Cardiovascular health

Table S1: Details of collection of musculoskeletal, mental, reproductive, cardiovascular and overall health outcome measures

Outcome Measure Musculoskeletal Health Respondents were classified as having a history of injury if they have ever sustained a knee, hip, foot or low back injury that either significantly altered their ability to perform or kept them out of training/competition for more than one week. Furthermore, respondents were asked to fill out a more comprehensive analysis if they experienced ongoing pain in that specific joint in the last year. All independent variables were dichotomized into yes/no variables for the analyses. **Mental Health** Anxiety Anxiety was captured using the validated GAD-7 screening questionnaire where individuals are scored from 0 to 21 [25]. The GAD-7 scores are categorized into four levels of anxiety: minimal (0-4), mild (5-9), moderate (10-14), and moderately severe (15-21). Scores over 14 were coded as having anxiety (anxiety = 1) Depression Depression was captured using the PHQ-9 screening questionnaire where scores range from 0 to 27[26]. The PHQ-9 scores are categorized into five levels of depression: none to minimal (0-4), 2) mild (5-9), moderate (10-14), moderately severe (15-19), and severe (20-27). Scores over 14 were coded as having depression (depression = 1). Harassment Harassment was captured by asking, "While competing with the national team, did you ever witness or experience yourself any of the following situations in your sports environment?" Situations included unwanted comments about body or appearance; negative comments on race, gender, religion or country of origin; comments, jokes, messages or gestures of a sexual nature; bullying or cyberbullying; exclusion, isolation or intentional denial of attention and/or support; intentional hitting, beating or kicking (not fouls or rough play); unwanted touching of breast, buttock, genitals or attempted kiss; wanted and unnecessary touching of the body; rewards in sports for sexual favours; inappropriate training (e.g. forced physical exertion beyond capabilities); and unsafe training conditions. Respondents were considered to have experienced harassment if they indicated 'yes' to any of the situations. Reproductive health Menstrual To capture menstrual health, respondents were asked, 'Do you currently have a normal menstrual cycle?" (yes = 1/no =0). Normal Health menstruation (eumenorrhea) was defined as cycles occurring every 28-34 days, blood flow lasting less than 8 days with approximately 5-80ml of blood loss per cycle. **Fertility** Fertility was captured though pregnancy outcomes. Respondents were asked if they have tried to become pregnant but have not been successful to date or they had become pregnant but did not or were not able to carry the child to term (fertile = 0). Respondents were categorized as having a "successful pregnancy" if they reported that they became pregnant and successfully delivered a child (fertile = 1).

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Respondents were asked if they were referred to a cardiologist for screening or for symptoms during their competitive years (yes = 1, no = 2). They also indicated whether they had ever been referred to an internist or cardiologist (yes = 1, no = 2) and provided the reason(s) and results. Respondents were asked to identify if they have ever been diagnosed with the following cardiovascular conditions (yes = 1, no = 2): sleep apnea; high blood pressure or hypertension; high cholesterol; diabetes or high blood sugar; cardiomyopathy; heart valve problems; heart attack; stroke; and/or atrial fibrillation. Additionally, respondents were asked to indicate whether they unexpected episodes of dizziness or lightheadedness in the past year (yes = 1, no = 2). Respondents with a diagnosis of atrial fibrillation or flutter were asked about electrical cardioversion (shock treatment (yes = 1, no = 2)); related visits to the emergency department (yes = 1, no = 2); ablation procedure(yes = 1, no = 2); symptoms(yes = 1, no = 2) and severity; length of episodes; frequency of episodes; and, modifications to training as a result of atrial fibrillation (No = 1, yes, for short periods(days) = 2, yes, for long periods (>1week) = 3, Yes, I had to stop training (how long) = 4). Respondents were asked if they had any first-degree relative(s) with a history of heart attack before the age of 65 (yes, (indicate reasons) = 1, no = 2). Finally, respondents were asked if they had ever undergone diagnostic testing including stress testing; Holter monitor; cardiac echocardiogram; cardiac MRI; and/or other (Yes,(indicate age and reason) = 1, no = 2)

Physical activity

Current physical activity behaviour was captured by asking, "How many hours per week do you engage in the following activities"? Activities included strength training, aerobic training, yoga or mobility, and other. Respondents were prompted to categorize the intensity of their exercise as light (can maintain for hours), moderate (breathing heavy/difficult to hold a conversation), or vigorous (borderline uncomfortable/short sentences only). Meeting physical activity guidelines was defined as engaging in 150 minutes or more of moderate-vigorous physical activity per week.

Overall health

Respondents rated their current general health on a scale from poor to excellent. General health was defined "as a state of "complete physical, mental and social well-being and not merely the absence of disease or infirmity" as per the World Health Organization. Those who indicated their health to be 'poor', 'below average' or 'average' were considered to be in poor health (health = 0) whereas those who indicated their health to be 'above average' or 'excellent' were considered to be in good health (health = 1). Participants were asked to explain their choice and illustrative quotes were selected to exemplify each health category.

Respondents were asked, 'When you consider your current health and looking back at your career, would you still choose to compete at the same elite level if you had the chance to do it again?" Respondents who indicated "yes" were coded as 1, whereas those who indicated "no" were coded as 0