

Dissatisfaction with Body Image and Development of Food Disorders in Dancers - An Integrative Literature Review

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ABSTRACT

Introduction: The eating disorders (ED) are psychological distress responsible for causing negative effects with how the individuals see themselves. They are classified in two main categories: Anorexia and Bulimia. Researchers show that students from Health field, practitioners of sport, dancers are more predisposed to the ED development.

Goal: to identify on literature corporal dissatisfaction in dancers and their associated factors relating them to eating disorders development.

Methodology: Through the LILACS, BVS and MEDLINE databases, studies from the past ten years on dissatisfaction with body image and the development of Eating Disorders were gathered. For the search, health descriptors such as Anorexia nervosa, Bulimia nervosa and Dance.

Results and discussion: On the results, it was viewed that the corporal dissatisfaction is categorically present in the lives of the dancers, once it showed present in 80 % of the analysed articles. Critical comments, expectation put by society and the coach's opinion are related factors for the dissatisfaction with the body.

Conclusion: it concludes that the corporal dissatisfaction is present in the group of dancers, being one of the main factors for the Eating disorder development.

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Introduction

Eating Disorders (ED) are psychological disorders responsible for causing negative effects on the way people see themselves, that is, it is a problem that interferes with the self perception of body image [1]. They can be classified into two main categories: Nervous Anorexia (NA) and Nervous Bulimia (NB) [2].

Nervous Anorexia is responsible for 20% of the deaths of all people who live with it. In addition, it may be responsible for several manifestations in the individual's body, such as cerebral atrophy, amenorrhea, cardiac arrhythmia, anemia, osteoporosis and gingivitis [3]. Patients with nervous bulimia are more susceptible to low blood pressure, irritability, insomnia, muscle hypotonia and loss of sexual interest [4].

At risk groups are university students in health courses, sportspeople who value low weight, such as gymnasts, and dance practitioners who suffer from aesthetic influence [5]. In dancers there is a higher demand on body image when compared to the general population [6]. In this modality, an excessive concern with body aesthetics is often associated with excessive physical activity and risky behavior to maintain pre-eliminated patterns:

lean body and low percentage of fat [7].

Themes such as the risk factors for the development of Eating Disorders and the main groups to be affected, were specific in this work; thus enabling appropriate intervention by health professionals who work with the disease. The aim of this research was to identify dissatisfaction with body image in dancers in the literature and its associated factors, which is one of the most important risk factors for the development of Eating Disorders.

Theoretical Framework

Food Disorders

Eating disorders (ED) are classified as psychological disorders that interfere with self-perception of body image, commonly occurring behaviors characterized by fear of gaining weight, causing the individual to develop irregularities in the way of eating, which can generate health risk, being the use of drugs that promote weight loss, exaggerated control of food and induction of vomiting after a meal is common [1]. Due to the increased incidence of Eating Disorders, they have become a public health problem [8].

The interaction of several factors can act causing the ED. The most important are the social ones, the body pattern seen by society as the ideal; the psychological, due to the propensity or presence of

some behavioral disorder; and genetic because there have already been cases in the family or there is a biological propensity for that [9]. There are several types of ED, however, there are two more known disorders: nervous anorexia and nervous bulimia [2].

The International Disease Code (ICD-10) describes nervous anorexia as a disorder characterized by excessive weight loss, intentional and maintained by the patient associated with a specific psychological pathology, in which there is a fear of fat and sagging body in addition to establishing for themselves, low weight limit. Nervous Bulimia, on the other hand, is characterized by ICD-10 as an excessive concern with body weight, the individual goes through episodes of overeating followed by purgative attitudes [10]. The diagnosis of NB occurs when these behaviors occur at least twice in a week for a period of three months [11]. Young people with these disorders have a lower quality of life than those diagnosed with schizophrenia [12]. Nervous anorexia is a public health problem because it has a long clinical history and can become chronic. [13]. Bulimia is usually characterized by a lack of self-control, whereas anorexia is its excess. A study by Costa-Val et al. used semi-structured interviews with health professionals, participants in Primary Care teams and Mental Health in a municipality in Minas Gerais, to get to know how workers in a health network understand bulimia and anorexia. In this study, one of the psychiatrists interviewed stated that what differentiates anorexia from bulimia is the current weight, since you can find patients who have bulimia with purgative actions and adequate weight, while people with anorexia will often find their weight below of the ideal. The most critical symptoms are related to worsening quality of life and serious damage to health [14].

