

THE EFFECT OF ONE-ON-ONE INTERVENTION IN ATHLETES WITH MULTIPLE RISK FACTORS FOR INJURY

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ABSTRACT

Background: Lower extremity injuries in soccer players are extremely common. Implementation of group injury prevention programs has gained popularity due to time and cost-effectiveness. Unfortunately, players with greater number of risk factors are most likely to sustain an injury, yet less likely to benefit from a group injury prevention program. The purpose of this study was to determine if targeting these high risk players with one-on-one treatment would result in a reduction in the number of risk factors they possess. The authors hypothesized that fifty percent or more of subjects receiving one-on-one intervention would have a reduction of ≥ 1 risk factor(s).

Study Design: Quasi-experimental pretest-posttest design.

Methods: Division I men's and women's soccer players were screened for modifiable risk factors using a battery of tests which assessed mobility, fundamental movement pattern performance, motor control, and pain. Players with ≥ 3 risk factors ("high risk") received one-on-one treatment from a physical therapist via an algorithm twice per week for four weeks. Players with < 3 risk factors ("low risk") did not receive one-on-one intervention.

Results: The proportion of treatment successes in the intervention group was 0.923 (95% CI 0.640-0.998). A significant proportion of high risk subjects (0.846) became low risk at posttest ($p=0.003$). A significant between group difference was noted in risk factor change from pretest to posttest ($p=0.002$), with the median risk factor change in the intervention group being -3.

Conclusion: Utilizing one-on-one interventions designed to target evidence-based risk factors is an effective strategy to eliminate LE musculoskeletal injury risk factors in high risk individuals.

Levels of Evidence: 2b

Key words: injury prevention, injury risk, soccer, movement system

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Conflict of interest: Dr. Kiesel has equity in the Functional Movement System™, which owns the Functional Movement Screen™, other authors report no conflicts of interest.

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