



Athletes questionnaire results

Introduction

The five questions included in the present questionnaire are designed to explore key cognitive and behavioural dimensions associated with body image disturbances and disordered eating patterns. Together, they form a coherent screening tool that can help identifying individuals who may be at elevated psychological risk for developing eating disorders. While none of the items alone is sufficient to diagnose a clinical condition, the pattern of responses provides a meaningful picture of internalized body ideals, dysfunctional beliefs about food, and compensatory behaviours that are characteristic of various forms of disordered eating.

Question 16: "Are you dissatisfied with your weight, shape or body composition?"

This question probes the foundational construct of body dissatisfaction, which is widely recognized as a core risk factor for the onset and maintenance of eating disorders. Body dissatisfaction denotes a negative evaluation of one's physical appearance, typically emerging from a perceived incongruity between the actual body and an idealized body image constructed through sociocultural, interpersonal, and intrapersonal influences. High levels of dissatisfaction are associated with a wide range of maladaptive behaviours, including restrictive dieting, purging, excessive exercise, and use of body-altering substances.

Numerous longitudinal studies have confirmed that adolescents and young adults who experience body dissatisfaction are at significantly higher risk for the development of eating disorders such as anorexia nervosa, bulimia nervosa, and binge eating disorder. Moreover, this dissatisfaction is not confined to appearance alone but often includes negative feelings about body composition (e.g., fat-to-muscle ratio), which is particularly relevant in athletic populations. Thus, Q16 serves as an entry point for detecting early psychological vulnerability.

Regarding dissatisfaction of physical appearance in relation to the type of sport practiced (**Figure 1**), football players show the lowest level of dissatisfaction, still at 28%, whereas a concerning and unexpected 87% of volleyball players report some level of dissatisfaction. Less unexpected, though still alarming, is the 67% of athletes involved in gymnastics (rhythmic, artistic, or acrobatic) who state they are dissatisfied with their bodies.



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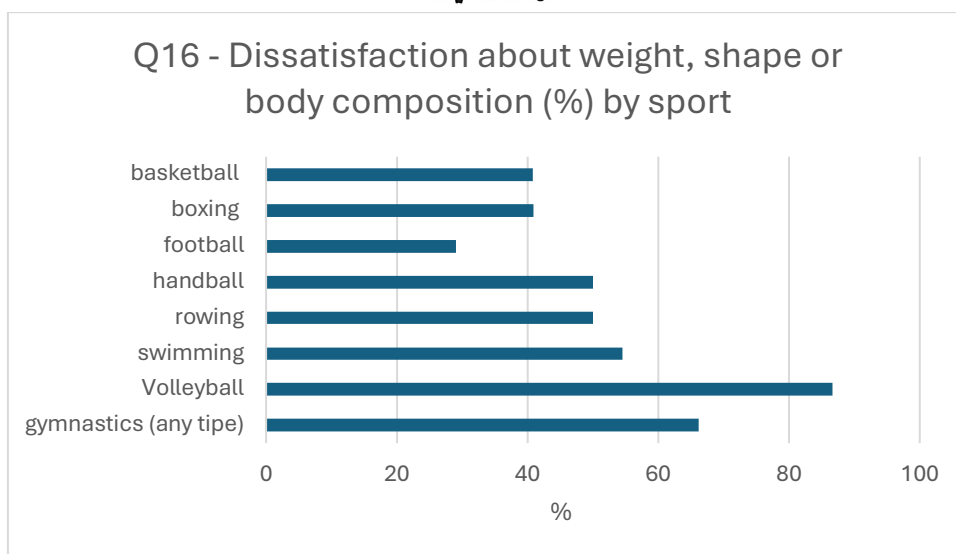


Figure 1

Girls are more likely to be dissatisfied with their weight, appearance, or body composition. As shown in **Figure 2**, 71% of them reported experiencing some degree of dissatisfaction, whereas the corresponding percentage for boys stands at 35%.

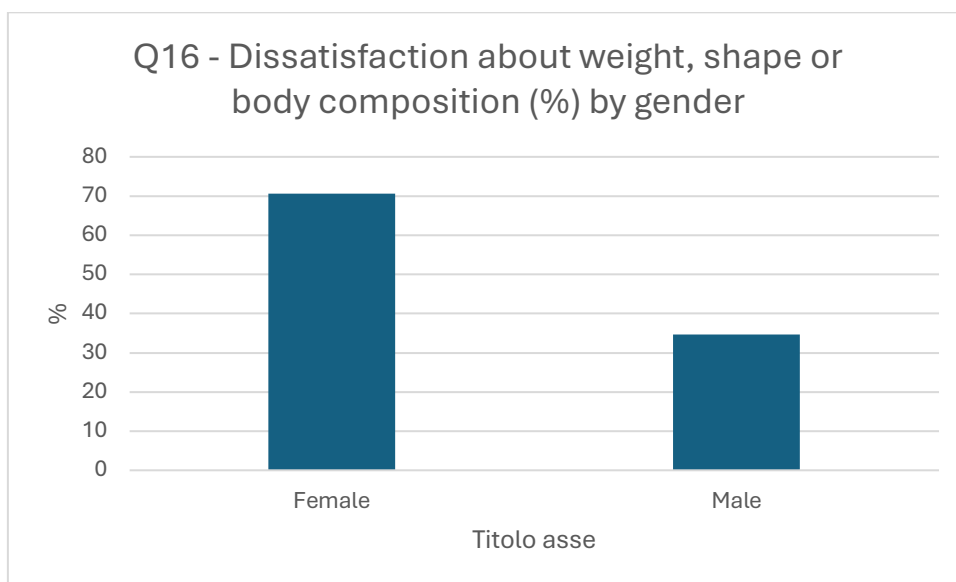


Figure 2



Looking at the entire group of study participants, it is notable that 53% report some level of dissatisfaction with their body weight, shape, or composition (**Figure 3**). When this data is analysed by age, it emerges that 10-year-old children and 15-year-old adolescents show the highest levels of dissatisfaction (around 60%), while the percentages for other age groups range between 43% and 55%.

