

EATING DISORDERS AMONG CLASSIC BALLET DANCERS

Transtornos alimentares em bailarinas clássicas adolescentes

Trastornos alimentarios en bailarinas clásicas adolescentes

Original Article

ABSTRACT

Objective: To describe the prevalence of eating disorders symptoms among classical ballet dancers. **Methods:** This is an analytical, observational, cross-sectional study, conducted in 2009, that investigated eating disorder symptoms using the Eating Attitudes Test (EAT-26) and Bulimic Investigatory Test, Edinburgh (BITE). The body image of the study population was assessed by the Body Shape Questionnaire (BSQ). In addition, the anthropometric assessment was performed – measurement of weight, height and skin folds, calculation of body mass index (BMI) and body fat percentage. **Results:** Of all the 139 female adolescents assessed, 4.4% (n=6) had nutrition problems and 23% (n=23) presented abnormal values of body fat. The analysis of the EAT concluded that 12.3% (n=17) of the girls presented positive results for anorexia nervosa (AN). The BITE results showed that 13.7% (n=19) of the girls had unusual eating habits and 6.5% (n=9) presented subclinical bulimia nervosa (BN). As for severity, 3.6% (n=5) of the girls presented clinically significant results and 1.4% (n=2) were diagnosed with high severity. Concerning the results of the BSQ, 15.7% (n=21) of the girls were slightly concerned about body image; 5.2% (n=7) were moderately worried, and 6.7% (n=9) were severely concerned about it. **Conclusion:** This study did not diagnose the occurrence of eating disorders but found symptoms of AN (Anorexia Nervosa) and BN (Bulimia Nervosa). Its main purpose was to alert about the prevalence of the possible development of eating disorders due to the influences of the environment where the teenagers are inserted – under a model defined by the classic ballet dance and the psychological turmoil of adolescence.

Descriptors: Eating Disorders; Nutritional Status; Adolescent.

RESUMO

Objetivo: Analisar a prevalência de sintomas de transtornos alimentares (TAs) em bailarinas clássicas adolescentes. **Métodos:** Estudo observacional, transversal e analítico, realizado em 2009, cujos sintomas de TAs foram investigados aplicando-se os testes Eating Attitudes Test (EAT-26) e Bulimic Investigatory Test, Edinburgh (BITE). A avaliação da imagem corporal da população estudada se deu pelo Body Shape Questionnaire (BSQ). Além disso, foi realizada avaliação antropométrica – aferição de peso, estatura e pregas cutâneas, cálculo do índice de massa corporal (IMC) e percentual de gordura corporal. **Resultados:** Das 139 adolescentes avaliadas, os desvios nutricionais estavam presentes em 4,4% (n=6); e 23% (n=32) apresentaram percentual de gordura anormal. A análise do EAT concluiu que 12,3% (n=17) apresentaram resultados positivos para a anorexia nervosa (AN). Diante dos resultados do BITE, identificou-se que 13,7% (n=19) apresentam hábito alimentar não usual e 6,5% (n=9) refletem quadro subclínico de bulimia nervosa (BN). Com relação à gravidade, 3,6% (n=5) apresentaram resultado significativo clinicamente e 1,4% (n=2), de alta gravidade. Ao avaliar o BSQ, 15,7% (n=21) encontravam-se levemente preocupadas com a imagem corporal; 5,2% (n=7), moderadamente; e 6,7% (n=9), extremamente preocupadas. **Conclusão:** O estudo não diagnosticou a presença de TAs, mas verificou a existência de sintomas de anorexia e bulimia nervosa. Ele teve como principal intuito alertar sobre a prevalência do possível desenvolvimento de TAs diante das interferências do meio em que essas adolescentes convivem, sob o modelo definido pelo balé clássico e as perturbações comuns na fase da adolescência.

Descritores: Transtornos Alimentares; Estado Nutricional; Adolescentes.

