Background Professional American football players (PAFP) are at high risk for musculoskeletal (MSK) injuries during their season. Little is known about how artificial intelligence (AI) enhanced force plate countermovement jump (CMJ) indices measure musculoskeletal and physiological change, and if these changes across seasons contribute to increased injury risk, especially after an extended layoff from training and participation such as occurred with the Covid-19 lockdown.

Objective Examine longitudinal changes in force plate CMJ measures in PAFP over multiple seasons and to determine if these measures were valid indicators of MSK health. Hypotheses tested: force plate CMJ indices are a valid measure of MSK health and these measures would decrease as injury risk would increase after Covid-19 lockdown.

Design Longitudinal force plate study

Setting Professional American Football

Patients (or Participants) 483 PAFP

Interventions (or Assessment of Risk Factors) Force plate measures in PAFP

Main Outcome Measurements CMJ force plate measures in PAFP

Results 483 unique individuals scanned over four pre-seasons. 109 unique individuals had repeat pre-seasons during that time. 949 force plate CMJ tests were performed over those four pre-seasons. The AI-generated conglomerate variable MSK Health was on average 47.8 ± 9.7 in 2017, 47.4 ± 10.1 in 2018, 47.5 ± 10.1 in 2019, and 45.0 ± 11.2 in 2020 post-Covid lockdown. ANOVA showed that 2020 measures of MSK Health were significantly decreased relative to the 3 prior seasons. Logistic regression analysis demonstrated a significant effect of the MSK_Health variable on MSK injury risk.

Conclusions Across multiple seasons of force plate CMJ measures in PAFP, MSK Health decreased following Covid-19 lockdown, which may be associated with higher risk for MSK injury. This greater understanding of the changes in longitudinal CMJ force plate measures in PAFP across seasons and after extended layoffs may assist in the development of effective MSK injury reduction measures.

Background Previous studies have confirmed different localization of injuries in football goalkeepers (FG) compared to outfield players. However, there is a lack of systematic data regarding the injury epidemiology and potential injury prevention programs that might be implemented in this unique group of players.

Objective 1) To analyze the type and localization of injuries among FG and what are the associated risk factors for these injuries 2) To verify whether there is any injury prevention program tailored for FG.

Design Systematic review of MEDLINE, SPORTDiscus, Web of Science, Scopus, and Cochrane Library electronic databases (search strategy available via the PROSPERO database; 2020 CRD42020183296).

Setting Any football competition level.

Patients (or Participants) The study population consisted of both sexes of amateur or professional FG.

Interventions (or Assessment of Risk Factors) Any paper addressing the issue of injury incidence and/or prevalence and describing injury prevention program/warm-up tailored for goalkeepers.

Main Outcome Measurements Type of injuries, localization of injuries, types of injury prevention programs, injury incidence (injuries/1000 training or match-play hours), percentage distribution of injury type, percentage distribution of injury localization.

Results Our searches identified 813 potentially relevant articles. By reviewing titles and abstracts, we identified 52 potential articles examining type and localization, and risk factors of injuries amongst FG, and biomechanical effects of applying injury prevention accessories (e.g., shorts, pads, etc.). There were no original scientific papers reporting the effectiveness of any tailored injury prevention programs implemented in a FG population. However, there was one short communication published as an abstract, confirming significant reductions in the total number of the upper extremity injuries following the application of FIFA 11+ program (RR=0.42 [0.31–0.56]; p<0.00001, NNT=5.1).

Conclusions More investigations are needed to develop and evaluate effectiveness of injury prevention strategies tailored for FG.

Background Para athletes from less-resourced countries have the highest need for protection against abuse in sport; however, their experiences and perceptions of abuse have not been studied.

Objective To describe Para athletes’ experiences and perceptions of abuse in sport, and systematically investigate the sociocultural drivers of those perceptions to inform culturally-relevant strategies to better protect vulnerable athletes.

Design Qualitative data were collected in the form of focus groups with Para athletes from Ghana, Brazil, and India. Data were analyzed using the Framework Method for Multidisciplinary Qualitative Analysis and transcripts were coded and analyzed by the research team.