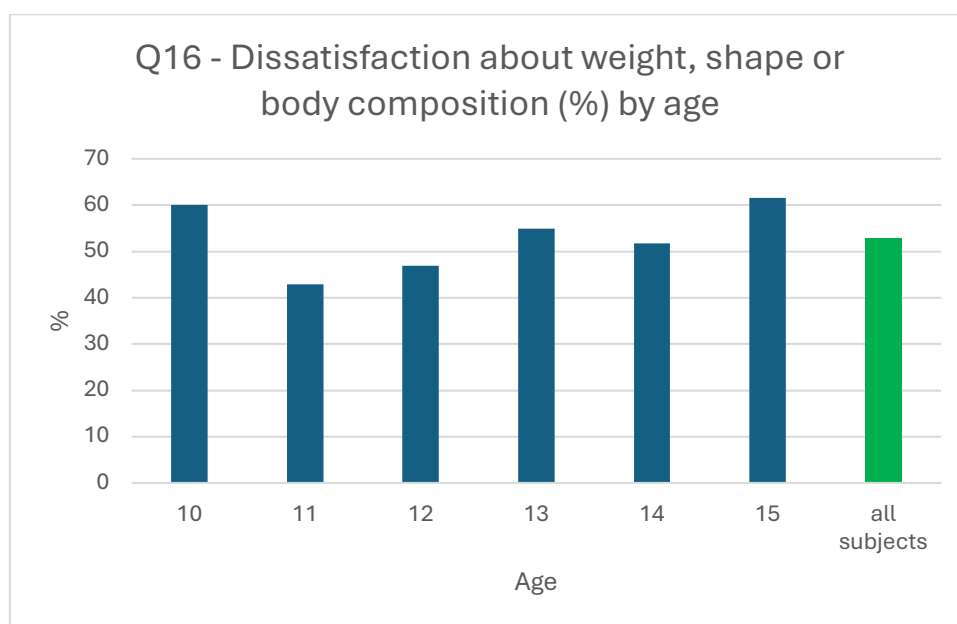


Figure 3

Although the responses to question Q16 are alarming, it is worth noting that not all participants who reported dissatisfaction with their physical appearance experience it all the time (**Figure 4**). In fact, 22% of participants say they are dissatisfied sometimes, 20% often, and 10% always.



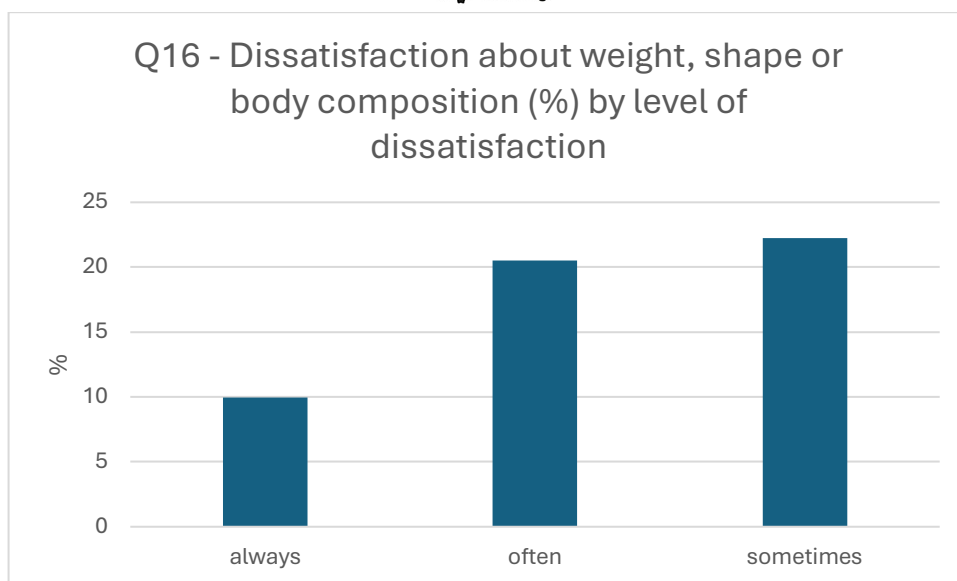
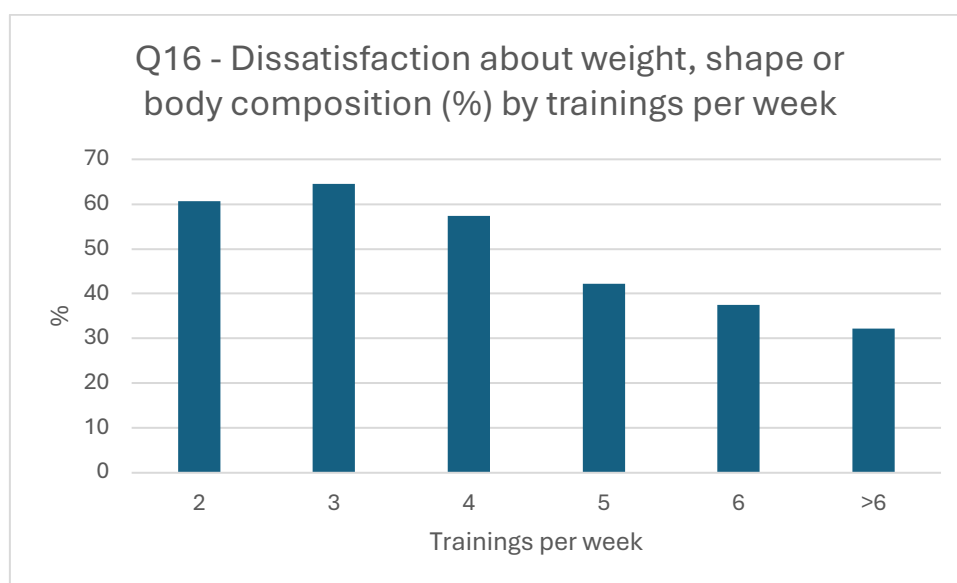


Figure 4

Finally, the study examined whether the number of training sessions per week is related to the level of dissatisfaction (**Figure 5**). The data suggests a potentially inverse relationship between training frequency and dissatisfaction levels. Athletes who train 4, 5, 6, or more times per week tend to be less dissatisfied compared to those who train only 2 or 3 times per week.