Eating Disorders have a direct influence on the individual's metabolism and nutritional status. Some of its main consequences are endocrine, gastrointestinal changes and muscle strength deficiency. The clinical problems involving Nervous Anorexia are due to malnutrition, whereas Nervous Bulimia is generally related to hydroelectrolytic disorders [14]. These disorders can affect individuals of all economic levels, varied levels of education, ethnicity and gender [16]. however the occurrence is shown to be higher in specific groups [17].

Research shows that students of health courses [18]. and sports practitioners who value a leaner body shape such as swimming and ballet are included in the risk group to develop ED[19]. With the idealization of a slim body and the influence of aesthetics on performance, dancers show a greater propensity for body image dissatisfaction and thus are also more predisposed to develop TA [10].

Food Disorders and Dance

Body image is seen as an individual's self-interpretation of his body. This opinion is formed by the combination of cultural, social and emotional factors interacting and forming a pattern that influences the way the person sees himself [20]. Depression, low self-esteem and obsessive and perfectionist traits can be influencing factors in dissatisfaction with body image [21].

The perception of the body is related to the assessment of the individual focused on his abilities and aptitudes. When the standards imposed by society are not reached, negative relationships can be developed on the body, low self-esteem and influence on body perception [6].

The charge for standard aesthetics among dancers is higher when compared to the general population, and, when they become

professionals, this charge increases, as they need to maintain the appropriate weight [6]. The body model often imposed on dancers can result in an unhealthy appearance, due to the search for the low percentage of body fat. This is a factor responsible for permanently causing concern in the dancers to maintain their body shape in the imposed standards, often using, as a method to achieve this goal, the excess of physical exercise [7].

The need for a slimmer body is evident in classical dancers, since they need lightness in the body and in their gestures, when compared to other modalities, in which the movements are characterized by freedom and the form represented by the dancers [22]. Perhaps due to this context, the body understood as ideal for ballerinas and dancers is thin and slender, however, strong and flexible. Thus, dancers can be considered a population at risk for the development of Eating Disorders such as Bulimia Nervosa and Anorexia Nervosa [23,24].

A patient diagnosed with Eating Disorders, who is in a serious state of health, is admitted at least once, throughout the history of the disease, in order to minimize the disturbances caused to his organisms [25]. However, despite the high number of hospitalizations during the treatment period, little is known about the conducts for its performance [26]. There is difficulty in obtaining information about the procedures adopted to treat ED in the literature and little is disclosed by the hospitals' media about how treatment is given to patients hospitalized with this diagnosis [11].

Methodology

This is an integrative literature review, which included searching for publications from the past 10 years on Eating Disorders and their associated factors. The following databases were used in the searches: Virtual Health Library (VHL), La Latin American and Caribbean Literature in Health Sciences (LILACS) and National Library of Medicine (MEDLINE). The descriptors used in the study, according to the DeCS were: eating disorders / eating disorders, nervous bulimia, nervous anorexia, bulimia in dancers/ bulimia and dance, ballet, eating disorders and ballet, body image and dance.

Studies published in Portuguese, English and Spanish were used. The exclusion criteria were: repeated studies, studies that showed eating habits for other populations (sportspeople, students, models) and those published more than 10 years ago.

By reading the title and then the summary, the articles were evaluated and selected and to present the most relevant information, a summary table was prepared with the following topics: title, objective, results; which facilitated the analysis of the selected articles.

Analysis and Discussion of Results

According to the search performed, using the selected descriptors, as well as the databases, a total of 244 articles were obtained. Of these, only 12 were selected for the analysis of the results. The articles were excluded according to the exclusion criteria established in the methodology. Figure 1 shows the exclusion scheme.

Figure1: Flowchart of the selection of scientific articles, based on the inclusion and exclusion criteria described in the methodology. Natal, 2020.