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RESUMEN

Objetivo: Analizar la prevalencia de síntomas de trastornos alimentarios (TAs) en bailarinas clásicas adolescentes. **Métodos:** Estudio observacional, transversal y analítico realizado en 2009 cuyos síntomas de TAs fueron investigados con la aplicación de las pruebas Eating Attitudes Test (EAT-26) y Bulimic Investigatory Test, Edinburgh (BITE). La evaluación de la imagen corporal de la población estudiada se dio por el Body Shape Questionnaire (BSQ). Además, fue realizada la evaluación antropométrica – medición del peso, altura y pliegues cutáneos, cálculo del índice de masa corporal (IMC) y porcentual de grasa corporal. **Resultados:** De las 139 adolescentes evaluadas los desvíos nutricionales estaban presentes en el 4,4% (n=6); y el 23% (n=32) presentaron porcentual de grasa anormal. El análisis del EAT concluyó que el 12,3% (n=17) presentaron resultados positivos para la anorexia nerviosa (NA). Delante de los resultados del BITE se identificó que el 13,7% (n=19) presentan la costumbre alimentaria no usual y el 6,5% (n=9) reflejan cuadro subclínico de bulimia nerviosa (BN). Respecto a la gravedad, el 3,6% (n=5) presentaron resultado clínicamente significativo y el 1,4% (n=2) de alta gravedad. Al evaluar el BSQ, el 15,7% (n=21) se encontró levemente preocupadas con la imagen corporal; el 5,2% (n=7) moderadamente y el 6,7% (n=9) extremadamente preocupadas. **Conclusión:** El estudio no diagnóstico la presencia de TAs pero verifico la existencia de síntomas de anorexia y bulimia nerviosa. Él tuvo como principal objetivo alertar sobre la prevalencia del posible desarrollo de TAs delante de las interferencias del medio en que las adolescentes conviven bajo el modelo definido por el ballet clásico y las perturbaciones comunes de la fase de adolescencia.

Descriptores: Trastornos de la Conducta Alimentaria; Estado Nutricional; Adolescente.

INTRODUCTION

Eating Disorders have increased over the last twenty years, especially among adolescents aged 10 to 19 years, young females prevailing at a rate of 90 to 95%. They are very recurrent among working professionals whose performance is linked to lightness, such as gymnasts, jockeys, skaters and ballet dancers or whose images are linked to beauty and are commercially used, such as models and actresses⁽¹⁾. Among classic ballet dancers, one in every five can develop an eating disorder, being it more frequent among young working or student females⁽²⁾.

Eating Disorders are characterized by abnormal eating behaviors, i.e. when the individual is extremely worried about what they eat or how much they weigh and stops eating properly what, as a result, interferes in their nutritional status and sets off a chain reaction that is very harmful to their health⁽¹⁾. These are pathologies with potentially high morbidity and mortality and whose etiology comes from

various factors, such as biological, psychological, socio-cultural and family related problems⁽³⁾. Affected individuals develop serious alterations in the capacity to perceive their body shape and weight; they create a distorted image of their own body bringing complications to the natural process of interaction between mind and body⁽⁴⁾. The most frequent kinds of Eating Disorders are anorexia nervosa (AN) and bulimia nervosa (BN).

AN is characterized by voluntary restriction of food, triggering severe weight loss in the constant search for thinness⁽⁵⁾. There is a deep concern about the physical form as well as a great physical and psychological strain. Losing weight is the main goal to be achieved and to do so, besides altering eating habits, adopting diets and long fasting periods, it is common the excessive practice of physical exercises, laxatives, diuretics and appetite suppressants. The patient's weight decreases by 15% or more below what it is expected for their age and height. Paradoxically, the desire to lose weight may become more pronounced as it decreases^(6,7).

BN does not deplete the individual's nutritional status as serious as in comparison with AN. Bulimics usually keep average weight or are slightly overweight, alternating hyperphagia crisis with improper compensatory and purgative methods to avoid gaining weight⁽³⁾. The misinterpreting of body size is typically lower than that seen in AN⁽⁶⁾.

The daily routine of a classic ballet dancer is full of circumstances that make them particularly vulnerable to disordered eating behaviors. Such behaviors, which aim at improving the performance and seizing the opportunities in the world of dance, may bring serious complications on an emotional basis and are usually pathologic, bringing about a distortion in the way they see their own body shape and weight⁽⁸⁾.

In the face of the relevance of this matter, this study aims at analyzing the prevalence of Eating Disorder symptoms in adolescent classic ballet dancers, who are dance school pupils in the municipalities of Vitória and Vila Velha in Espírito Santo.