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Figure 5



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Question 17: "Are you worried that your weight, shape, or body composition will change if you fail to exercise?"

This question assesses exercise-related body anxiety, a concern that one's body will undergo undesirable changes, typically weight gain or fat accumulation, if physical activity is missed. While regular exercise is generally health-promoting, an intense fear of missing training due to concerns over body image can signal exercise dependence or compensatory behavior, both of which are hallmark features of disordered eating.

This question helps identify individuals who may feel psychological pressure to exercise in order to control or maintain body shape, rather than for health or enjoyment. Such beliefs are often associated with rigid routines and feelings of guilt or distress when exercise is skipped, thereby increasing the risk of compulsive exercise and food restriction.

Figure 6 shows the percentage of participants by sport who answered *always*, *often*, or *sometimes* to Q17. The data indicate that concern levels are generally high, consistently above 40%, and in some cases markedly elevated, particularly in volleyball and water polo.

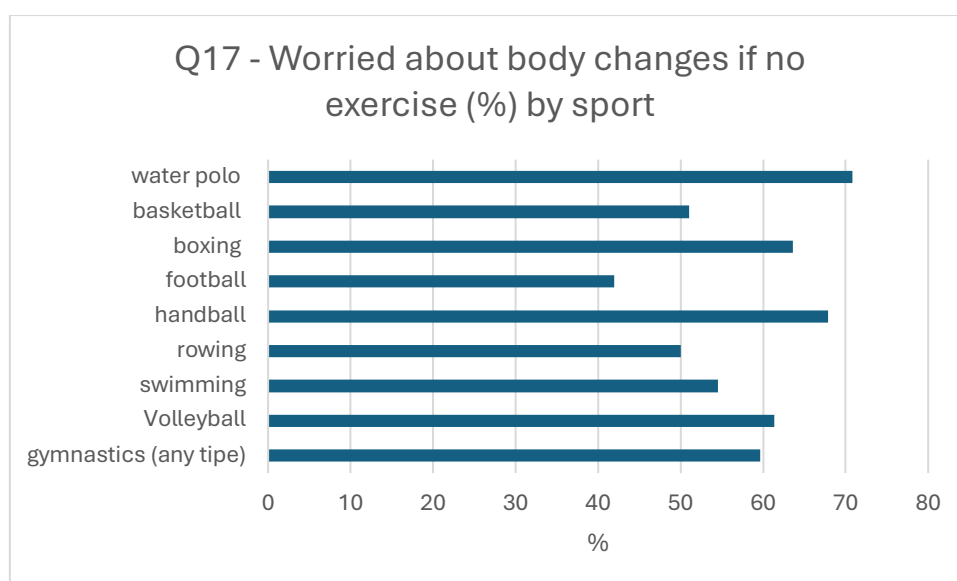


Figure 6

Figure 7 presents Q17 responses by gender. Unlike what was observed for Q16, the concern about experiencing negative effects on physical appearance appears to be very similar between males and females in this case.

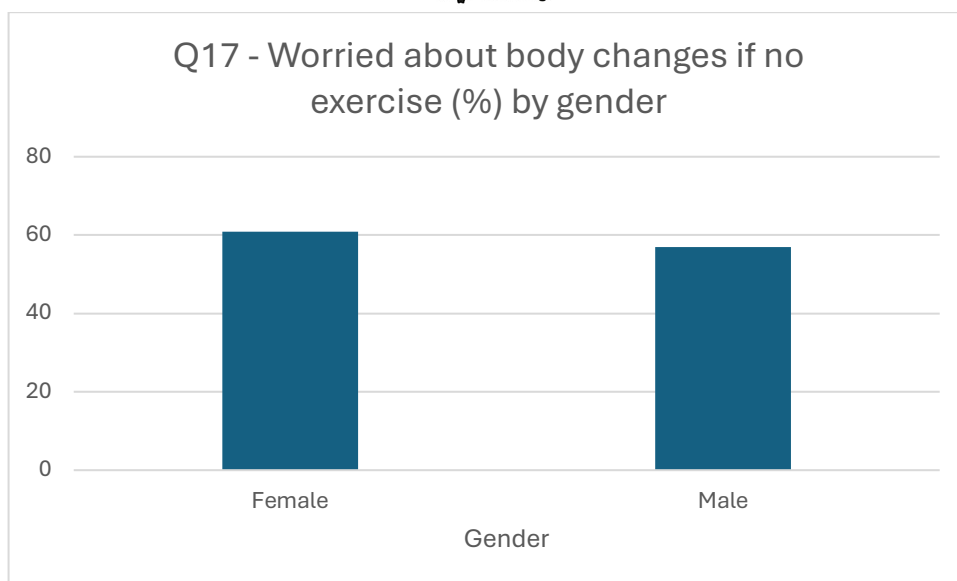


Figure 7

Furthermore, **Figure 8** shows that this concern tends to increase with age: 15-year-old boys and girls seem more worried than the 10–11-year-olds, although the younger age group still shows a concern level of about 40%.