Total Founded Articles	244
Excluded Articles for not be according with the subject	132
Excluded Articles by be repeated	7
Excluded articles by not be in the proposed years	93
Selected articles	12

Among the readed articles, the theme body dissatisfaction was present in all of them, which shows that this theme is categorically present in the lives of the dancers. According to the studies, it was observed that women, young people and practitioners of classical ballet were the main audiences affected.

Below, we can view a table with the synthesis of the results obtained by reading the twelve articles selected to compose the present work.

Title	Objective	Instruments	Results
Body image, nutritional status and symptoms of eating disorders in dancers. REIS et al. (2013)	To analyze the association between nutritional status, HF perception and AT symptoms in three dance modalities: classical ballet, contemporary dance and urban dances.	For the perception of CI, the scale of 9 body silhouettes proposed by Stunkard, Sorenson and Schlusinger was applied. The symptoms of ED were assessed using the Eating Attitudes Test (EAT-26) and Bulimic Inventory Test Edinburgh (BITE)	72% of body dissatisfaction, a higher prevalence of discontent overweight (53.1%). 21.2% of participants showed AN traits. Contemporary dance dancers showed the highest percentage to develop AN (34.8%). Dancers with BN characteristics show greater dissatisfaction with the lean aesthetic.
Body Image and Risk Behavior for Eating Disorders in Professional Dancers. RIBEIRO & DA VEIGA [34]	Assess dissatisfaction with HF and associate it with risky behaviors for ED in professional classical dancers.	The presence of risky behavior for ED was assessed using EAT-26 and BITE. Regarding the self-perception of HF, the Stunkard Silhouettes Scale was used..	31% of the dancers pointed out the risk of developing ED. 50.8% wished to have a smaller silhouette than the one observed by them and 36.1% wished to have the contour with measurements below the one considered healthier. More mature individuals showed interest in having the silhouette deemed healthy.
Influence of dance mode on distortion and dissatisfaction of body image in preadolescent, adolescent and young ballerinas VAQUERO-CRISTÓBAL, KAZAREZ & ESPARZA-ROS (2017)	To analyze the distortion of the CI of dancers in training according to the dance modality.	The Teen Silhouette Test (TSA) was used to determine HF disorders.	All participants showed body dissatisfaction, wishing for a leaner aesthetic. Classical dancers were shown to consider adequate BMI values above those corresponding to them and resulted in a higher distortion index. Ten dancers belonging to contemporary and Spanish dance groups were at risk for eating disorders.
Comorbid psychiatric diagnosis and psychological correlates of eating disorders in dance students LIU et al. [33]	Explorar a prevalência de TA e comorbidades psiquiátricas associadas em estudantes de dança.	O EAT-26, BITE, Inventário do Transtorno Alimentar (EDI-1) e Teste da figura corporal, foram aplicados para avaliar aspectos relacionados a presença de TA e insatisfação corporal.	O excesso de peso e descontentamento com a figura corporal foram os principais motivos para o desencadeamento de Transtornos Alimentares. Os distúrbios psiquiátricos associados mais prevalentes foram ansiedade e transtornos de humor.
Disordered Eating Behavior, Body Image, and Energy Status of Female Student Dancers ROBBESON, KRUGER & WRIGHT (2015)	Investigar o comportamento alimentar desordenado, medidas patogênicas de controle de peso e status energético de dançarinas.	O comportamento alimentar desordenado e insatisfação corporal foram avaliados por meio da subescala de Transtorno Alimentar-3 (EDI-3) (Garner, 1983) e da sub-escala Cognitive Dietary Restraint (CDR) do Questionário Alimentar de Três Fatores (TFEQ).	39% dos controles e 69% dos bailarinos apresentaram chances de desenvolver TA. Grande parte dos praticantes de dança relatou querer alterar a massa corporal por motivos estéticos (39%) e melhoria de desempenho (19%).

