Deficits in health-related quality of life following sport-related musculoskeletal injury in adolescent athletes

Curt Bay, PhD; Alison Snyder, PhD; John Parsons PhD; Eric Sauers PhD; Tamara Valovich McLeod, PhD*

*All from Post-Professional Athletic Training Program, A.T. Still University, Mesa, AZ

Context: Measures of health-related quality of life (HRQOL) assess physical, psychological, and social domains of health. This global view considers the whole-person, extending beyond physiological and psychosocial components of health. HRQOL is a patient-oriented outcome that may be altered by sport-related injury, and may influence recovery. Objective: To examine HRQOL in adolescent athletes 3 and 10 days post-injury using, the Medical Outcomes Short Form (SF-36) and the Pediatric Outcomes Data Collection Instrument (PODCI). Design: Cohort. Setting: Athletic Training Facilities. Participants: Convenience sample of injured adolescents (n= 41 age=15.7±1.2) participating in interscholastic athletics. Interventions: Athletes completed the SF-36, and PODCI on days 3 (D3) and 10 (D10) post-injury. Single-sample t-tests (alpha=.05, two-tailed) were used to test differences in subscale scores between sample means and published normative values at D3 and D10. Wilcoxon tests were used to assess changes. Outcome Measures: Eight subscales (Physical Functioning-PF, Role Physical-RP, Bodily Pain-BP, General Health-GH, Vitality-VT, Social Functioning-SF, Role Emotional-RE, Mental Health-MH) and two composite scales (Physical Composite Score-PCS, Mental Composite Score-MCS) of the SF-36; five subscales (Upper Extremity/Physical Functioning-UE/PF, Transfer-TR, Sports-S, Pain/Comfort-PC, Happiness-H) and one global scale of the PODCI. Results: Scores are expressed in standard deviation units (effect size) relative to published norms. On D3, athletes scored below normative means on 5 of 8 SF-36 subscales: PF -1.1, RP -1.0, BP -1.2, SF -0.8, RE -0.6 and the PCS, -1.0 (p<0.005). On D10, scores remained below normative means: PF -0.5, RP -0.8, BP -0.4, SF -0.4, RE -0.5, PCS -0.4 (p<0.02). On D10, scores on PF, BP, VT, SF and PCS increased from D3 (all p<0.05). On D3, athletes scored significantly below the standardized population means on 3 of the 5 PODCI subscales: TR -2.9, S -3.0, PC -2.5 and the global score, -3.2 (p<0.001). At D10, scores remained below normative means: TR -1.8, S -2.1, PC -1.8 and the global score, -2.2 (p<0.001). By D10, all PODCI scores increased from D3 (all p<0.05). Conclusions: The SF-36 and the PODCI measured deficits in HRQOL in athletes with sport-related injury. They also reflected improvements in these subscales across a 7-day follow-up. Clinicians should incorporate these measures to determine the impact of sport-related injury on HRQOL.

Responsible Author: Curt Bay, Ph.D.: cbay@atsu.edu: 480-219-6037

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