

ELS Poster Day Application 2019

Reference: Dendy DW, James CR, Brooks T, Lierly M, et al. Effectiveness of an ACL prevention program during a recreational softball season for young girls: applying coach and player engagement

Context: In today's sports world, non-contact knee injury rates among female athletes have remained largely unchanged over the past 10 years. While current research and practices have indicated that knee injury prevention programs for female athletes are effective, such efforts have yet to impact the overall likelihood or rate of injury.

Objective: The research question was how to implement a knee injury prevention program in a typically low incidence-rate sport (softball) for a non-contact knee injury. More specifically, could such programming be implemented in a practical way while positively influencing performance (i.e. field-based measures) and player engagement?

Design: A pilot study was conducted with pre- and post-intervention measures of on-field agility performance and written test pre- and post-exams.

Setting: The study took place during a recreational softball season of eight weeks duration. The on-field agility was tested on a high school softball field.

Specimens, Patients or Other Participants: The intervention groups consisted of eight female subjects and the control included three female subjects. The age range for all subjects was 13-18 y.o.

Intervention(s): The intervention group went through a knee injury prevention program (IPP) during the softball season consisting of movement preparation skills and drills in practices and games, along with sport-specific skills intended to assist the athlete in learning to dynamically stabilize the knee. Practicing the IPP consisted of 15 minutes of stability and mobility work along with agility skills and drills during every practice. In addition, during practices, there were 2-3 fielding drills to work on controlling knee mechanics. Specific movement prep drills were performed before every game, and between innings, agility skills for knee injury prevention were performed. A licensed physical therapist and/or certified athletic trainer attended every practice and game to go over the IPP. The control group played in the same softball season with the intervention group but received no IPP.

Main Outcome Measure(s): On-field performance was assessed for the intervention and control utilizing a standardized test battery for softball before and after the season. Testing consisted of a 20-yard dash, standing vertical jump, rotational power ball throw, and 20-yard shuttle. Each performance measure was attempted three times with the best attempt recorded. All subjects took a written pre- and post-exam to get their understanding of how to decrease their risk of knee injuries.

Results: Data are still being analyzed, but will be done before ELS.

Conclusions: Data are still being analyzed, but will be done before ELS.