being not firm enough?	17,98	0,000	838,00 (ED and GP) 630,500 (Dance and ED)	0,000 0,000	-3,845 -3,786
Item 6 Has feeling full (e.g. after eating a large meal) made you feel fat?	28,78	0,000	776,000 (ED and GP) 433,000 (Dance and ED) 1215,00 (Dance and GP)	0,000 0,000 0,034	-3,769 -5,327 -2,120
Item 9 Has being with thin women made you feel self-conscious about your shape?	8,72	0,013	766,50 (Dance and GP)	0,003	-2,921
Item 10 Have you worried about your thighs or waist spreading out when sitting down?	8,57	0,014	835,500 (ED and GP)	0,005	-2,793
Item 12 Have you noticed the shape of other women and felt that your own shape compared unfavorably?	7,42	0,024	955,000 (ED and GP) 1279,500 (Dance and GP)	0,032 0,013	-2,140 -2,496
Item 16 Have you imagined cutting off fleshy areas of your body?	6,40	0,041	172,000 (Dance and ED)	0,009	-2,611
Item 21 Has worry about your shape made you diet?	9,52	0,009	520,500 (ED and GP)	0,018	-1,437
Item 23 Have you thought that you are in the shape you are because you lack self-control?	3,95	0,047	297,500 (Dance and ED)	0,003	-2,972
Item 24 Have you worried about other people seeing rolls of fat around your waist or stomach?	12,27	0,002	1030,000 (ED and GP) 715,000 (Dance and ED)	0,001 0,004	-3,377 -2,868
Item 30 Have you pinched areas of your body to see how much fat there is?	8,55	0,014	1268,000 (Dance and GP)	0,005	-2,814
Item 31 Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?	5,40	0,020	636,00 (Dance and ED)	0,020	-2,325
Item 34 Has worry about your shape made you feel you ought to exercise?	8,78	0,012	1970,50 (ED and GP)	0,004	-2,916

Figure 1-. Percentage of students based on their degree of body concern and dissatisfaction

