235 EPIDEMIOLOGY OF ILLNESS IN FEMALE ATHLETES: A SYSTEMATIC REVIEW

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Background Illness prevention within elite sport can confer performance and health benefits to athletes. Despite the growing popularity and coverage of women's sport, little is currently known about the illness profiles of female athletes.

Objective To describe the incidence and nature of illness in female athletes.

Design This systematic review was prospectively registered (PROSPERO CRD42018092373). CINAL, Medline, PsychINFO, PubMed, SPORTDiscus were systematically searched from January 2008 to March 2018 inclusively. Peer-reviewed original research articles which reported the incidence and nature of illness in elite female athletes aged 18+ years were included. The risk of bias was assessed independently by two authors using the STROBE Statement Rating Criteria for systematic reviews. The included studies were mapped against the NHMRC evidence hierarchy.

Main Outcome Measurements Incidence and nature of acute and chronic illness.

Results 118 studies met the inclusion criteria; including 65 cohort studies (level ii/iii) and 46 cross-sectional studies (level iv evidence). The mean risk of bias was 16/22 (median=16, range 8–21). Of the included studies, 66 were in elite athletes (including 14 studies in Olympians), and 40 studies investigated collegiate/university athletes. Infections (primarily respiratory and gastrointestinal) were the most frequent cause of illness (46%), followed by mental health issues (20%), regardless of the sport or setting. Heterogeneity of illness definitions, severity classifications, and inconsistencies in exposure measures prevented any direct comparisons of illness incidence/severity across levels of competition.

Conclusions Illness prevention in women's sport is a novel and emerging research area. Currently there is a lack of consensus on illness data collection, and the majority of studies did not report important methodological information such as participant characteristics, or loss to follow-up. Owing to the lack of good-quality data, the findings are only able to provide a partial overview of the illness profile of female athletes, limiting the development of prevention interventions.

236 ANTHROPOMETRICS AND KNEE DYNAMIC VALGUS AS EXPLANATORY FACTORS FOR LANDING KINETICS AND ACL INJURY RISK: A FEMALE FOOTBALL COHORT STUDY

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Background Due to the devastating impact of the anterior cruciate ligament (ACL) injury has on the female athlete´s career, anthropometrics and biomechanics-related risk factor screenings have been widely designed. However, the relation of aberrant movement patterns and other anthropometrical variables still remains controversial.

Objective The aim of this study was to analyse if lower limb anthropometrics and knee kinematics could explain landing kinetics during a drop jump maneuver, as primary ACL injury risk factors in a female football environment.

Design Prospective cross-sectional descriptive study. Testing methodology was settled inside an anatomical, biomechanical and functional conditioning risk factor screening. Data collection was made during the pre-season period.

Setting 4 different teams from the region of the Basque Country (Spain). 2 youth second teams and 2 senior teams competing in the Spanish second division.

Patients (or Participants) 64 youth female football players (age 20,32±4,9). Every available (non-injured) athlete was included. No lost participants during the data collection.

Interventions (or Assessment of Risk Factors) Pelvic width and femur length were measured as anthropometrical gold variables. Knee valgus kinematics and landing kinetics during the bilateral and unilateral drop jump were registered.

Main Outcome Measurements Knee valgus kinematic data (femur-tibia angle <180°) was captured by a video analysis tracker software. Landing kinetics were registered using inertial sensor unit technology.

Results There was a little correlation ($r=0.303$) between landing peak VGRF and knee valgus kinematics, at p = 0,01 significance level, and also with the femur length ($r=-0.338$). In addition, the linear regression analysis showed that the pelvic width, femur length and knee valgus kinematics explained in 89,1% (R^2) the landing kinetics results ($p=<0.05$).

Conclusions A moderate significance level between lower limb anthropometrics, knee valgus kinematics and landing kinetics was the main finding at the present study. More exhaustive surveillance screening re-tests are needed in order to detect the main contributors for ACL injury mechanics in a female football context.

237 CONTACT INJURIES PREDOMINATE IN FEMALE YOUTH TEAM SPORTS: AN OPPORTUNITY FOR PREVENTION

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Background Sport participation is the leading cause of injury in youth. Female youth are underrepresented in the sport injury literature and present with a different injury profile than males.

Objective To investigate sport-related injury rates, types, locations and mechanisms in female youth team sports.

Design Secondary analysis of a cross-sectional study.