METHODS

This is an observational, cross-sectional and analytical study whose field research took place in 2009 from March to July with a population composed of 229 female ballet dancers and a sample of 139 adolescent girls regularly attending six dance schools, one of them public and the others private. Four of them are situated in Vitória and the other two in Vila Velha, Espírito Santo, Brazil. Schools with a long time of existence and frequent participation in festivals and dance competitions were invited to be part of this research.

As a criterion to be part of this study, the girls had to be aged between 10 and 18, they also had to be properly enrolled in one of the schools invited to join voluntarily the research and they had to have been practicing classic ballet for over a year. The parents of the girls participating in the study had to sign an informed consent form. All girls that met the requirements previously mentioned and voluntarily wished to take part in this study were interviewed and assessed.

The socioeconomic profile of the study sample was drawn based on the Brazil Economic Classification Criterion (*Critério de Classificação Econômica Brasil – CCEB*), which allows the stratification of the population into social classes, according to the Socioeconomic Survey (IBOPE, 2008)⁽⁹⁾.

Tools were used to draw the adolescents' anthropometric profile. This evaluation consisted of measuring weight and height in order to obtain the body mass index (BMI). To define the percentage that characterize the diagnosis of the nutritional status we adopted the cut-off points recommended by the National Center for Health Statistics (NCHS, 2000)⁽¹⁰⁾. Triceps and subscapular skinfolds were measured through anthropometric equations in order to get more accurate values for the body fat percentage of the adolescents. Finally, all recommended anthropometric measures were verified⁽¹¹⁾.

The fat percentages were determined by applying the formula⁽¹²⁾ and adopting the cut-off points⁽¹³⁾ established by the specialized literature that determines 30-35% as high and above 35% as very high.

The presence of Eating Disorders symptoms was detected through self-administered questionnaires, included the EAT-26 (Eating Attitudes Test), BITE (Bulimic Investigatory Test, Edinburgh) and BSQ (Body Image Questionnaire) tests, all internationally recognized, validated and used in the Portuguese version⁽¹⁴⁻¹⁷⁾.

The data collected and stored in the 2003 Excel software were later statistically analyzed by the SPSS 15.0 software. For the descriptions of variables, it was used simple frequency and percentage tables. The associations of the variables related to nutritional status, fat percentage and eating disorders tests used the chi-square test with a significance level of 5%, i.e. $p\text{-value} \leq 0.05$, indicating a significant relationship between the variables.

The study was approved by the Research Ethics Committee of the Salesian College of Vitória (*Faculdade Salesiana de Vitória – FSU*) under the registration number 02/2009.

RESULTS

A total of 139 adolescent ballet dancers took part in this study, their average age was 14.2 ± 2.65 years, minimum age 10 and maximum 18.

In all, 59% (n=82) of the grand total attended dance schools from the city of Vitória and 41% (n=57) from Vila Velha. A total of 103 (74.1%) attended private schools and 36 (25.9%) attended public schools. As for schooling, 88 (63.3%) were in elementary school, 49 (35.3%) in high school, and 2 (1.4%) were enrolled in a higher education program, as shown in Table I.

Table I - Socio-demographic characterization and nutritional status of classical ballet dancers from the municipalities of Vitória and Vila Velha, ES, 2009.

Variables	TOTAL	
	n	%
Age (years)		
10	14	10.1
11	14	10.1
12	25	18.0
13	20	14.4
14	18	12.9
15	24	17.3
16	11	7.9
17	3	2.2
18	10	7.2
Education		
Elementary School	88	63.3
High School	49	35.3
Higher Education	2	1.4
Schools		
Private	103	74.1
Public	36	25.9
Scholarships		
Yes	32	24.0
No	104	76.0
Race		
White	91	66.9
Black	45	33.1
Economic Class		
Class D	8	5.8
Class C	53	38.1
Class B2	35	25.2
Class B1	30	21.6
Class A2	13	9.4
BMI		
Low Weight	3	2.2
Well Nourished	133	95.7
Overweight/Obesity	3	2.2
Fat Percentage		
Normal	107	77.0
High	31	22.3
Very High	1	0.7
TOTAL	139	100.0

BMI: Body Mass Index

It was found that 118 (84.9%) belonged to economic classes B and C, 32 (24%) were scholarship holders and 45 (33.1%) classified themselves as being black (Table I).