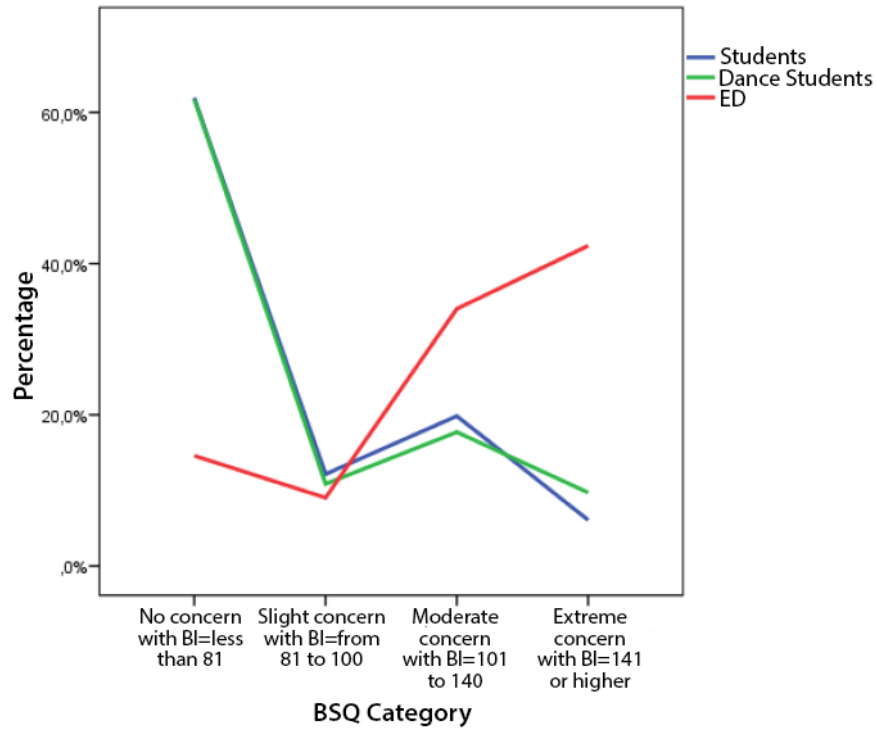


Figure 2. Body concern and dissatisfaction based on age

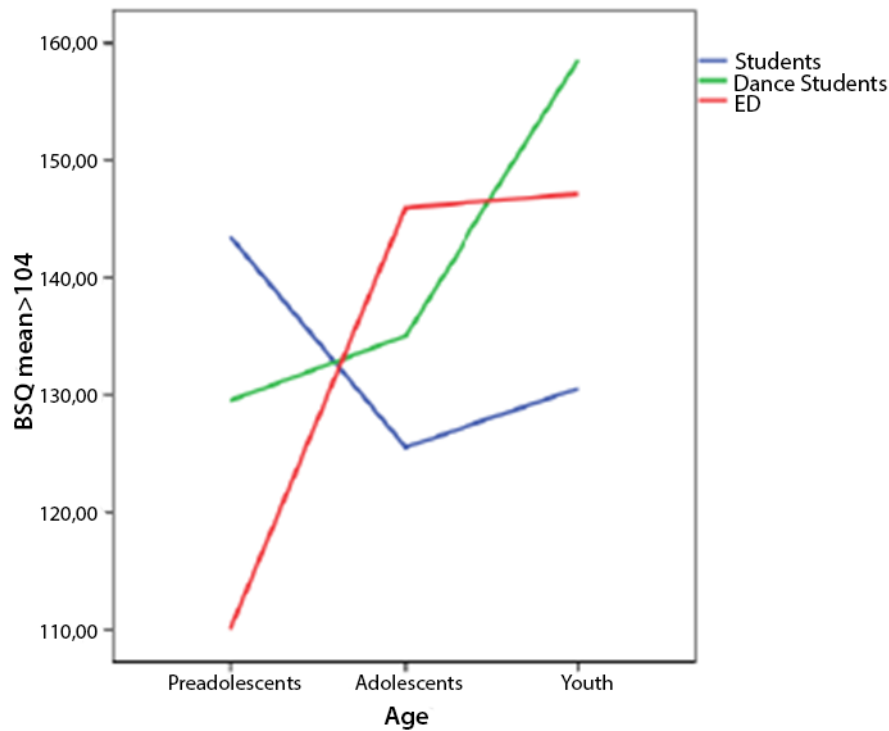
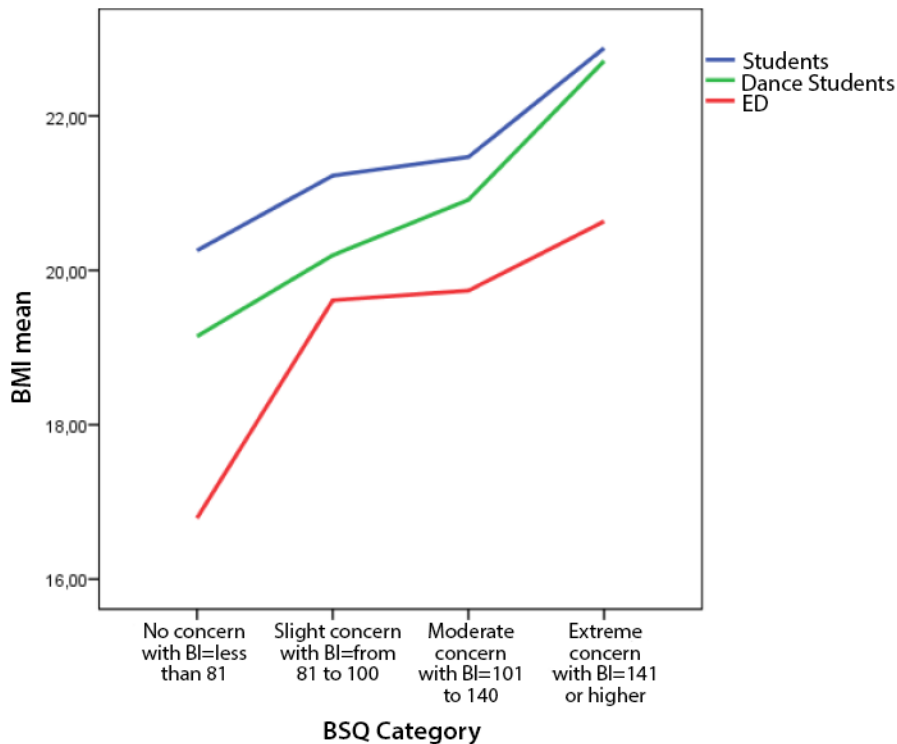


Figure 3. Level of body concern and dissatisfaction as a function of BMI



ANOVA) and multiple comparisons (Sheffé test). To study the differences with respect to the coexisting behaviors associated with body concern and dissatisfaction, we applied Kruskal-Wallis and the U by Mann-Whitney.

RESULTS

DISCUSSION

Our findings concur with other studies in relation to young women from the general population. Among such women, dissatisfaction tends to normalize once they have gotten used to the physical changes of adolescence. However, among dancers, we noted that this dissatisfaction not only does not diminish but instead increases or at least remains steady with age. In this regard, Dotti *et al.* (2002) suggested that concerns regarding eating, weight and body image increase with age and with the duration of dance studies. Among the groups with EDs, dissatisfaction sets in during adolescence and persists in the different life stages.

In summary, given the results of our study, we can conclude that the practice of dance can promote greater dissatisfaction with one's body image and reach a clinically significant degree of concern even without a high BMI. At the same time, this concern as a behavioral response to the search for ideal thinness can lead women to start low-calorie diets that are dangerous for their health and adopt body avoidance behaviors and other coexisting behaviors like those listed on Table 4. Based on these results, there is a need to take preventive measures at professional dance conservatories. The differences noted for women studying dance justify the need to consider this variable in the prevention programs in order to adapt them to the characteristics of each group, as we have noted in another study (García-Dantas, Del Río-Sánchez, Sánchez-Martín, Avargues and Borda, 2013).

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