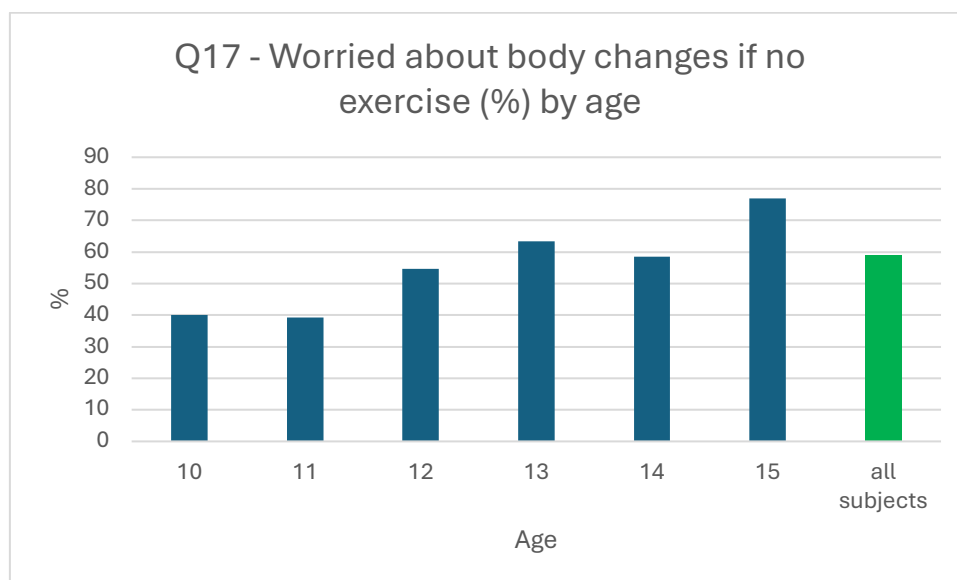


Figure 8

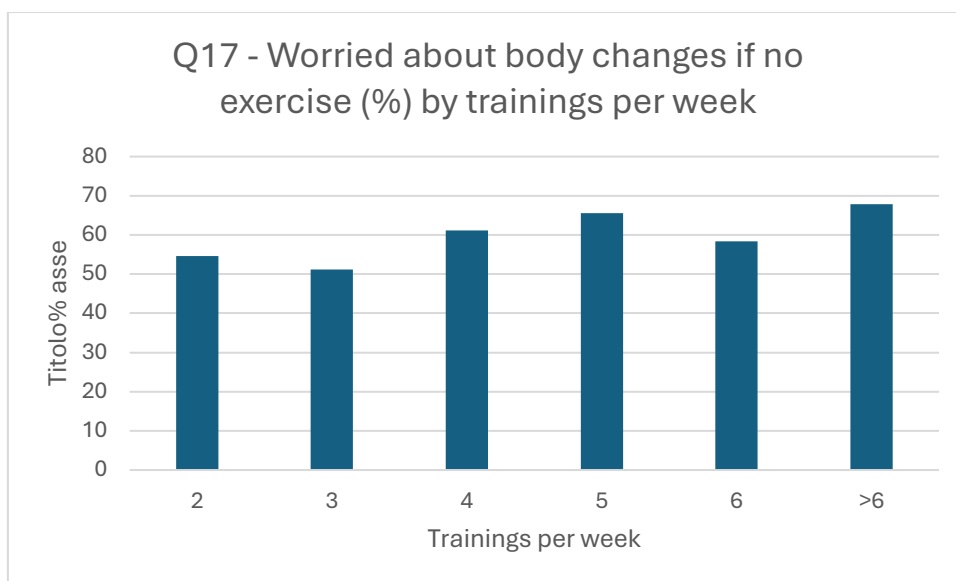


Regarding the level of concern, approximately 16% of participants report being *always* worried that missing training sessions may negatively affect their physical appearance, 17% responded *often*, and 25% *sometimes* (**Figure 9**).



Figure 9

Finally, **Figure 10** illustrates the relationship between positive responses to Q17 and the number of training sessions per week. The percentage of participants expressing concern does not vary significantly across those training from 1 to more than 6 times per week; in fact, concern appears more frequent among those training more than 6 times weekly.



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Figure 10

Overall, responses to Q17 reveal that on the one hand, there is an awareness of the importance of physical activity in maintaining a body shape and appearance that aligns with one's expectations. On the other hand, this awareness can develop into concern, that persists even among those who engage in a high number of training sessions each week. It is therefore crucial that coaches and, more broadly, staff within sports organizations are trained to recognize early signs of eating disorders, even among athletes who train most frequently.

Question 18: "Do you want to be slimmer even though others think you are already slim?"

This question is designed to assess distortions in body image perception and the internalization of unrealistic body ideals. A desire to become slimmer despite receiving external confirmation of already being slim indicates a discrepancy between self-perception and actual body status. This form of cognitive distortion is frequently observed in individuals with anorexia nervosa and other eating disorders, where internal body standards are shaped more by sociocultural influences than by objective physical realities or health needs.

This item also captures the psychological influence of perfectionism and low self-esteem on body image formation. A sustained drive for thinness, despite external reassurance or corrective social feedback, may reflect deeply internalized beliefs that equate thinness with personal worth and social acceptance. Consequently, Q18 targets a dimension of body dissatisfaction that demonstrates resistance to external validation, an indicator strongly associated with the development and maintenance of disordered eating behaviors.

Figure 11 highlights interesting differences across sports disciplines regarding affirmative responses to this question. Swimmers and football players appear to align more closely with societal standards of thinness, while water polo and handball players seem to hold more accentuated personal ideals of slimness. Overall, however, there is a notable tendency toward an "unrealistic" thinness ideal, or at least participants tend to see themselves as heavier than they are perceived by society. This represents a warning sign for the potential development of eating disorders.