One can see in Table II a BMI and body fat percentage average of 18.8 ± 2.17 kg / m² and $25.8 \pm 4.68\%$, respectively. Through the results of BMI, it is possible to say that 133 (95.7%) of the adolescents had normal weight, 3 (2.2%) were underweight, and 3 (2.2%) had a nutritional diagnosis of overweight or obesity (Table I). It can also be affirmed that 107 (77%) had normal fat percentage, 31 (22.3%), high, and 1 (0.7%), very high (Table I).

The analysis of the EAT-26 test confirmed that 12.3% (n=17) had a positive diagnosis of AN symptoms (Table III).

The diagnostic results of body image disorders (BSQ test) showed that 15.7% (n=21) were slightly concerned with their own body image, 5.2% (n=7), moderately concerned, and 6.7% (n=9), extremely concerned (Table III).

The results of BITE (test which diagnoses indications of BN) for the detection of symptoms showed that 13.7% (n=19) had unusual eating habits, 6.5% (n=9) reflected a subclinical bulimia, and 1.4% (n=2) showed a high

Table II - Anthropometric characteristics of classical ballet dancers from the municipalities of Vitória and Vila Velha, ES, 2009.

Variables	n	Minimum	Maximum	Average	Standard Deviation
Age	139	10	19	14.2	2.6
Weight (kg)	139	22.3	70.0	46.2	8.0
Height (m)	139	1.21	1.75	1.5	0.08
BMI (kg/m ²)	139	13.6	26.1	18.8	2.1
Triceps Skinfold	139	9.0	33.0	18.2	4.5
Subscapular Skinfold	139	6.0	30.0	11.6	4.2
Fat Percentage	139	11.0	36.4	25.8	4.6

BMI: Body Mass Index

Table III - Classification of Eating Disorders diagnostic tests in classical ballet dancers from the municipalities of Vitória and Vila Velha, ES, 2009.

Variables	TOTAL	
	n	%
EAT		
Negative	121	87.7
Positive	17	12.3
BSQ		
Not concerned with body image	97	72.4
Slightly concerned	21	15.7
Moderately concerned	7	5.2
Extremely concerned	9	6.7
BITE symptoms		
Asymptomatic	109	78.4
Unusual eating habit	19	13.7
Subclinical group	9	6.5
Symptomatic	2	1.4
BITE Severity		
Insignificant	132	95.0
Clinically significant	5	3.6
Highly severe	2	1.4

EAT: Eating Attitudes Test

BSQ: Body Shape Questionnaire

BITE: Bulimic Investigatory Test, Edinburgh

probability for the diagnosis of BN (Table III). According to the BITE test assessment, it was observed that 95% (n=132) demonstrated insignificant values for BN, while 3.6% (n=5) and 1.4% (n=2) presented clinically significant values and high severity, respectively, for the disorder (Table III).

Table IV shows the results for the correlations between fat percentages and the tests that indicate symptoms of eating

disorders, EAT-26, BITE and BSQ. The data showed in Table IV report that: 22.5% (n=23) of the sample diagnosed with normal fat percentage showed some degree of concern with body image ($p<0.05$), 43.8% (n=14) of the adolescents with excess body fat reported preoccupation with body image and 37.5% (n=12) of these showed symptoms of BN ($p<0.05$).

Table IV - Association between body fat percentage and eating disorders test results in adolescent ballet dancers from the municipalities of Vitória and Vila Velha, ES, 2009.

Variables	Fat Percentage			<i>p</i>
	Normal	High /Very High	TOTAL	
EAT				0.071
Negative	96 (90.6%)	25 (78.1%)	121 (87.7%)	
Positive	10 (9.4%)	7 (21.9%)	17 (12.3%)	
BSQ				0.041
Not concerned with body image	79 (77.5%)	18 (56.3%)	97 (72.4%)	
Slightly concerned	14 (13.7%)	7 (21.9%)	21 (15.7%)	
Moderately concerned	5 (4.9%)	2 (6.3%)	7 (5.2%)	
Extremely concerned	4 (3.9%)	5 (15.6%)	9 (6.7%)	
BITE symptoms				0.028
Asymptomatic	89 (83.2%)	20 (62.5%)	109 (78.4%)	
Unusual eating habit	13 (12.1%)	6 (18.8%)	19 (13.7%)	
Subclinical group	4 (3.7%)	5 (15.6%)	9 (6.5%)	
Symptomatic	1 (0.9%)	1 (3.1%)	2 (1.4%)	
BITE Severity				0.214
Insignificant	103 (96.3%)	29 (90.6%)	132 (95.0%)	
Clinically significant	3 (2.8%)	2 (6.3%)	5 (3.6%)	
Highly severe	1 (0.9%)	1 (3.1%)	2 (1.4%)	