Critical comments concerning shape and weight: associations with eating psychopathology among full-time dance students GOODWIN et al. (2014)	Determinar o grau em que os comentários críticos estão associados a psicopatologia alimentar na dança e se essa relação é mediada pela autoestima.	Eating Disorder Examination Questionnaire (EDE-Q) foi aplicado para avaliar os TA.	73% já ouviram opiniões desagradáveis sobre sua estética e 34,63% vem dos professores. 20,4% dos dançarinos falam que essas análises tem grande impacto para eles. O grupo que relatou ter escutado esses comentários mostrou maiores chances de desenvolver TA.
Satisfacción corporal em bailarina y no bailarinas TORALES et al. [36]	Determine if there is an association between the presence of body dissatisfaction and being a dancer.	The 34-item Body Shape Questionnaire (BSQ-34) was used.	When compared to the control group, of the 49 dancers 38% showed body dissatisfaction, with 19.44% of the dancers having low weight and 76.85% with the appropriate weight according to the BMI.
Comorbid psychiatric diagnosis and psychological correlates of eating disorders in dance students LIU et al. [33]	Explore the prevalence of ED and associated psychiatric comorbidities in dance students.	EAT-26, BITE, Eating Disorder Inventory (EDI-1) and Body Figure Test were applied to assess aspects related to the presence of ED and body dissatisfaction.	Overweight and discontent with the body figure were the main reasons for triggering Eating Disorders. The most prevalent associated psychiatric disorders were anxiety and mood disorders.
Disordered Eating Behavior, Body Image, and Energy Status of Female Student Dancers ROBBESON, KRUGER & WRIGHT (2015)	To investigate disordered eating behavior, pathogenic measures of weight control and energetic status of dancers..	Disordered eating behavior and body dissatisfaction were assessed using the Eating Disorder-3 (EDI-3) subscale (Garner, 1983) and the Cognitive Dietary Restraint (CDR) subscale of the Three-Factor Food Questionnaire (TFEQ).	39% of controls and 69% of dancers had a chance of developing ED. Most of the dance practitioners reported wanting to change their body mass for aesthetic reasons (39%) and performance improvement (19%).
Critical comments concerning shape and weight: associations with eating psychopathology among full-time dance students GOODWIN et al. (2014)	Determine the degree to which critical comments are associated with food psychopathology in dance and whether this relationship is mediated by self-esteem.	Eating Disorder Examination Questionnaire (EDE-Q) was applied to assess the ED.	73% have heard unpleasant opinions about its aesthetics and 34.63% come from teachers. 20.4% of dancers say that these analyzes have a great impact for them. The group that reported hearing these comments was more likely to develop ED.
Satisfacción corporal em bailarina y no bailarinas TORALES et al. [36]	Determine if there is an association between the presence of body dissatisfaction and being a dancer.	The 34-item Body Shape Questionnaire (BSQ-34) was used.	When compared to the control group, of the 49 dancers 38% showed body dissatisfaction, with 19.44% of the dancers having low weight and 76.85% with the appropriate weight according to the BMI.
Eating attitudes and self-perception of body image in dancers in the municipality of Tubarão- Santa Catarina. CASTRO, MAGAJEWSKI & LIN (2017)	Evaluate the perception of body image and its association with risk behaviors for Eating Disorders.	To evaluate eating attitudes, the EAT-26 questionnaire was used, with regard to the perception of body image, the Body Shape Questionnaire (BSQ) was applied.	BSQ showed that 37.93% of the dancers reported some type of disorder. 89.66% reported having already started a diet because they were concerned about their physical shape. This same percentage reported having already been afraid of becoming fat or fatter. A slightly smaller percentage (86.21%) said they had already pinched areas of the body to see the amount of fat and 37.93% had imagined cutting off some part of their body.
Fatigue and symptoms of eating disorders in professional dancers RODRIGUES et al. (2017)	To evaluate fatigue and symptoms of eating disorders in professional dancers from two dance modalities: classical ballet and contemporary dance.	In assessing the symptoms of ED, the EAT-26 and BITE questionnaires were applied.	15.8% of the dancers revealed symptoms of AN and 25.2% disturbances in the symptomatic scale of Bulimia Nervosa, in addition to 29.9% in the BN severity scale. Women were more prevalent in the symptoms of developing ED.

