

Recovery Expectation and Anxiety Predict Functional Outcome in Orthopaedic Trauma Patients

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Purpose: Studies in multiple areas have demonstrated a relationship between patients' anticipated recovery and their functional outcome, but this association has not been investigated in orthopaedic trauma patients. The goal of this study was to investigate the relationship of recovery expectation and anxiety following a surgically treated fracture with postoperative physical function.

Methods: All surgically treated trauma patients with complete data over a 2-year period from 2018-2020 at a Level I trauma center were included. Demographic, injury, PROMIS (Patient-Reported Outcomes Measurement Information System) Physical Function (PF) and Anxiety data were collected. Patient expectations were collected by a single question: "On a scale of 0 to 100, how likely do you believe you are of returning to your previous level of function?" (SF-1). Outcomes were collected at 2 weeks and at a minimum of 3 months postoperatively. Standard statistical comparisons were performed.

Results: In total 410 patients were included in the study with an average age of 55 years (standard deviation [SD]: 17). There were 242 males (59%) and 168 females (41%) in the cohort. Median time of follow-up was 6 months (Range: 3-27 months). The average SF-1 score immediately post-op was 80 (SD: 26) and 82 (SD: 22) at final follow-up. There were 129 patients (31%) who reported an SF-1 of 100 at the first visit. There was no difference in age, gender, follow-up time, and fracture locations when comparing the patients with an SF-1 score of 100 to all other patients with any response less than 100. However, despite having similar initial PF-CAT (computer adaptive test) scores (32 vs 31, $P = 0.27$) at first visit, patients who expected full recovery had higher PF-CAT scores at final follow-up (49 vs 41, $P < 0.01$) and lower PROMIS anxiety scores (52 vs 58, $P < 0.01$) compared to all others.

Conclusion: These data support the notion that patient expectation of recovery is predictive of functional outcome in orthopaedic trauma patients. For one-third of all patients who anticipate a full recovery (SF-1 = 100) at the onset of their injury, greater physical function is expected at 6 months postoperatively. This study highlights the importance of optimism, self-efficacy, and low anxiety in recovery from traumatic injury.