EAT: Eating Attitudes Test

BSQ: Body Shape Questionnaire

BITE: Bulimic Investigatory Test, Edinburgh

DISCUSSION

Classical ballet is a complex and highly technical practice that requires its practitioners to have an athlete's like performance. Dancers must be conditioned, trained and rehabilitated as one, respecting the particularities that the activity attributes to them⁽¹⁸⁾.

Athletes who suffer from an eating disorder face a paradox, since the necessary behaviors to achieve the body weight that will lead to success, such as semi-starvation, purging and excessive exercising, affect negatively their health, energy reserves and physiological functions, profoundly reducing the ability of the individual to train and compete⁽²⁾. Nutritional assessment in individuals exposed to health risks has become an important tool to detect eating disorders, especially AN and BN⁽¹⁹⁾.

According to published data⁽²⁰⁾, the prevalence of normal weight in dancers was present in 91.3% of the studied population, a fact that supports the present study, which diagnosed 95.7% of the population as being well nourished. However, when assessing a group of adolescent female classical ballet dancers who attended a dance school in Fortaleza⁽⁸⁾, a study found that only 71.1% of the girls were well nourished. And when assessing adolescents attending a modeling school⁽¹⁾, models represent a group also considered at risk for the development of eating disorders, 67.9% of the population was considered well nourished.

This study found an average BMI of 18.8 ± 2.17 kg/m², similar to the value obtained in a study with athletes from aesthetic sports⁽²⁾, who had a BMI of 18kg/m² and lower than the one stated in a research with young student athletes

affiliated to various sports clubs in Rio de Janeiro⁽¹⁹⁾, whose BMI found was 21.6 ± 2.3 kg/m².

A study carried out in Germany⁽²¹⁾ compared the anthropometric profiles of dancers and school students, both groups were composed of teenagers, and evidenced an average BMI of 16.9 kg/m² and 19.9 kg/m², respectively. The authors stated that not one dancer was overweight and 32% were underweight, while, among the students, only 2% were underweight and 5% overweight. In turn, a study with school students⁽²²⁾ found an average BMI of 21.1 kg/m².

The analysis of the anthropometric measures collected by this study revealed that most of the assessed dancers had an adequate relation between weight and height (BMI), confirming that the data found by this study corroborate the data found by other studies, such as the study conducted with aesthetic sports athletes⁽²⁾. However, these values were higher than those obtained in the German survey⁽²⁰⁾ and lower when compared to those found in the population of non-athlete⁽²⁰⁾ school students. The results may reflect the profile of the custom and the society to which the adolescents belong. Classical ballet is more traditional in Germany what suggests a greater demand from teachers in keeping the dancers within the standards established by the aesthetics of classical dances, while in Brazil, it is noticed that only a small portion of the young people who take ballet lessons expresses a desire to becoming professional dancers; thus, there is not the strictness concerning weight as there is in German schools.

It is considered that the nutritional status of an individual is not only defined by their BMI; other aspects are also relevant for the diagnosis of problems, such as eating disorders⁽¹⁸⁾.

The present study revealed that the average fat percentage of the assessed girls corresponded to $25.8 \pm 4.68\%$, indicating that 77% of them had normal fat percentage, 22.3% high, and 0.7%, very high. Similar results were obtained in studies that investigated athletes and female school students^(19,20), which obtained an average fat percentage of 23.1% and 29.7%, respectively.

Physical training is an important factor in the changes of body composition, involving many variations among young athletes. Several physiological adaptations take place after a period of physical training. The increased metabolic rate or energy expenditure, for example, are two characteristic changes that directly reflect the decrease in body fat percentage⁽²³⁾. However, the period of sexual maturity, which occurs during the adolescence, is an important factor that directly affects girls' body composition because the hormonal action is intense⁽²⁴⁾, which explains the values of fat percentage, normal, high and very high.

Current data found in contemporaneous specialized literature show that there is a strong relationship between

eating disorders and high body fat percentage. Even though they seem to be opposing characteristics, one is a risk factor for the development of the other. The constant desire for the ideal body can be considered a facilitator of inadequate nutritional attitudes with the objective of maintaining body weight⁽²⁴⁾.

