

Eating Disorders and Performance Sports

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Abstract

Eating disorders are often complex, multifactorial medical conditions. In some cases, suffering from an eating disorder may have devastating effects on one's health, despite being a professional athlete. The portrait of an elite athlete is difficult to make. The aspects that need to be examined and taken into consideration are complex and they are continually evolving. For what is worth, the common picture that we all refer to is that first in line is the amount of effort and hard work that builds a sports career. Along with hard training and effort motivation, talent and the athlete's personality are also very important and they have the power to shape performance. The life style of an athlete can be so demanding and stressful that the risk of developing an eating disorder is not easy to be ignored. Most of the times a gymnast needs to maintain a certain weight level in order to be qualified for a competition. On the other hand society serves so many distorted standards when it comes to weight and beauty. The major risk for developing eating disorders involves a deep interest in and emphasis on a slim body and its relationship to the alleged improved athletic performance. Coaches and everyone involved in sports are urged to recognize that such an emphasis on bodyweight, on its thinness disregarding athletes' health may be the most important factor in developing eating disorders. It is very important to have a diagnostic as soon as possible since the treatment is much more effective if it is initiated close to the illness debut. It certainly prevents emotional traumas and organic damages.

Keywords: *eating disorders, sports, performance, anorexia, intervention, prevention*

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I. DEFINING EATING DISORDERS

Eating disorders are complex, multifactorial medical conditions (Currie, 2007). Suffering from an eating disorder may have devastating effects on one's health, despite being a professional athlete. If confronted with an eating disorder, a normal person doesn't usually have the same resources as a professional athlete has. Even if that particular athlete is able to avoid seriously compromising his or her health, he or she can expect to have a shorter sporting career characterized by inconsistent performances and recurrent injuries as a result of the disorder (Currie, 2007). Eating disorders - such as anorexia, bulimia (DSM IV-TR, 2000) and binge eating (DSM-5, 2013) - also include extreme emotions, attitudes, and behaviors surrounding weight and food issues.

Feeding and eating disorders are characterized by a persistent disturbance of eating or eating-related behavior that results in altered consumption or absorption of food which significantly impairs physical health or psychosocial functioning (DSM-5, 2013). Eating disorders are serious health problems that can endanger the life of the individual, both women and men.

Many nutrition experts blame one of our modern society values, embraced by an increasingly number of individuals: the ideal image of a body as portrayed by the media. According to such idealized images, human perfection is represented by women abnormally lean (Sundgot-Borgen, 1994). One study showed that 47% of girls from grades 5-12 reported they want to lose weight because of magazine pictures (Levine, 1998). Among other studies have revealed that 42% of 1st-3rd grade girls want to be thinner (Collins, 1991) and 81% of 10 year olds are afraid of being fat (Lindholm, Hagenfeldt, & Hagman, 1995).

The number of individuals with eating disorders who try to compensate eating by doing sport is increasing each year. Many of them practice sports excessively and sometimes obsessively, these being compensatory behaviors that can have devastating effects and consequences both physically and emotionally (Matejek, et al., 1999).

Engaging in an organized sport can offer several advantages such as increased resistance, improved physical appearance and improved self-esteem. Practicing any sport also encourages individuals to stay active throughout their lives. But in an organized sport occurs competition and that may be another contributing factor to severe stress, both psychologically and physically. When that pressure of these competitive sports is added to an existing cultural emphasis on thinness, the risk of developing eating disorders continues to increase.

Characteristics of the sport culture can leave athletes more vulnerable to the development of these disorders; make athletes less likely to view their behaviours as problematic (Sherman & Thompson, 2001).

Eating disorders represent an important issue for many athletes. Compared to male athletes, female athletes are especially at risk in sports which emphasize a thin body or appearance, such as gymnastics, ballet, figure skating, swimming, and distance running (Bachner-Melman et al., 2006; Johnson, Powers, & Dick, 1999). Of these sports, gymnastics is characterized by flexibility, strength, grace, agility, and power exhibited by its practitioners.

According to a study done on athletes by Division 1 NCAA, the risk for developing anorexia nervosa based on specific habits and symptoms was reported in over one third of the female participants. But not only female athletes are affected by these because there are different sports such as bodybuilding, running or wrestling where male athletes are at risk too because of athlete's specific diet, certain emphasis on appearance, size, and weight requirements.