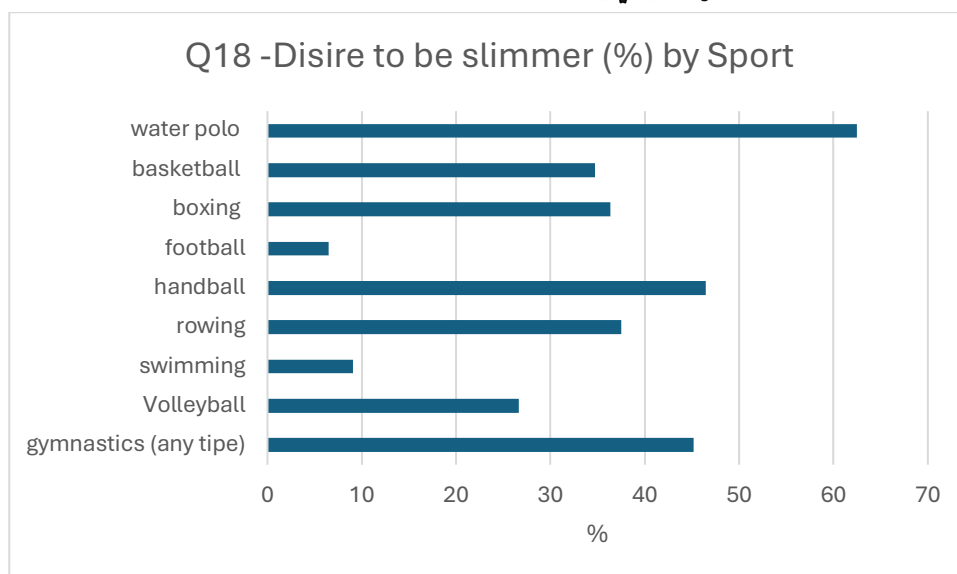


Figure 11

As already shown for Q16, responses to Q18 also indicate that girls are significantly more susceptible to developing distorted ideals of thinness, placing them at greater risk for eating disorders compared to boys (**Figure 12**).

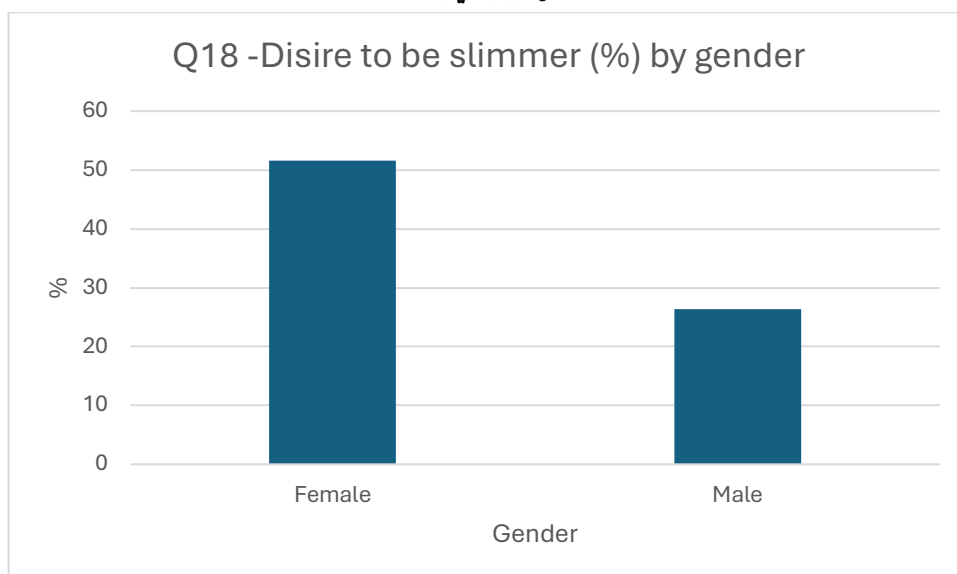


Figure 12

Overall, a distorted perception of one's slimness affects approximately 39% of participants, who answered *sometimes*, *often*, or *always* to Q18. However, while previous questions highlighted specific ages where the problem was more pronounced, Q18 responses are relatively evenly distributed across the 11-15 age range (**Figure 13**). This suggests that educational interventions aimed at promoting healthier body image awareness should target the entire 11-15 age group.

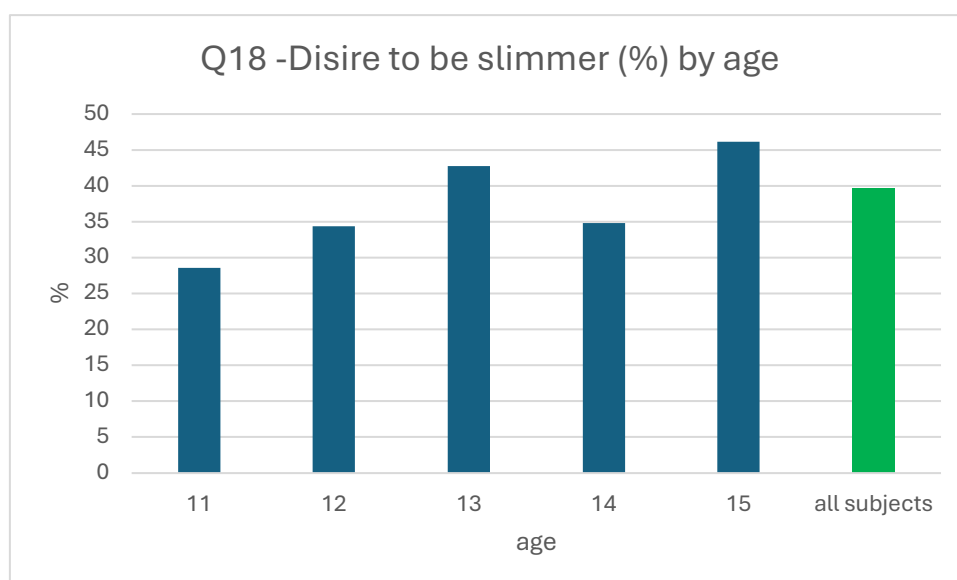


Figure 13



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Figure 14 shows how frequently participants report wanting to be slimmer. In this case, about 9% answered *always*, indicating a possible obsession with thinness.

