Jose Carlos Appolinario[1]
https://orcid.org/0000-0002-6089-4400

Andrea Deslandes[2]
https://orcid.org/0000-0001-5941-9111

Physical exercise and eating disorders: together or apart?

Exercício físico e transtornos alimentares: juntos ou separados?

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Physical exercise is usually defined as a form of physical activity scheduled, structured, repetitive and with the objective of improving or maintaining physical fitness or health[1]. It is considered an essential aspect of our daily lives and plays an important role in medicine as part of a multimodal intervention for several metabolic diseases such as obesity, diabetes, and dyslipidemia among others. More recently, there is a growing body of evidence showing the effectiveness of including exercise as part of the treatment for different mental disorders such as depression, anxiety, dementia, etc.[2]. Although these positive views about exercise in general medicine and psychiatric disorders, exercise is a controversial subject in the field of eating disorders. In the last ten years, systematic reviews and meta-analyses have shown the positive effects of different types of exercise (*e.g.*, aerobic, resistance training, yoga-based interventions) in the prevention and treatment of eating disorders[3,4]. However, translating the evidence to clinical practice is still a challenge.

Eating disorders are a group of serious mental disorders characterized by a persistent disturbance of eating or eating-related behavior that results in the altered consumption or absorption of food that significantly impairs physical health or psychosocial functioning[5]. Common symptoms include food restriction, binge eating, and purging behaviors like vomiting or overexercising. Thus, the trend to overexercise by individuals displaying eating disordered behaviors is one of the reasons for the intense debate surrounding exercise in this area.

Another aspect associated with the interface between exercise and eating disorders is that disordered eating is highly frequent in sports, mostly in those involving endurance. Cunha *et al.*[6] investigated the occurrence of disordered eating behaviors and drive for muscularity in a sample of subjects practicing CrossFit training in the city of São Paulo. These authors found that women in CrossFit training had higher disordered eating symptoms, dietary restrictions, and excessive concern for thinness when compared to men. In addition, muscularity-oriented behaviors in men and the drive for muscularity, body-ideal internalization, body mass index (BMI), and age in women are predictors of disordered eating.

Considering the tendency of subjects with eating disorders to escalate their physical activity into an obsession and/or harmful behavior there is a need to better establish the limits between what is considered "regular" from "excessive exercise"[7]. Although it is hard to determine the boundaries between what is considered "regular exercise" from "excessive exercise" there are some attempts to define these limits. For example, DSM proposes that "exercise may be considered to be excessive when it significantly interferes with important activities, when it occurs at inappropriate times or in inappropriate settings, or when the individual continues to exercise despite injury or other medical complications".

However, it is imperative to consider that eating disorders are not a homogeneous group of disorders. This aspect could be important to analyze the role of exercise in eating disorders. For example, subjects with anorexia nervosa are usually hyperactive and engage in compulsive exercise because of their fear of gaining weight and denying the seriousness of their low body weight[8]. In the same path, in bulimia nervosa, compulsive exercise could be used to counterattack the episodes of overeating, a disturbed compensatory behavior used to control

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1 Federal University of Rio de Janeiro, Institute of Psychiatry, Obesity and Eating Disorders Group (GOTA), Rio de Janeiro, RJ, Brazil.
2 Federal University of Rio de Janeiro, Institute of Psychiatry, Neuroscience of Exercise Lab (LaNEx), Rio de Janeiro, RJ, Brazil.
Address for correspondence: Jose Carlos Appolinario. Av. Venceslau Bras, 71 Botafogo – Rio de Janeiro, Brasil - 22290140. E-mail: jotappo@gmail.com

weight gain. Otherwise, binge-eating disorder, the most prevalent eating disorder[9], is associated with overweight/obesity and usually with physical inactivity.

In summary, we have witnessed recently a growing interest in the interface of physical exercise and eating disorders. The initial negative view about physical activity and eating-disordered behavior has changed rapidly to a more open-minded perspective. Cook *et al.*[10] reviewed the current literature about this interface and proposed some recommendations. These authors proposed that exercise should be considered, as in other medical fields, an important pillar of the treatment approach, however tailoring exercise to maximize health effects in this specific population. Indeed, when properly supervised, physical exercise can contribute to improve health parameters in patients with anorexia nervosa and bulimia nervosa. The overall objective of an exercise program adjunctive to the eating disorder treatment should be developed from the beginning by a multidisciplinary team including medical, psychological, nutritional, and physical educators among other staff members. Due to the nature of these conditions, specific content must focus on safety while re-educating patients about the appropriate prescription of physical exercise, the attitudes related to motivation, and the transparency about the health benefits and potential detriments as a result of increased exercise. They finalize their proposals suggesting that the inclusion of physical exercise in eating disorder treatment should be considered as an instrument to empower the individual with exercise as a tool for healthy living.

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