Certain physical activities are also associated with eating disorders. A study list gymnastics, long-distance running, diving and figure skating as a sport with a high incidence of eating disorders (Cintado, 2007). Those who practice dance - especially ballet - are also at risk. Being skinny is clearly an advantage in each of these sports but when combined with the desire to excel, young participants are at risk of developing eating disorders.

Petrie and Sherman (2007) suggest that it is not uncommon for female athletes to be diagnosed using Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR, 2000) based on the criteria described for food disorder (such as anorexia nervosa and bulimia nervosa), but it is becoming increasingly common for female athletes to meet the criteria for disordered eating patterns and behaviours, such as "body dissatisfaction or body image disturbance, excessive attempts to lose weight, eating compulsively, strict diet and /or low self-esteem, depression, and unrealistic beliefs about their weight" (Petrie & Sherman, 2007).

Gymnastics is a very competitive sport. If a girl is very perfectionist and simultaneously results-oriented she is a good candidate for anorexia because gymnastics performance requires and is promoted by athletes who have strong and supple bodies, powerful but tiny, contrary to the classic image of femininity defined by the roundness of the hips and breast (Sundgot-Borgen, 1994). For this reason, we intend to study the link between eating disorders and sports performance, particularly the link between anorexia nervosa and gymnastics.

According to U.S. National Library of Medicine, anorexia nervosa "is an eating disorder characterized by a low weight, fear of gaining weight, a strong desire to be thin, and food restriction". Even though it is commonly recognized as a psychological disorder, her roots include anxiety and depression (Cintado, 1997). In elite gymnasts, athletes' percentage who suffers from anorexia nervosa reaches 28% (Byrne, & McLean, 2001; Collins, 1991).

In the 1992 NCAA survey, 51% of the gymnastics programs that responded reported this illness among its team members, a far greater percentage compared to any other sport. A more recent review of the research indicates that female athletes in judged sports have a 13 percent

prevalence of eating disorders, compared to just 3 percent in the general population. (Athletes and Eating Disorders: The National Collegiate Athletic Association Study). Such a perfect picture of a gymnast comes from Olympic gold medalist Shawn Johnson with a height of 1.45 (4'9 ") and weighing 40.82 (90 pounds) (Byrne, & McLean, 2002).

II. THE ROLE OF MOTIVATION IN SPORTS PERFORMANCE

Most gymnasts have a particularly high intrinsic motivation to striving for perfection. But this internal drive is caused by the pressure put on the athlete by their coaches, judges, and society. Gymnastics in itself is a sport dealing with perfection (Caine, Russell, & Lim, 2013; Chantal, et al., 1996). The coach is there to teach perfection, the judge's duty is to tell the athletes if they achieved it, the public shows disappointment when the gymnasts fail to reach the standards and don't shine as expected. All these outside pressures lead to internal stress because she strives for perfection. When she can't reach her own internal standards she experiences failure. This sense of failure combined with fatigue resulting from long hour workouts which adds to deprivation of necessary nutrients often leads to depression, an internal condition for anorexia nervosa. The coaches, fellow teammates and public usually create this particular environment where all that seems to matter is performance (Sanford-Martens et al., 2005).

The behavior of an athlete with high results comes down to hard training, discipline and a good control over all the aspects of his personal life. In order to understand how all of these elements work together we need to understand the motivational factors that drives him. Each and every single human act is directed and channeled by a motivational system; one takes no action without having a motive (Zlate, 2006).

The understanding of the human mind might be enabled by answering a simple question, and that question is "Why?". According to Aniței (2010) having an answer to that question will give us a broad perspective on what triggered a certain act or behavior, what is the expected outcome, and if the above is likely to take place again.

The study of motivation has known so far multiple theoretical approaches, has triggered numerous academic disputes, and it is a topic that is far from being completely explained (Golu, 2004). The field of psychology can be divided into some specific research trends when it comes to motivation. The first trend is represented by the theories that are focused on fundamental human instincts, impulses and the natural disposition for equilibrium and homeostasis.

The major concerns were the level of activity, appetites and aversions, homeostasis and chemical controls. Another trend was represented by a view that included the human cognition as a major determinant of human behavior. First it included concepts like exploratory behavior,

aggression and frustration and after a while motivation was also related to other process areas of learning, perception and memory (Aniței, 2010).

One of the most influential psychologists in the field of human personality is Gordon Allport (1991), and he offers a lot of attention to motivation. In his opinion the motives are the very heart of one's personality, and trying to understand the human behavior through basic instincts, impulses and appetites will only explain a small part of a more complex phenomenon. In his view these theories can be useful in understanding new born and toddler's behavior, but they are not elaborate enough to explain the great diversity of the motives of an adult. They can explain the reactive nature of human behavior, but they fail to recognize phenomenon as self-actualization, creativity, pursuit of knowledge, spiritual enlightenment, etc. (Allport, 1991).

