The Preventing Australian Football Injuries with Exercise (PAFIX) Study: a group randomised controlled trial

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ABSTRACT

Background: Knee injuries are a major injury concern for Australian Football players and participants of many other sports worldwide. There is increasing evidence from laboratory and biomechanically focused studies about the likely benefit of targeted exercise programmes to prevent knee injuries. However, there have been few international studies that have evaluated the effectiveness of such programmes in the real-world context of community sport that have combined epidemiological, behavioural and biomechanical approaches.

Objective: To implement a fully piloted and tested exercise training intervention to reduce the number of football-related knee injuries. In so doing, to evaluate the intervention's effectiveness in the real-world context of community football and to determine if the underlying neural and biomechanical training adaptations are associated with decreased risk of injury.

Setting: Adult players from community-level Australian Football clubs in two Australian states over the 2007–08 playing seasons.

Methods: A group-clustered randomised controlled trial with teams of players randomly allocated to either a coach-delivered targeted exercise programme or usual behaviour (control). Epidemiological component: field-based injury surveillance and monitoring of training/game exposures. Behavioural component: evaluation of player and coach attitudes, knowledge, behaviours and compliance, both before and after the intervention is implemented. Biomechanical component: biomechanical, game mobility and neuromuscular parameters assessed to determine the fundamental effect of training on these factors and injury risk.

Outcome measures: The rate and severity of injury in the intervention group compared with the control group. Changes, if any, in behavioural components. Process evaluation: coach delivery factors and likely sustainability.