Decreased Injury-Related Fear Following a 4-Week Comprehensive Intervention for Those with Chronic Ankle Instability

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**Context:** Individuals with chronic ankle instability (CAI) suffer from functional and self-perceived impairments. Established CAI interventions have proven effective at improving many functional and ankle-specific complaints. However, injury-related fear has yet to be investigated following rehabilitation for those with CAI. CAI is associated with increased levels of injury-related fear that may limit physical activity levels and put individuals at risk for chronic diseases. **Objective:** Determine if a 4-week comprehensive rehabilitation program can decrease injury-related fear in those with CAI.

**Design:** Interrupted time-series. **Setting:** Laboratory. **Patients or Other Participants:** Twenty physically active adults (15 females; age=24.4±7.0 years; height=169.2±10.1cm; weight=70.6±12.9kg) with self-reported CAI participated. Inclusion criteria consisted of a history of ≥1 ankle sprain, ≥2 episodes of giving way in the past three months, answering “yes” to ≥4 questions of Ankle Instability Instrument, scoring ≤24 on the Cumberland Ankle Instability Tool. **Interventions:** Subjects participated in 12 intervention sessions in which they completed balance training, ankle strengthening, and talocrural joint mobilizations over the course of four weeks. Additionally, subjects were instructed to perform daily home ankle strengthening and gastroc-soleus complex stretching exercises throughout the four weeks. Injury-related fear was assessed using the Fear Avoidance Beliefs Questionnaire (FABQ). The FABQ is comprised of two subscales that assessed injury-related fear during physical activity (PA) and work (W) activities. The 5 items of the FABQ-PA and 11 items of the FABQ-W are each scored on a 7-point Likert scale. Greater scores on the FABQ indicate increased injury-related fear. The FABQ was measured four weeks before intervention (baseline), prior to the first intervention session (pre-intervention), 24-48 hours following intervention cessation (post-intervention), and two weeks following intervention cessation (follow-up). **Main Outcome Measures:** The independent variable was time (baseline, pre-intervention, post-intervention, and follow-up) and dependent variables were FABQ-PA and FABQ-W scores. Cronbach’s α and standard error of measurement were used to calculate minimal detectable change using the baseline and pre-intervention data. Separate repeated-measures ANOVAs examined differences in each dependent variable over time (pre-intervention, post-intervention, follow-up). Sidak post hoc comparisons were completed in the presence of significant main effects. Alpha was set a-priori at p≤0.05. **Results:** Minimal detectable change (MDC) values for FABQ-PA and FABQ-W were 3.18 and 5.39 respectively. A significant main effect was identified for the FABQ-PA (p<0.001). Post hoc analysis identified significant reductions at post-intervention (p<0.001, 6.50±5.01) and follow-up (p<0.001, 5.65±4.74) compared to pre-intervention (12.60±4.22) for the FABQ-PA. A significant time main effect was not identified for the FABQ-W (p=0.16). **Conclusions:** The 4-week comprehensive rehabilitation program significantly reduced injury-related fear in those with CAI. Changes in post-intervention and follow-up scores surpassed the MDC associated with the FABQ-PA. These findings suggest that clinically relevant changes in injury-related fear occurred and persisted after the cessation of the intervention. **Word Count:** 450