

Determining Potential Risk Factors for Non-Contact Lower Extremity Injuries in Female Collegiate Soccer Players

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ABSTRACT

The severity and rising incidence of lower extremity (LE) non-contact injuries is concerning in competitive sports, especially soccer. Risk factors in specific populations must be identified in order to adequately prevent LE non-contact injuries from occurring. **PURPOSE:** to determine if BMI, playing position, limb dominance, surface type, history of injury, and/or competition type are risk factors for LE non-contact injuries in NCAA DII female collegiate soccer players. **METHODS:** Subjects (N=21) voluntarily participated in this study for the duration of the 2019-2020 Women's Soccer Season. Subjects were excluded if they were injured prior to the first official in-season game or if they had surgery or serious injury within 6 months. Subjects included in the study completed a questionnaire to establish a history of injury, age, height, weight, BMI, limb dominance, and playing position. Each subject signed an Informed consent approved by the university Institutional Review Board (IRB). Injuries included in the study were all injuries below the waist occurring from any mechanism other than outside force resulting in 1 or more days of time loss from sports participation. A weekly meeting was conducted between the primary investigator and the Women's Soccer athletic trainer to establish any new LE non-contact injuries. At the time of injury, surface type (turf or grass), competition type (practice or game), playing position, and the side of LE non-contact injury (left or right) were recorded. Throughout the duration of the season practice hours and playing hours were also recorded. **RESULTS:** A total of 7 LE non-contact injuries occurred throughout the season, while 5 of the injured athletes had a history of injury and 2 did not. Of the 7 injuries, 3 were forwards, 3 were defenders, and 1 was a midfielder. Four (4) injuries occurred during practice and on turf and 3 occurred during games and on grass. No significant associations ($P < 0.05$) were observed between LE non-contact injury incidence and BMI, playing position, limb dominance, surface type, history of injury, and competition type. **CONCLUSION:** The present study determined BMI, playing position, limb dominance, surface type, history of injury, and competition type are not risk factors for LE non-contact injuries in female collegiate soccer players.