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Eating behaviours, menstrual history, and the athletic career

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INTRODUCTION:

Sports participation has many health benefits but is also associated with injuries, disordered eating (DE) behaviours, and menstrual dysfunction (MD) in female athletes. This retrospective study aimed to investigate if menstrual history and eating behaviours are associated with sports career-related factors in females who had participated in competitive sports during their adolescence. Moreover, the aim was to evaluate differences in menstrual history and eating behaviours among females with and without a competitive sports background.

METHODS:

One hundred females with a competitive endurance sports background and their 98 age-, gender-, and municipality-matched controls participated in the study. Data on demographics, menstrual history, eating behaviours at different age stages, sports careers, and injuries were collected by a questionnaire. Eating behaviours were assessed with the Eating Disorder Examination Questionnaire short form (EDE-QS). EDE-QS scores were calculated for each assessed age period (i.e., ages 13–15, 16–18, 19–21, 22–25, and present) and the scores were used both as a continuous and binary variable. Generalised estimating equations were used to calculate associations of menstrual history and eating behaviours with the outcome variables, i.e., sports career length, participation level, injury-related harms during the career, and career termination due to injury.

RESULTS:

Higher EDE-QS scores, indicating unhealthier attitudes toward eating and body image, during the athletic career were associated with a shorter career ($B = -0.15$, 95% confidence interval (CI) $-0.26, -0.05$), and secondary amenorrhea was associated with lower participation level (odds ratio (OR) 0.51, 95% CI 0.27, 0.95), injury-related harms during the career (OR 4.00, 95% CI 1.88, 8.48), and career termination due to injury (OR 1.89, 95% CI 1.02, 3.51). Females with a competitive sports background reported higher rates of MD than controls (primary amenorrhea 20% vs 2% in athletes and controls, respectively, $p < 0.001$ and secondary amenorrhea 34.1% vs 20.4%, in athletes and controls, respectively, $p = 0.035$), but no differences between the groups were observed in the EDE-QS scores at any age ($p > 0.05$ for all). However, trends in the EDE-QS scores over time were more stable among controls, while the scores of athletes increased significantly after age 13–15. DE during the sports career among athletes and DE during adolescence or young adulthood among controls was associated with current DE in both groups.

CONCLUSION:

The findings of this study indicate that DE behaviours and MD, specifically secondary amenorrhea, are linked with undesirable aspects of a sports career in females competing in endurance sports. DE during the sports career is associated with DE after the career. Athletes and those working with them should be aware of the negative link of DE and MD to a sports career.

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