

Preoperative Resilience Strongest Predictor of Postoperative Outcome Following an Arthroscopic Bankart Repair

James S. Shaha, MD¹, Steven H. Shaha, PhD, DBA², Craig R. