The Relationships Between Self-Reported Pain and Injury History, the Functional Arm Scale for Throwers© (FAST©), and the Disabilities of the Arm, Shoulder, and Hand (DASH) in Adolescent Baseball Pitchers.

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Purpose: To examine the relationships between self-reported pain and upper extremity injury history in adolescent baseball pitchers using two region-specific, patient self-report scales. **Subjects:** Twenty adolescent baseball pitchers (age=16.1±1.1 years). **Methods:** During pre-season screening of adolescent baseball players subjects were asked to complete a multi-component demographic questionnaire that included questions regarding pain and injury history. Questions were asked relative to ever having pain or injury (EVER) or having pain or injury in the last 12 months (12 mos). Subjects were also asked to complete two region-specific, self-report scales for the arm, which included the Functional Arm Scale for Throwers (FAST), and the Disabilities of the Arm, Shoulder, and Hand (DASH). Scores were calculated for the FAST total score (F-T), FAST pitching module (F-PM), pain (F-P), impairment (F-I), functional limitation (F-FL), disability (F-D), and societal limitation (F-SL) subscales and the DASH total (D-T) and sport module (D-SM) scores. Point bi-serial correlations were used to examine the relationships between self-reported pain and injury history and scale scores. All results of statistical significance are reported as $P \leq 0.05$, two-tailed. **Results:** Pain in the shoulder during pitching was significantly related to the F-T, F-PM, F-I, F-D [EVER=5/19 (26%) r=.45-.76], and the F-P and F-D [12 mos=6/19 (32%) r=.45-.65]. Pain in the elbow during pitching was significantly related to the F-PM, F-P, and F-D [12 mos=5/19 (26%) r=.45-.51]. Having pitched when the shoulder was tired was significantly related to the D-T [EVER=14/19 (74%) r=.53]. History of an arm or shoulder pitching-related injury that restricted participation in pitching for 1 week or more was significantly related to the F-T, F-FL and D-T [EVER=7/20 (35%) r=.51-.57] and the F-T, F-PM, F-P, and F-D [12 mos=2/20 (10%) r=.46-.70]. Seeing a physician for a pitching-related injury that restricted participation in pitching for 1 week or more was significantly related to the F-PM, F-FL, and F-D [12 mos=1/20 (5%) r=.50-.99]. Having surgery on the arm or shoulder from a pitching-related injury was significantly related to the F-PM, F-FL, and F-D [EVER=1/20 (5%) r=.50-.99; 12 mos=1/20 (5%) r=.50-.99]. History of using pain relievers for pitching was significantly related to

F-PM, F-FL, and F-D [EVER=8/19 (42%) r=.51-.69; 12 mos=6/18 (33%) r=.50-.75]. **Conclusions:** The presence of self-reported pain and injury history in adolescent baseball pitchers are significantly, positively correlated to the FAST. Few significant relationships were observed between pain and injury history and the D-T and no significant relationships were observed for the D-SM. **Clinical Relevance:** In this small, convenience sample of adolescent baseball pitchers the FAST appears to better discriminate between those with and without positive pain and injury histories compared to the DASH. **Word Count:** 431

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