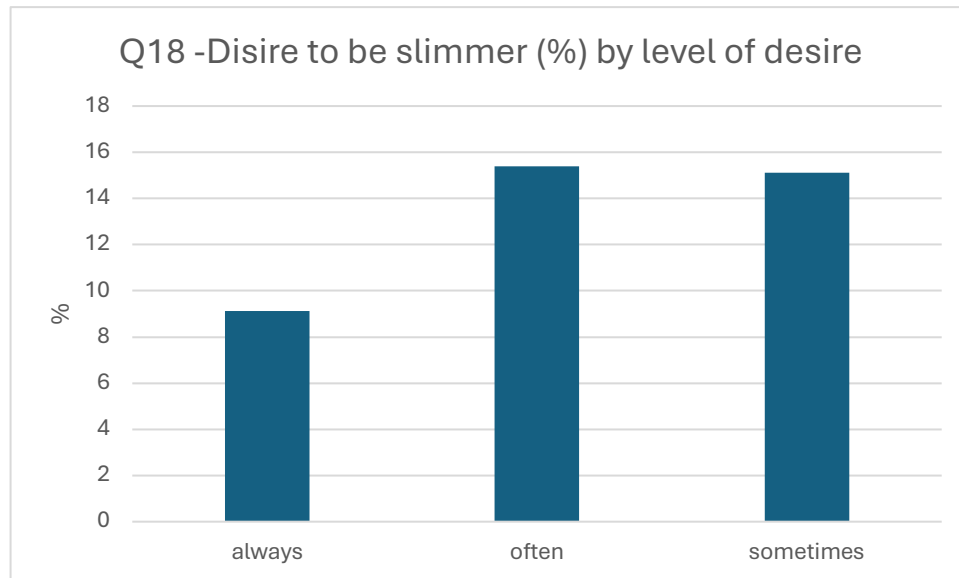


Figure 14

Figure 15 illustrates the distribution of affirmative responses to Q18 based on the number of training sessions per week. Although a clear positive trend between training frequency and desire for thinness is not evident, those who train six days per week are more likely to chase an unrealistic ideal of slimness. This should raise awareness among sports clubs, encouraging them to implement dedicated prevention programs for their competitive athletes.



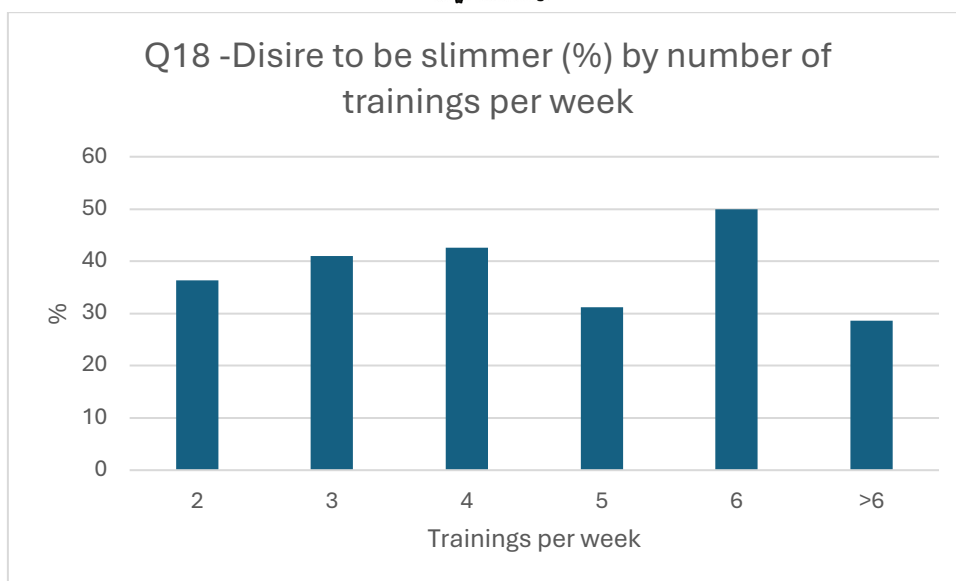


Figure 15



Question 19: "Are you worried about losing control over your eating because of the possible consequences for your weight, shape, or body composition?"

This item addresses food-related anxiety and fear of loss of control, two emotional states frequently associated with restrictive eating patterns and binge episodes. The question specifically links this fear to concerns about body outcomes, highlighting the psychological tension between self-regulation and body image preoccupation.

A fear of losing control overeating suggests a conflicted relationship with food and is often accompanied by compensatory behaviours such as purging or extreme restriction. This question is particularly important because it distinguishes between general dietary caution and pathological concern, making it valuable for identifying individuals on the spectrum of disordered eating even in subclinical populations.

Figure 16 illustrates the fear of losing control over food intake by sport. It clearly emerges that the level of concern is generally high regardless of the sport practiced. However, there are significant differences among sports: water polo players, volleyball players, gymnasts, and basketball players appear to be more affected by this worry compared to those practicing other sports.

