

Current Barriers and Facilitators of Warm-Up Practices in Secondary Schools

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Context: Preventive training programs (PTPs) are recommended and proven to reduce lower extremity sport-related musculoskeletal injury. Although there is much support of these programs, there is low reported adoption in the literature. The purpose of this project was to evaluate the current facilitators and barriers of PTPs in existing team-based warm-ups among secondary school athletic trainers (ATs) and athletic directors (ADs).

Methods: A cross sectional study design included 20 secondary school ATs and 18 secondary school ADs in North Carolina and Connecticut who volunteered to complete a pre-validated online questionnaire via Qualtrics (Provo, UT). The questionnaire development was guided by the 2018 NATA Position Statement: Prevention of Anterior Cruciate Ligament Injury. ATs and ADs were asked questions pertaining to facilitators and barriers of any team-based dynamic warm-up at their school. Questions were formatted for the respondents to select all that applied. Frequencies were calculated for each barrier and facilitator. Prevalence ratios (PR) with 95% confidence intervals (CI) were also calculated to compare barriers and facilitators reported between ATs and ADs.

Results: The most commonly reported barriers to implementation of team-based warmups, as reported by ATs, were resistance or apprehension from the head coach (40%, n=8), that the school would need more information/ assistance to implement the program (35%, n=7), and not applicable (30%, n=6). The most commonly reported barriers, as reported by ADs, were resistance or apprehension from the head coach (11%, n=2), financial limitations (11%, n=2), and that the school would need more information/assistance to implement a program (11%, n=2), with 12 (67%) reporting this question was not applicable. The most commonly reported facilitators as reported by ATs were: have a team-based warm-up developed and demonstrated (70%, n=14), support from someone in an authoritative position (40%, n=8), seeing how other schools/ programs facilitate training (35%, n=7), and having medical professionals at the school (35%, n=7). The most commonly reported facilitators as reported by ADs were to have a team-based warm-up developed and demonstrated (33%, n=6) and having policies in place to require training (22%, n=4), with 7 (39%) of ADs reporting this question was not applicable. ATs reported a higher prevalence of having a team-based warm-up developed and demonstrated to be a facilitator compared to ADs (70% vs. 33%; PR=2.10; 95% CI=1.03,4.29). No other significant comparisons between facilitators and barriers were noted between ATs and ADs.

Conclusions: Evidence-based PTPs are critical in reducing injury. Identifying the most common barriers and facilitators of PTPs can guide future dissemination strategies. It is also important to recognize that ATs and ADs may have different perceptions of barriers and facilitators regarding implementation of a PTP. Therefore, dissemination strategies should include a socioecological approach to ensure community buy-in to facilitate compliance with a PTP.