

## **RCPsych Annual Essay Prize: London Division**

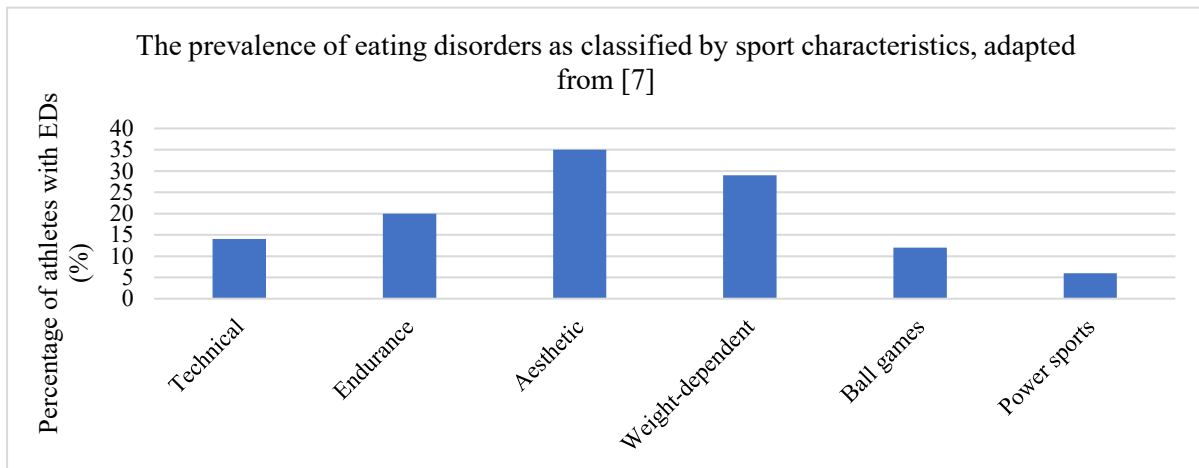
### **The Hidden Risk of Sporting Excellence: Eating Disorders in Athletes**

British sporting teams are no strangers to success. In 2012, London hosted the Olympic Games and demonstrated a strong display of sporting excellence, claiming 29 gold medals and ranking third globally<sup>1</sup>. This was further solidified by the 2020 Tokyo Olympic Games, where Great Britain's trailblazing performance was hailed, "the greatest achievement in British Olympic history", after the young team matched the number of medals from the 2012 Olympic games despite the unprecedented crisis of the COVID-19 pandemic<sup>2</sup>. Since the Olympic Games, other competitions, such as the roaring success of the English Lionesses at the UEFA Women's EUROs cup and the annual hosting of the Wimbledon tennis competition, have enthused other young athletes to chase their dreams of sporting success. However, beneath all the pride and glamour of victory, athletes often face multiple years of intensive training, rigid dieting and sacrifice, in order to be the best, promoting the hidden risk of eating disorders in their journey to sporting accolade.

Whilst playing sport at a national level, I observed the extent of eating disorders throughout the sporting community and its subsequent lack of recognition from athletes, coaches and supporting carers. With weight and performance being closely linked, I witnessed first-hand how athletes enter environments which promote disordered eating through the use of excessive weight monitoring, diet restrictions as well as personal sporting attitudes, such as an unfaltering desire to succeed. Within sport, teams often fail to recognise symptoms of disordered eating and even when identified, there is no sport-specific referral pathway despite the increased risk to the athlete and continued training.

In 2019, the Royal College of Psychiatrists released a position statement promoting early intervention for eating disorders, with the aim to enable earlier recovery, reduce the risk of chronicity and diminish the risk of disruption to personal development<sup>3</sup>. Eating disorders, such as anorexia nervosa, bulimia nervosa, binge eating disorders and related partial or mixed syndromes are common conditions which affect approximately up to 15% of young women and up to 5.5% of young men in high-income countries<sup>3</sup>. With the average duration of illness lasting six years alongside severe psychological co-morbidities, including suicidality and functional impairment, the effects of eating disorders are not to be under-estimated<sup>4</sup>. Moreover, the psychological distress caused by eating disorders do not only affect patients exclusively, it is reported that those looking after individuals may also experience distress, with the reported burden being as least as high, or even higher, than that of caring for someone with depression or schizophrenia<sup>3</sup>.

