

structured according to the FIFA 11+ program which is already being successfully used to prevent injuries.

Objective To investigate the effectiveness of the FIFA 11+S in reducing the incidence of upper extremity injuries

Design Randomised controlled trial.

Setting Amateur soccer.

Patients (or Participants) Male goalkeepers aged 14 to 35 years were randomly assigned to the experimental group (n = 360) or the control group (n = 366).

Interventions (or Assessment of Risk Factors) Experimental groups performed FIFA 11+S exercises for 20–25 minutes. The control group practiced their usual warm up.

Main Outcome Measurements The incidence of upper extremity injuries, mechanism, type and severity of injury.

Results During one season, 50 injuries (0.62 injuries/1000 exposure hours) were reported in the experimental group and 122 injuries were reported in the control group (1.94 injuries/1000 hours). The FIFA 11+S significantly reduced the total number of upper extremity injuries (RR = 0.42 [0.31–0.56]; $p < 0.00001$; Number Needed to Treat = 5.1), the incidence of contact injury (RR = 0.39 [0.27–0.55]; $p < 0.00001$), the incidence of initial injury (RR = 0.43 [0.31–0.59]; $p < 0.00001$) and the incidence of recurrent injury (RR = 0.32 [0.12–0.86]; $p < 0.05$) more than the usual warm up. Minor injury severity (RR = 0.41 [0.29–0.58]; $p < 0.00001$) and moderate injury severity (RR = 0.44 [0.20–0.94]; $p < 0.05$) were significantly reduced in the experimental group (FIFA 11+S) compared to the control group.

Conclusions This is the first study investigating the effectiveness of the FIFA 11+S in reducing the incidence of upper extremity injuries. This randomised trial provides evidence that implementation of the FIFA 11+S can reduce the incidence of upper extremity injuries among goalkeepers more than usual warm-up.

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THE FÉDÉRATION INTERNATIONALE DE FOOTBALL ASSOCIATION (FIFA) 11+ REFEREES INJURY PREVENTION PROGRAM: AWARENESS, IMPLEMENTATION AND OPINION OF WORLDWIDE SOCCER REFEREES AND ASSISTANT REFEREES

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Background Soccer referees and assistant referees have a significant risk of injury, particularly to the lower extremity. A growing body of research supports the use of injury prevention programs to prevent such injuries, yet participation rates in these programs by soccer referees and assistant referees remains largely unexplored.

Objective To assess soccer referees and assistant referees' awareness, implementation and opinion of the Fédération Internationale de Football Association (FIFA)11+ referees injury prevention program.

Design A cross-sectional study.

Setting An online survey for all continental football federations.

Patients (or Participants) A total of 727 soccer referees and assistant referees completed the survey.

Interventions (or Assessment of Risk Factors) The questionnaire consisted of questions relating to the awareness level, implementation rate, and opinion of the FIFA 11+ referees injury prevention program. Questions development was guided by several authors whose expertise is in sport medicine and injury prevention.

Main Outcome Measurements The primary outcomes were awareness level, implementation rate, and opinion of the effectiveness of the FIFA 11+ referees injury prevention program in reducing injuries.

Results A total of 234 (32.2%) participants reported awareness of the FIFA 11+ referees injury prevention program and 208 (28.6%) reported implementing the FIFA 11+ referees injury prevention program in their current practice. Participants who implemented the FIFA 11+ referees injury prevention program reported a positive attitude towards the program efficacy, with a score of 7.5 ± 1.3 out of 10.

Conclusions In order to increase the awareness and implementation of the FIFA 11+ referees injury prevention program, the football federations should focus on improving referees and assistant referees education, courses that emphasize injury prevention programs should be mandatory for all soccer referees, soccer assistant referees, and their coaches.

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THE FÉDÉRATION INTERNATIONALE DE FOOTBALL ASSOCIATION (FIFA) 11+ SHOULDER INJURY PREVENTION PROGRAM: AWARENESS, IMPLEMENTATION AND OPINION OF WORLDWIDE SOCCER GOALKEEPERS AND GOALKEEPERS' COACHES

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Background Soccer goalkeepers are more likely than outfield players to injure their upper extremity. The Fédération Internationale de Football Association (FIFA)11+ Shoulder injury prevention program (FIFA 11+S) was developed to prevent upper extremity injuries.

Objective To assess soccer goalkeepers and goalkeepers' coaches' awareness, implementation, and opinion about the FIFA 11+S injury prevention program.

Design Cross-sectional study.

Setting An online survey for all continental football federations.

Patients (or Participants) A total of 722 goalkeepers and goalkeepers' coaches completed the survey.

Interventions (or Assessment of Risk Factors) The questionnaire consisted of questions covering the awareness, implementation, and goalkeepers and goalkeepers' coaches' opinion of the FIFA 11+S injury prevention program. Questions development was guided by several authors expert in sport medicine and injury prevention programs.

Main Outcome Measurements The primary outcomes were awareness level, implementation rate, and opinion of the