The effect of occupational stress on the risk of overuse lower limb injuries in army recruits

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ABSTRACT

Background: Little is known about levels of occupational stress in recruits undergoing military training and the effect that this may have on presentation and severity of injury. Recognition of the psychosocial risk factors may be important for injury prevention.

Aims and Objectives: To explore the effect of occupational stress on the occurrence of Overuse Lower Limb Injury (OLLI), its presentation and severity.

Methods: A cohort of 476 recruits completed the Occupational Stress Inventory-Revised (OSI-R) in week four of Phase One training. The OSI-R measures levels of occupational stress using three psychological scales: Occupational Roles Questionnaire (ORQ), Personal Strain Questionnaire (PSQ) and Personal Resources Questionnaire (PRQ). Data on known risk factors for injury was gathered from selection records and from a questionnaire appended to the front of the OSI-R. In the final week of training, recruits completed a further questionnaire about any undeclared injuries. Once they had completed Phase One training, their electronic medical records were examined to look for evidence of OLLI.

Results: In the 476 recruits, there were 165 injuries. Of the injuries 91 (54%) were OLLI. OSI-R scores were not predictors of OLLI or of undeclared OLLI. OSI-R scores were predictive of significant OLLI (OR for those with higher PSQ score 1.104, 95% CI 1.016-1.201 P= 0.019).

OSI-R scores were significant predictors of outcome in training. Those with higher levels of strain (PSQ) were less likely to complete training (OR for completion with increased PSQ score 0.976, 95% CI, 0.968-0.985 P=0.00), those with better coping resources were more likely to complete training (OR for completion with a higher PRQ score, 1.034 95% CI 1.026-1.043 P= 0.00).

Conclusions: Higher levels of occupational stress were predictive of the severity of OLLI. Occupational Stress measured in week four of training is a significant predictor of outcome in training.