It is easy to summarize the fact that the behavior of an athlete is mainly influenced by his self-realization needs. Mook (2009) states that an individual with a high level of self-realization needs will take on as many challenges as possible. But this kind of motivational elements might prove to be very difficult to be analyzed and studied. McClelland (cited by Mook, 2009) conceives a number of tests in order to decide if there are individuals that are strongly driven by self-realization needs, and if so, if these kind of motives lead to a certain type of behavior that will make them stand out from the crowd. He sets up some projective tests that were especially designed to identify the type of motivation that drives his participants. According to his study results there is a strong connection between the level of self-realization need and the profession one chooses.

Nowadays we can find a big range of studies that are trying to build different measure scales that can underline the intrinsic and extrinsic factors of motivation, and they try to establish the kind of correlation between the level of motivation and the professional results.

Starting in 1970 Deci and Ryan have developed a new theory on motivation in order to highlight the difference between intrinsic and extrinsic motivation. The theory of self-determination is the starting point of all the different scales and tests regarding the motivation (Gagné, & Deci, 2005; Sears, 2007).

In 1996 the International Journal of Sport Psychology publishes a study which was focused on the principles of the self-determination theory and it analyses the answers given by 98 performance athletes to a scale (Sport Motivation Scale – SMS).

The results reveal that athletes with very high results and prestigious titles show a bigger sensibility to external factors - extrinsic motivation. But comparing male and female athletes it reveals that female athletes are more determined by internal factors (Pelletier et al., 1995; Chantal et al., 1996).

III. THE ROLE OF PERSONALITY IN SPORTS PERFORMANCE

Motivation does not open the path for high performance in sport one other important element is the personality of the athlete by itself. The human personality is a biosocial system that is built both by heredity and learning in the social context (Allport, 1991). The personality is the first element that influences the decision to practice a sport, and it also channels the individual to a certain type of activity. When an athlete is in a competition he needs to focus on a lot of issues. For example, a gymnast needs to keep a strict eating discipline in order to maintain a certain weight.

There are not many studies that give special attention to the personality of gymnasts. There is a phenomenon that might need more attention as we need to understand how the personality of a gymnast responds to pressure, and how under pressure the individual can prove to be able to make the right choices when it comes to his health.

IV. PREVENTION, INTERVENTION AND TREATMENT

In theory the nutritionists strongly recommend discipline and a strong balance between the eating routine and hard training, in order not only to achieve good results but also to maintain them. Not being able to keep this balance the gymnast can develop eating disorders and experience real health problems. For example skipping or refusing a meal over more training will put the organism under a lot of pressure. When it comes to gymnast's anorexia, it is not considered to be an accidental event. Comparing the mental profile of an anorexic with different profiles of athletes it looks like there is a strong match between those that are affected by anorexia.

There are some universal traits of those that are predisposed to anorexia: perfectionism, competitiveness, hyperactivity, an inclination for depression, unrealistic standards for weight and image (Bachner-Melman et al., 2006). The performance standard in gymnastics refers to perfectly executed moves and exercises. Gymnasts are educated and thought to always practice and sometimes this kind of attitude is the one that determines the failure. Another source for the stress in the gymnastics is given by the fact that is not the time that matters in the competition, as it is the case in athletics where the first to finish is the best competitor. In gymnastics the entire routine is supervised and scored by a judge.

The sport climate and education standards can make athletes even more vulnerable to experiencing this kind of disorders, they are much more inclined to put pressure on themselves (Sherman & Thompson, 2001). In the same time this phenomenon will make intervention and therapy even more difficult (Petrie & Sherman, 2000).

Another important aspect we need to take into consideration when it comes with eating disorders amongst gymnasts is the emotional stability. Most gymnasts reach the highest peak of their career while being a teenager, therefore experiencing puberty. This is a period of big physiological and biological transformations. Some might be inclined to maintain the body appearance of an adolescent, refusing to allow their bodies to transform and mature. They can refuse eating in order to maintain their appearance (Thompson et al., 1999).

In getting to understand what makes a great athlete we can also bring into the discussion the matter of talent and giftedness. Sometimes motivation and a determined personality is not enough. According to Gagné (1985) by talent we can understand some exceptional natural abilities which appear more or less spontaneously during the early years of life.

