

Association between sleep quality and pain in young amateur athletes

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Abstract

Introduction: It has been shown that there is a close association between sleep quality and pain. In young athletes, sleep disorders and pain have a particularly high prevalence; however, the relationship between them has not been widely studied.

Objective: To study the association between sleep quality and pain in young athletes.

Methods: A cross-sectional study was conducted in which 71 young amateur athletes (39 males) were included. The mean age was 16.9 ± 1.2 years, with 6.5 ± 3.2 years of sports practice and 5.2 ± 1.2 hours of training per week. Sleep quality was evaluated using the Pittsburgh Sleep Quality Index (PSQI). The participants were classified according to sleep quality, as PSQI-I = without sleep disorders, PSQI-II = requiring medical assistance and PSQI-III = requiring medical assistance and treatment. Also, pain intensity was assessed on the Numerical Rating Scale, both at rest (NRSr) and during sports activity (NRSs), along with pain duration.

Results: The individuals classified as PSQI-III presented higher NRSr (Mdn = 2.0; IQR = 4.0 vs. Mdn = 0.0; IQR = 2.0; $p = 0.04$) and higher NRSs (Mdn = 4.0; IQR = 5.0 vs. Mdn = 0.0; IQR = 2.0; $p = 0.03$) than the individuals classified as PSQI-I. No differences were observed in relation to pain duration. The PSQI score was positively but weakly associated with NRSr ($r_s = 0.24$, $p = 0.046$) and NRSs ($r_s = 0.27$, $p = 0.03$) but not with pain duration.

Conclusion: Young athletes with lower levels of sleep quality show higher levels of pain at rest and during sports practice. Therefore, sleep quality and pain should be considered in the routine assessment of young athletes, by technical and health teams. Level of evidence III; type of study: Cross-sectional. © 2021, Redprint Editora Ltda. All rights reserved.

Author keywords

Adolescent; Musculoskeletal pain; Sleep; Sleep hygiene; Sports