The prevalence of eating disorders within sport is reported at much higher rates than compared to the normal population with a rate of up to 19% in male athletes and 45% in female athletes<sup>5</sup>. Although gender may account for some of the differences, Sundgot-Borgen et al. suggested that sporting type may affect the prevalence of eating disorders<sup>6,7</sup>. Their study classified sports into six categories, including technical, endurance, aesthetic, weight dependent, ball and power sports, utilising both self-reported questionnaires and clinical interviews to examine the percentage of athletes with eating disorders. The results demonstrated that eating disorders were more common among those competing in aesthetic and weight-dependent sports, such as gymnastics and boxing, where athletes are critiqued on their appearance or have to meet stringent weight requirements to compete, as shown in Figure 1<sup>7</sup>. However, it is important to recognise that athletes with eating disorders were identified within each category<sup>7</sup>, suggesting a complex, generalised issue with eating that stretches beyond the type of sport.



**Figure 1.** A bar growth to show the prevalence of eating disorders as classified by sport characteristics, adapted from [7]

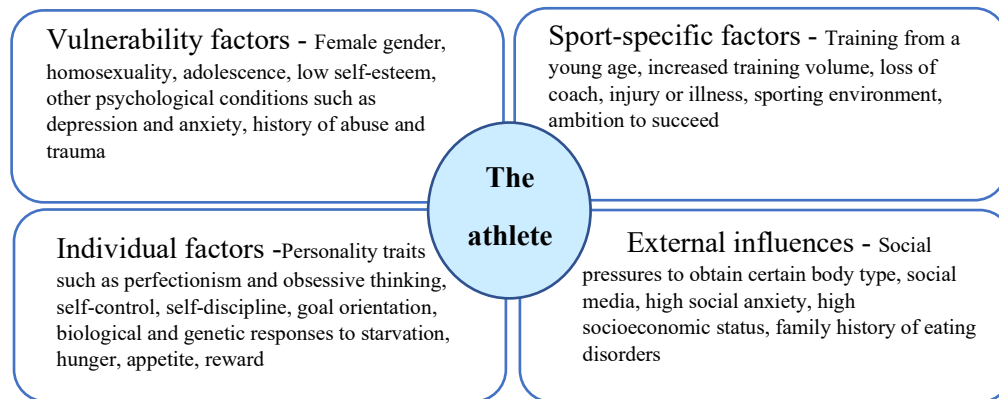
Athletes are uniquely vulnerable to disordered eating, often driven by the ideas of ‘optimum performance weight,’ a term used to describe the ideal weight to enable best physical performance<sup>6</sup>. Optimal performance weight is widely regarded as a non-sustainable short-term weight<sup>6</sup>. In striving for optimum performance weight, athletes are expected and encouraged by their team to eat in unusual ways. For most athletes, this will simply be another requirement for the pursuit of sporting excellence, however for other athletes, it will herald a pathological acceleration into disordered eating and the establishment of eating disorders<sup>8</sup>.

The idea of ‘making weight’ for competitions is common in combat sports, such as mixed martial arts, where athletes are typically divided into weight class divisions and encouraged to ‘cut’ weight for increased performance advantage<sup>6</sup>. A study by Barley et al. investigated weight loss strategies in 637 competitors from a range of combat sports, including Brazilian jiu-jitsu, boxing, judo, mixed martial arts, Muay Thai, kickboxing, taekwondo and wrestling, and found that body-mass manipulation was undertaken by all athletes, with a particularly high incidence of diet restriction, increased exercise and fluid restriction<sup>9</sup>. The promotion of skipping meals was higher in taekwondo and wrestling (84%) and likewise, training in heated rooms and forced fluid loss was higher in wrestling (83%, 47%) than other combat sports (45%, 19%)<sup>9</sup>. Exposing athletes to extreme weight-cutting measures and the perceived benefits of rapid weight loss over short periods of time can subtly promote the rise of disordered thinking and unhealthy attitudes towards food.