High results and performance level it is also defined and enabled by talent, which is considered to be a feature that individuals are born with, so, in other words it is present in one's life before learning and starting to train it. Talent gives individuals a great advantage when entering a competition. But being talented will not automatically guarantee absolute success, in order to maintain their results athletes need to put in constant effort and hard work (De Highden, 2012).

The perseverance when it comes to effort and training is in fact more reliable than talent. Hard work exceeds the talent, if the athlete won't work on improving his skills in time he risks to waste all of his natural gifts. A less talented individual can have access to great results by being constant and perseverant. It looks like the most optimistic scenario is that when talent meets a strong inclination for being hard working and conscientious (Wegner, 2013). Talent opens the path and may even make the first steps easier, but only hard training will make a visible difference.

When it comes to medical or psychological intervention in case of an eating disorder there are a lot of suggestions, but all of them refer to some critical aspects. The first, and perhaps the most vulnerable aspect, is a precise diagnostic of the disorder. This is in the hands of an outside person, maybe. Another aspect is for the athlete to admit and accept the diagnostic (Thompson, & Sherman, 1999). When it comes to athletes it is necessary that the whole staff to be informed, to get involved and support him. There are some cases when the instructors and trainers push the members of their team too hard and they ignore their health vulnerabilities. Along with the trainer and the family, also other members of the staff need to take part of the therapeutic process. Here we refer to the team doctor, the nutritionist, the club's psychologist (Bonci et al., 2008; Pecinovsky, 2013).

Most of the times a gymnast needs to maintain a certain weight level in order to be qualified for a competition and to be able to carry out her activities, especially when she is confronting with an eating disorder, anorexia or bulimia it is crucial to determine if this condition

is due to a necessity to keep the weight under a certain threshold or if it is an adaptive response to stress. Stress can also be caused outside of his professional field (Moore et al., 2009).

There can be situations when the condition can be traced a long time in the past, in which case the illness can leave some deep marks so that it can be necessary to involve medication along with therapy and emotional support (Sundgot-Borgen, & Torstveit, 2004). However, each case needs to be treated with great concern the process needs to be adapted to an individual profile. Even if the effects of the disorder are not as visible or don't look too severe it is necessary for the athlete to revise his priorities, even if this means a temporary inactivity.

Eating disorders can be prevented, as this may be possible by keeping a prophylactic eating discipline with the trainer's or nutritionist's involvement (Lindholm et al., 1995).

In conclusion, looking into some statistical data dedicated to this phenomenon it becomes very obvious that eating disorders are a real and serious threat both on a personal and professional level. Considering an estimated between 1.0% up to 4.2% of women suffer from anorexia in their lifetime, that almost 50% of people with eating disorders meet the criteria for depression (McNutt et al., 1997) and the incidence of these eating disorders in elite athletes has significantly higher rates (20%) than the standard group control consisting of females (9%) (Sungot-Borgen, 2004) we can estimate the extent and seriousness of the potential threat.

It is very important to have a diagnostic as soon as possible since the treatment is much more effective if it is initiated close to the illness debut. It certainly prevents emotional traumas and organic damages. But it would be even more useful to be able to have a profile of the risk factors that lead to unadaptive behaviors such as anorexia or bulimia. In that case it would allow prevention (de Oliveira Coelho et al., 2014).

It is advisable for the trainer and technical staff to have at least some basic information regarding such matters, to be acquainted with the symptomatology and to be able to recognize potential threats.

In a controlled study participants were asked what type of educational information, assistance or training believes it would be most useful in terms of identifying and managing athlete's symptoms. The most common response of coaches was trainers (83%) or consultants (68%) should be invited to campus in order to inform those interested. This finding that coaches preferring expertise from external sources is interesting and somehow contrary with their apparent preference to cater to athletes with symptoms in sports environment (Torstveit, Rosenvinge, & Sundgot-Borgen, 2008).

The major risk for developing eating disorders involves a deep interest in and emphasis on a slim body and its relationship to the alleged improved athletic performance (Davis et al., 1994). Coaches and everyone involved in the sport are urged to recognize that such an emphasis

on bodyweight, on its thinness disregarding athletes' health may be the most important factor in developing eating disorders.

Finally, the stigma associated with these disorders for those seeking help and mental health treatment must be removed (Sherman, & Thompson, 2001). Those who have influence in these sports can play a key role by recommending and encouraging treatment and appropriate mental health so that athletes should not be treated as a negligible cost.

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