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More load less harm? Perceived harmfulness of daily activities and low back pain beliefs in weightlifters and power lifters

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Weightlifting (WL) (Figure 1) and Powerlifting (PL) (Figure 2) are popular strength-based sports associated with large spinal loads (1, 2). Low Back Pain (LBP) is one of the most common disorders incurred by WL and PL athletes (3). Fear of movement is thought to be a risk factor for the onset and persistence of LBP, but this has only been investigated in the lay population (4). Whether similar levels of fear exist in a cohort of athletes regularly exposed to high and repetitive spinal loads is uncertain. The predictors of fear in this cohort are also unknown.

Fear of movement was quantified using the Photograph Series of Daily Activities Short Electronic Version (PHODA-SeV) (Figure 3) (scored from 0 = 'Not harmful at all' – 100 = 'Extremely harmful') in a cohort of 70 WL and PL athletes (Age = 28 ± 8, Mass (kg) = 74 ± 12, Back squat (kg) = 129 ± 49). A stepwise regression model (Figure 5) was used to determine the strongest predictors of PHODA-SeV score. 13 variables were measured and included in the stepwise regression to predict fear. Independent t-test were used to compare the cohort mean PHODA-SeV score with the mean population score (PHODA-SeV = 40). Pain intensity in the cohort was measured using the Oslo Sports Trauma Research Centre Overuse Injury Questionnaire (OSLO) (5).

Athletes who train in WL and PL had lower fear levels compared to the general population. Similar findings have been seen within ACL recoverees (6), where modified PHODA scores were reduced in the athlete ACL recovery group compared to the sham group (6). Regular exposure to high spinal load movements may reduce pain-related fear. Support for this was seen within our regression analysis, with back squat weight being one of the most important predictors for reduced pain-related fear.

Biography

Josce Syrett is an MPhil student at the University of Cambridge studying population health sciences (specializing in public health) and is a recent graduate in sport and exercise science. Previous publications have focused on the psychology of low back pain among weightlifters and power lifters. Their current research is focusing on improving the diagnosis of atrial fibrillation using wearable technology whilst trying to reduce the need for mass manual ECG review.