This was further proven by Mickelsson et al. who demonstrated that elite combat athletes who cut more relative weight scored higher on the Eating Disorder Examination Questionnaire (EDE-Q), suggesting correlation between body-mass manipulation and disordered eating<sup>10</sup>. However, Mickelsson et al. further reported increased levels of self-confidence in athletes who cut more relative weight, graded by the Trait Sport Confidence Inventory Test (TSCI), suggesting that athletes perceive a clear psychological benefit to intense dietary restrictions, exercise and weight loss<sup>10</sup>.

Interviews with pro-fighters, such as UFC fighter Kay Hansen, demonstrate how eating disorders can thrive in elite athletic communities. She describes that after a period of non-stop fighting and ‘making weight’ since the age of 18, she developed unhealthy eating patterns, choosing to minimally eat whilst following a rigorous training programme, often exercising up to three times per day. She explains that she developed disordered thinking patterns in relation to food, frightened that if she was to eat, she would ‘blow up’ and ‘miss weight’<sup>11</sup>. A similar message was communicated by another UFC fighter Paige Vanzant who discussed the extreme measures taken to reduce weight and the risks of eating disorders within combat sports<sup>12</sup>.

Understanding sport-specific risk factors which may predispose athletes to eating disorders is essential in protecting, educating and preventing disordered eating within sport. Eating disorders usually arise via a complex interplay between individual factors, vulnerability factors, sport-specific factors and external influences<sup>6</sup>. Figure 2, shows the complex interaction between these factors, adapted from [6,13,14]. Once athletes develop disordered eating, maintaining factors, such as perceived thoughts of psychological advantage, initial reward mechanisms, increased self-esteem, improved performance and a sense of order from weight control can cause continuation of dieting behaviours and the establishment of eating disorders<sup>6,13,14</sup>.



**Figure 2.** A diagram to demonstrate the complex interplay of factors which may promote disordered eating in athletes, adapted from [6,13,14.]

Moreover, the disparity between male and female athletes reporting eating disorders is vast with the majority of research primarily focused on the female athlete triad and disordered eating within female sport<sup>15</sup>. In 2018, Adam Rippon, an Olympic gold medallist figure-skater, released an explosive interview with the New York Times, raising awareness of eating disorders within the male athletic community<sup>16</sup>. Adam shares that ‘male body issues remain an open secret’ and reports that his dietary restrictions of ‘three slices of wholegrain bread with three cups of coffee’ per day were driven by muscle leanness, increased performance advantage and encouragement by the judges<sup>16</sup>. Disordered eating was also reported by Johnny Weir, a double Olympic champion figure skater, who reported maintaining his diet of one meal per day with coffee supplementation to prevent weight gain<sup>16</sup>.

It is evident that the incidence of eating disorders within the male population may be being overlooked by the medical profession and sport community alike. Kristjansdottir et. al evidenced that in a sample of 576 German athletes, 59% of men reported dissatisfaction with their body<sup>17</sup> and in a sample of 405 French athletes, in which the population was 63% male, the prevalence of eating disorders was reported to be as high as 33%<sup>17</sup>. Torstveit et al. assessed eating habits in trained male cyclists, triathletes and long-distance runners (n=53) and found that higher exercise dependence was associated with high scores of disordered eating on the Eating Disorder Examination Questionnaire (EDE-Q)<sup>18</sup>. This study demonstrates how dietary restrictions and intense exercise regimes often co-exist, enabling the establishment of eating disorders and its subsequent biological complications to the body, including reduced glucose, reduced testosterone and increased cortisol levels<sup>18</sup>.

Thompson et al. hypothesise that one of the reasons why male eating disorders may be overlooked is because it can be difficult to ascertain whose body composition results from anorexia as oppose to athleticism<sup>19</sup>. Carlat et al. further expanded on this idea alluding that male eating disorders may be under-recognised secondary to the rise of atypical presentations, often with males presenting at higher weight values and prioritising muscle mass than their female counterparts<sup>20</sup>. Both studies attribute sex-related stigma, which often includes feelings of shame of having a stereotypically “female” disorder, as a potential cause of treatment delay within males<sup>19-20</sup>.

The health concerns associated with eating disorders within athletes are extensive and include menstrual changes, reduction in libido, lower bone mineral density, fragile joints, reduced muscle density, increased risk of injury, reduced ability to recover and decreased performance<sup>6,15</sup>. Once an athlete is recognised to have a suspected eating disorder, athletes are supported to seek help and receive treatment, often within the NHS<sup>6</sup>. However, specialist NHS clinics with expertise in the management of eating disorders are sparse, often associated with long waiting lists and complex referral pathways, resulting in long treatment delays for training athletes<sup>8</sup>.

