Establishing Pre-Season Self-Reported Functional Outcomes Scores for Overhead Athletes

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Background: The goal of rehabilitation is to return overhead athletes to pre-injured levels; however, prospective pre-injured levels of physical capability for overhead athletes have not been well documented. Purpose: To perform a descriptive analysis of a shoulder-specific perceived measure of physical capability during pre-participation physical examinations. To compare the perceived measure between athletes with and without a history of injury. Design and Setting: Cross-Sectional Study. Pre-participation physical examinations at physician offices and athletic facilities. Patients or Other Participants: 168 collegiate overhead athletes (Age 19±2 years, 74 male and 94 female) were administered questionnaires after receiving medical clearance to participate in their sport. 54 of 168 (32%) athletes reported a history of injury. Methods: Self-reported athletic function of athletes with and without a history of shoulder injury assessed by the Kerlan-Jobe Orthopaedic Clinic Shoulder and Elbow Score (KJOC). The KJOC is scored 0-100 (low to high capability). Non-parametric analysis was performed to determine if scores differed between participants reporting history of shoulder injury. Results: The mean KJOC score for all athletes was 90±16. Athletes with a history of shoulder injury reported significantly lower arm function (81) compared to athletes without a history of injury (98) ($p<.001$). KJOC scores were significantly lower for both male (88) and female (80) athletes with a history of shoulder injury compared to males and females with injury history (≥98) ($p<.001$). Athletes who sustained an injury within the previous 12 months of completing the KJOC reported significantly lower arm function (70) compared to athletes who sustained an injury longer than 12 months prior to KJOC completion (92) ($p<.001$). Conclusions: The pre-season functional value for an athlete's shoulder per the KJOC is similar to previous reports involving asymptomatic professional athletes. However, history of injury negatively impacts self-perceived physical capability of the shoulder in overhead athletes. Timing of injury appears to affect perceived shoulder function as well with athletes reporting lower functional scores with more recent injury although they were medically cleared to participate in sport. Prospective collection of preseason perceived function may provide clinicians with relative "normal" values and may serve to identify individuals who may benefit from further monitoring for injury risk and/or the implementation of injury prevention interventions.