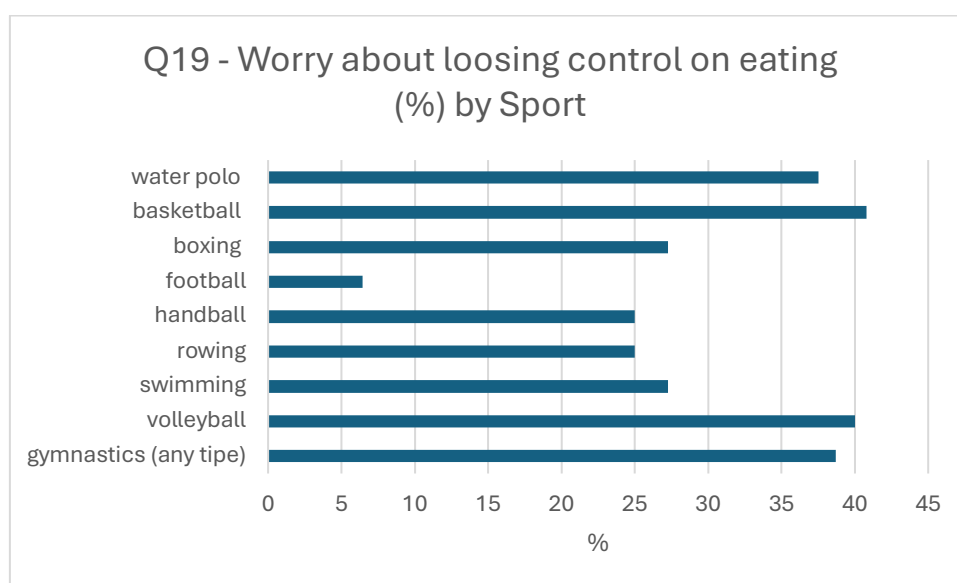


Figure 16

Figure 17 shows this concern by gender. Again, girls are significantly more susceptible to this fear than boys, which—considering the responses to other questions—places them at a higher risk of



developing eating disorders. However, it is important to note that boys are not immune to the problem: 28% of male participants report some level of concern.

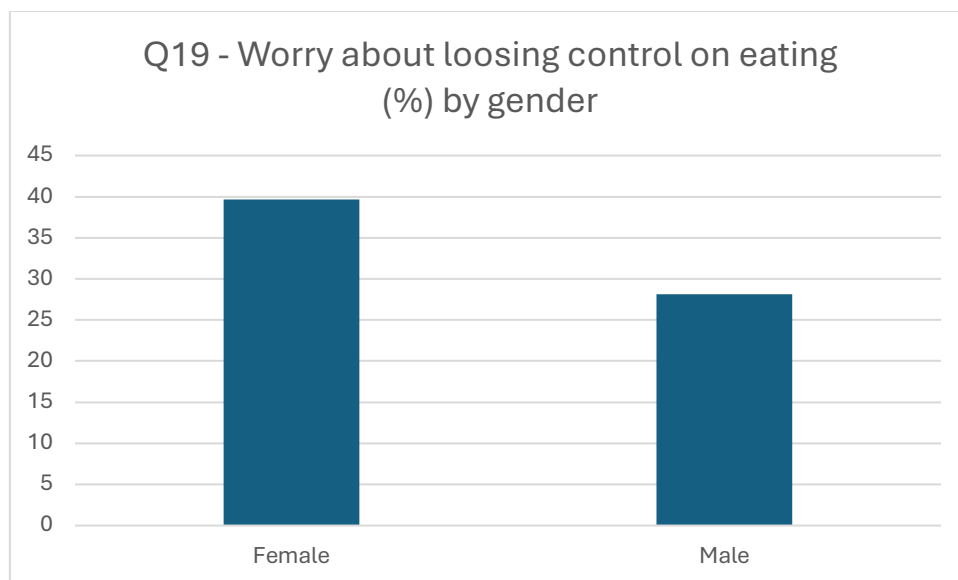


Figure 17

The fear of losing control overeating seems to follow a linear, positive trend with age: the number of concerned individuals increases steadily from age 11 to 14. Despite this trend, the concern remains high (around 30% of participants) across all ages between 11 and 15 (**Figure 18**).

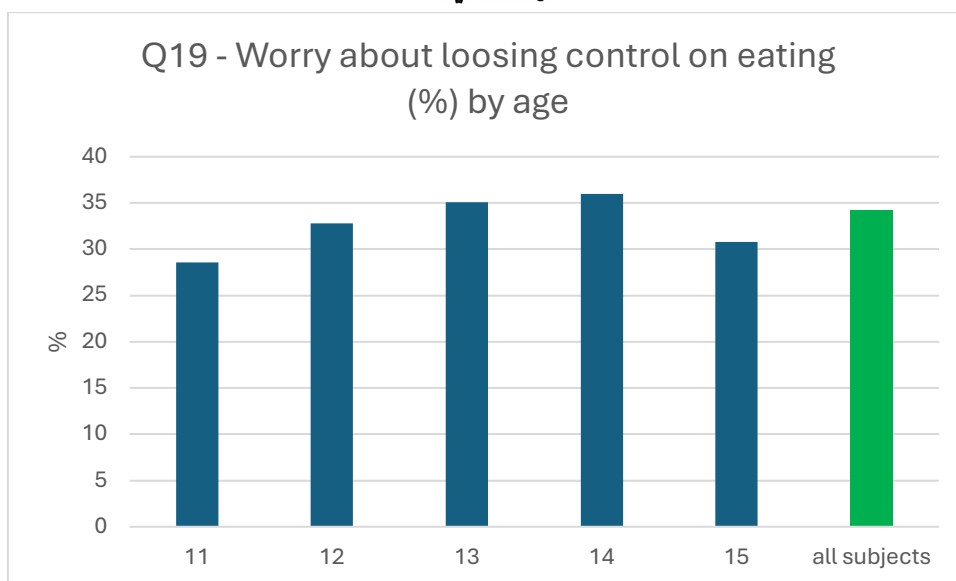


Figure 18

Although 34% of participants reported being worried about losing control over their eating, only 4.5% say they are always worried. Most of those who express concern report feeling this way “only” sometimes (Figure 19).