A number of studies have also highlighted the challenging and often exhausting impacts felt by carers. A qualitative study by Fletcher et al. assessed the 'burden of care,' a construct encompassing the emotional, physical, social, financial and psychological burdens, on eight individuals by use of semi-structured qualitative interviews<sup>21</sup>. All participants reported the experience of having a family member diagnosed with an eating disorder as 'life-changing' and stated that they were 'unprepared' to cope with the effects, often feeling that their 'life kind of stopped' and that caring for family members exacted a heavy toll on their own wellbeing<sup>21</sup>. Notably, many carers expressed their frustration at the apparent lack of and incoordination of services which impeded recovery speed<sup>21</sup>.

Following the launch of the RCPsych's position statement in 2019, a number of services have been developed to increase access to early, effective treatment<sup>3</sup>. One of these services is the FREED pathway (First Episode Rapid Early Intervention for Eating Disorders) ran by South London and Maudsley NHS Foundation Trust in partnership with King's College London which aims to enable access to specialised evidence-based treatment for patients aged between 16-25 years with an eating disorder of a duration of less than three years within four weeks<sup>22</sup>. The FREED pathway emphasises early, pro-active engagement with services to facilitate early symptom reduction, family involvement and education, such as understanding the effects of eating disorders and identifying triggers, such as social media influence and stressors within life, often related to emerging adulthood<sup>22</sup>. To date, over 1200 young people have been supported by FREED programmes<sup>21</sup> and a two-year follow-up study showed patients treated by FREED programmes had better weight outcomes and reduced need for inpatient care<sup>24</sup>.

The success of the FREED programme is widely acknowledged and developing a similar service provision for athletes is of vital importance given the increased prevalence of disordered eating within this cohort and its influence on the younger generation. Following the London 2012 Olympic games, it was reported that over half of the children (53%) living in London said that the games had inspired them to try new sports and activities<sup>25</sup> and more widely, a survey organised by the Kaiser family foundation which selected a random sample (n=1500) of 10–17-year-old children found that 92% of children are inspired by famous athletes, with the levels of inspiration being only second to the children's parents<sup>26</sup>. This essay recommends that, as a matter of urgency, a sport-centred programme should be developed to protect this uniquely vulnerable section of society and the future generation of athletes.

Developing a service provision for athletes with eating disorders may require different management strategies to the pre-existing patient cohort. At present, the main treatment for eating disorders within adults delineated by current national and international guidelines is psychological therapies, often given in an outpatient setting, unless severe in which patients are treated in specialist facilities<sup>27</sup>. Cognitive Behavioural Therapy (CBT) is the first-line treatment for all types of eating disorders and has the greatest impact on symptom reduction<sup>28</sup>. However, this essay proposes that in combination with CBT, athletes would also require a similar service provision to children in which atheoretical family-based treatment (FBT) is the leading modality of care<sup>27</sup>. Within professional sport, athletes establish close relationships with their coaches, trainers, sport doctors and psychologists, providing a second 'family.' It is integral that a service provision for athletes with eating disorders utilises all team members within the sport to support the recovering athlete as well as advance the psychoeducation of eating disorders within the athletic community.

Whilst adolescence and early adulthood remains a clear risk factor for eating disorders, the prevalence of eating disorders within sport is often overlooked, under-recognised and ill-managed.

Athletes with eating disorders can be difficult to manage, often displaying rigid thinking patterns in relation to food sustained by years of symptoms, intense exercise regimes, sporting environments and their desires for sporting excellence. In particular, the population of male athletes with disordered eating may be under-estimated, demonstrating a group of patients which are presently unsupported by both research and treatment alike. It is evident that athletes must be managed better to prevent physical and psychological damage to their well-being. The FREED pathway is a promising example of how a service can provide rapid specialised care and I believe that developing a similar programme for the benefit of elite and sub-elite athletes alongside sporting educational programmes which raise awareness of the symptoms, signs and support resources for eating disorders is essential to improve the management of eating disorders within this patient cohort.

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