Frequency of pain and eating disorders among professional and amateur dancers DIOGO, RIBAS & SKARE (2016)	Prevalence of pain and eating disorders among dancers and whether there was a difference between amateurs and professionals in addition to comparing the modalities.	EAT-26 and BITE were applied to verify the TA.	34.6% had a high risk of eating disorders. Women who practice ballet are more likely to develop ED, as well as those with high levels of anxiety. 58% of the participants declared to feel some type of musculoskeletal pain.
Transtornos alimentares e insatisfação com a imagem corporal em bailarinos GUIMARÃES et al. (2014)	To determine the prevalence of risky behaviors for the development of ED and dissatisfaction with body image in the city of São Luís, Maranhão.	The eating behavior was assessed using the EAT-26 and BITE, in the self-perception of the CI the BSQ was applied.	30% of the sample proved to be susceptible to the development of AN and 40% to BN. 26.7% demonstrated some degree of body dissatisfaction and 33.7% reported using compensatory methods for weight loss.
Factors Dancers Associate with their Body Dissatisfaction DANTAS et al. (2018)	Test factors that dancers point out to be relevant to CI.	To assess body dissatisfaction, BSQ was used, abnormal eating behavior was analyzed by EAT-26.	The teacher, with 19.4%, was the most reported reason for causing body dissatisfaction, followed by 11.7% in the uniform and 11.46% in the mirror. More than 30% of classical ballet students indicated the teacher as the biggest contributor.

The support tools for investigating signs and symptoms of Eating Disorders and dissatisfaction with body image used in the surveys were: Eating Attitudes Test-EAT, Body Shape Questionnaire-BSQ, Bulimic Investigatory Test Edinburgh-BITE, Eating Disorders Inventory-3 (EDI -3), TFEQ-CDR subscale, Silhouette scale.

In view of the results, it is possible to observe a high prevalence of body dissatisfaction among the dancers, since the twelve selected articles had significant levels of dissatisfaction with their body image. This discontent with the body becomes one of the main risk factors for individuals to develop Eating Disorders, as well as show symptoms of these disorders. The high percentage of body dissatisfaction in the studies addressed is related, mainly to sex, dance modality, teacher and critical comments by the technician or choreographer and the public [27].

Rodrigues et al. (2017)[28] observed that women showed greater Body Dissatisfaction when compared to men, as well as Reis et al. (2013) who observed dancers with 3.8 times more chances of being dissatisfied with their bodies when compared to dancers.

Found that classical ballet dancers showed greater body dissatisfaction when compared to contemporary and Spanish dance dancers [29]. This result is different from that observed by Reis et al (2013), who presented contemporary dance as the dance modality most affected by HF and, consequently, more likely to develop ED.

When investigating what factors the dance practitioners identified as relevant to HF, [30].obtained in their results the professor and his critical comments as the main cause. When investigated which dance modality considered these comments most important, it was found that most of the answers belonged to classical ballet [31]. Obtained similar results when verifying that the choreographer and his judgments were significantly relevant to the CI present in the dancers.

In addition to the CI present in the dancers, the chances of developing AT are also frequent when compared to people who do not practice dance. [32] Realized that approximately 70% of their sample were at risk of developing ED, as well as Robbeson,

Kruger and Wright (2015) who observed approximately 35% of their sample with symptoms of such disorders.

[2] when comparing the two main categories of eating disorders, observed that dancers were more likely to develop bulimia nervosa compared to nervous anorexia. The authors showed that more than 30% of the dancers used compensatory methods for weight loss and that the most frequent method was fasting for 24 hours. According to the researchers, the fact of being a dancer can be an essential factor for the development of Eating Disorders.

Conclusion

The dancers' search for an ideal body is often the result of observations made by the people around them, that is, the public's opinion can be considered a risk factor for the development of Eating Disorders, as well as sex, age, and the type of dance performed. This integrative literature review allows us to conclude that Body Dissatisfaction (CI) is categorically present in the daily life of dance practitioners, this dissatisfaction being one of the main factors for the development of ED.

It is convenient to carry out more studies on the subject to improve the understanding of the causes and consequences of Eating Disorders in the life of dance practitioners, so that health professionals can adopt strategic measures in prevention and / or rehabilitation health of these individuals [37-39].

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