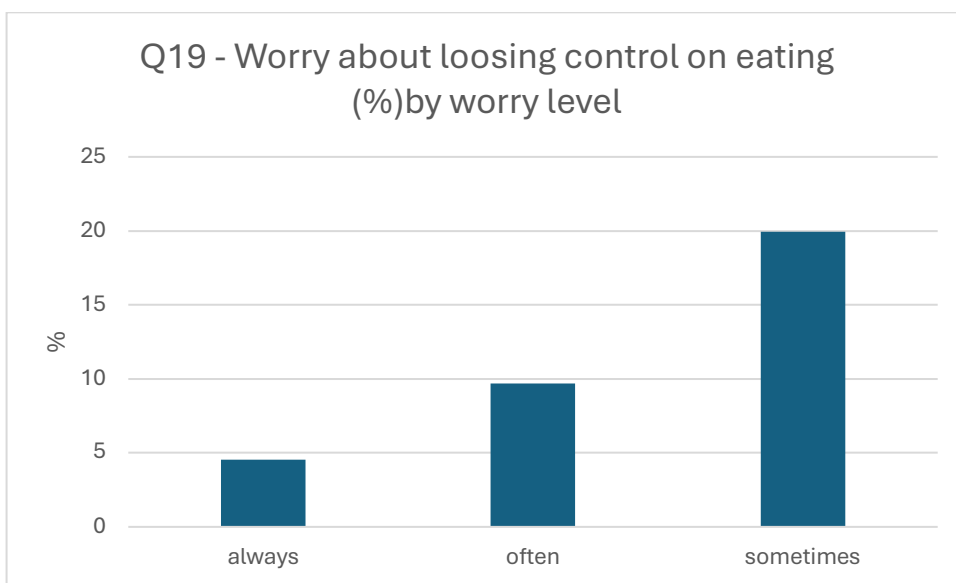


Figure 19



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Finally, **Figure 20** illustrates the relationship between the number of weekly training sessions and the percentage of participants reporting concern. While high levels of concern are present across all training frequencies, the highest percentages are found among those training only once a week and those training more than six times per week. Once again, this suggests that athletes who train the most are among those at greater risk of developing eating disorders.

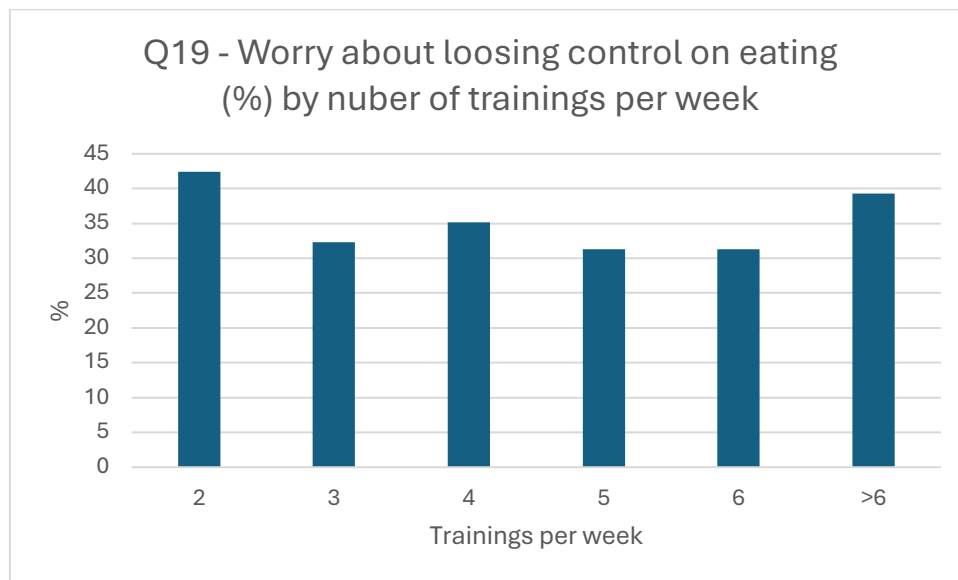


Figure 20



Question 20 - “Do you try to avoid certain foods to affect your weight, shape, or body composition?”

This question investigates the behavioural expression of body image concerns—namely, food avoidance motivated by appearance-related goals. Avoiding foods is not inherently problematic; however, when food choices are driven primarily by fear of gaining weight or altering body shape, they may indicate the presence of rigid dietary rules, food moralization, or orthorexic tendencies.

This question does not, in itself, define the presence of an eating disorder. However, when considered in combination with the previous questions, it can help to understand the attitude toward developing one. For this reason, the analysis focused on athletes who answered “Always.” This group includes 30 athletes: 16 females and 14 males; among them, 13 are 13 years old.

A comprehensive analysis of the group of questions Q16-20 reveals that 7 athletes answered “Always” to at least 3 out of 5 questions. These seven athletes range in age from 11 to 15 years, and no predominant sport can be identified. However, they all train frequently, between 3 and 6 times per week.

Conclusions

The results of this analysis highlight a potentially concerning psychological landscape among young athletes, especially with regard to body image and the risk of developing eating disorders. More than half of the participants expressed some degree of dissatisfaction with their weight, shape, or body composition, and nearly 40% wished to be slimmer even when already perceived as thin by others. These figures underline how distorted body ideals and internalized aesthetic expectations are widespread, transcending gender, age, and sport.

Girls appear significantly more vulnerable, showing higher levels of dissatisfaction, greater fear of losing control over food intake, and stronger desires to conform to thinness ideals. Nonetheless, the presence of concern and disordered patterns among boys must not be overlooked, as over a quarter of male participants expressed similar anxieties.

An interesting finding concerns the role of training frequency. While higher training loads are sometimes associated with reduced dissatisfaction, athletes who train the most are also among those who report the greatest concern about exercise interruption and food-related anxieties. This suggests that performance and aesthetic goals may become entangled in a way that fosters rigid control and psychological strain.

Although no single response is diagnostic of an eating disorder, the cumulative analysis of items Q16-Q20 allowed the identification of a small group of athletes showing persistent preoccupations. Seven individuals responded *Always* to at least three of the five questions, and they exhibit several features compatible with subclinical or preclinical eating disorders.



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This highlights the importance of monitoring psychological well-being in youth sport contexts. Coaches, trainers, and support staff should be equipped with tools to recognize early warning signs and promote a culture of healthy body image, balanced nutrition, and psychological safety.

Ultimately, the findings underscore the need for targeted prevention and education programs aimed at athletes, parents, and coaches alike. These initiatives should address not only physical performance, but also mental health and self-perception, with particular focus on the critical developmental window between ages 11 and 15.



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