A study conducted with classical ballet dancers⁽²⁵⁾ revealed that 83% of them had some kind of eating disorders. 6.9% of them had AN, 10.3% BN and 10.3% a combination of both.

The classificatory analysis of the EAT-26 tests, applied in this study, revealed that 12.3% of the adolescents were positive for symptoms of AN, a similar result was found by a study conducted with ballet dancers⁽²⁶⁾, 12% of them being positive for eating disorders. Different results were found by a study with young athletes affiliated to sports clubs⁽¹⁹⁾, according to which 100% of the sample was diagnosed as being within limits for AN.

The BITE results, used for detection of symptoms, showed that 78.4% had normal eating patterns; 13.7% unusual eating habits; 6.5% presented subclinical bulimia; and 1.4% high probability for BN diagnoses. Concerning severity, BITE pointed 3.6% as having clinical significant indication of BN and 1.4% high BN probability. Nonetheless, a survey conducted with athletes⁽¹⁹⁾ stated that 83.3% of the studied population was within normal limits; 16.7% showed unusual eating patterns, indicating the presence of risky eating behaviors; and 100% showing no significant symptoms for BN diagnoses.

Through these results, we can say that classical ballet and aesthetic sports offer a higher risk for the development of eating disorders than other sports. The study conducted in Rio de Janeiro⁽¹⁹⁾ with young athletes who practiced team and individual sports and also fights did not find any indications of AN symptoms nor significant values in the severity scale for BN confirmation in any of the interviews conducted.

EAT-26 test done with schoolchildren⁽⁶⁾ revealed that 13.3% of them presented a positive test result for eating disorders. The BITE test results revealed that 16.4% of the adolescents presented unusual eating patterns and 0.6% indicated a probable BN diagnosis. A study with adolescent girls and adult women⁽¹⁴⁾ found that 16.6% of them presented a positive diagnosis for EAT-26. Regarding the BITE test results, 30.4% presented an unusual eating pattern and 3.3% a severely disturbed one with binge eating events.

The diagnostic results of body image disorders (BSQ) showed that 15.7% were slightly concerned, 5.2%, moderately concerned, and 6.7% extremely concerned. These numbers differ from those found in the study that

assessed body image in athletes⁽¹⁹⁾, identifying 33.3% and 66.7% with slight and none body image distortion respectively.

Researchers confirmed the impression that, nowadays, many women go on diets and feel dissatisfied with their bodies, even when they are not overweight^(7,18). Attaching too much importance to weight seems to be one of the most significant risk factors for the development of eating disorders⁽¹⁴⁾. Once clinically established, they become very resistant to treatment, which reinforces the need for preventive measures focused on the higher-risk groups.

Regarding body image, the authors studied the relationship between body image and dance styles, noting that classical dance has a negative influence on body image^(18,19).

Ballet teachers have a significant role in the development or not of Eating Disorders. A simple comment coming from them can set off the process. A careless remark can be rooted deeply in the mind of a potential anorexic or bulimic^(2,18). Authors^(4,18) agree that teachers (coaches) and parents should not insist on an “ideal” body type to dance. Depending on the age, they should have the responsibility to guide and encourage, being careful not to exclude adolescents from competitions, festivals and dance exhibitions due to their weight.

The awareness of the aspects previously mentioned by all the intervening agents allows differentiation and gradual appreciation of the practice of classical ballet and other sport activities. With the qualitative improvement of practice at various levels, comes the effective maintenance of athletes’ health⁽²⁷⁾. There is a need for human beings to love their body and have a positive appreciation for them in order to recognize it, accept it and never disapprove of it for being as it is⁽¹⁸⁾.

The data assessed and discussed here refer to some professional teams of athletes and dancers. It is important to consider that some of the adolescents assessed practice classical ballet just as a hobby and do not wish to become professional dancers.

CONCLUSION

This study did not diagnose the presence of Eating Disorders, but found the existence of symptoms of anorexia and bulimia nervosa. Its main purpose is to warn about the prevalence of possible development of Eating Disorders due to interferences in the environment in which these teens are inserted, under the model defined by classical ballet and common disorders of adolescence.

More studies are needed in this area in order to obtain comparative data and, consequently, better analyses and interventions.

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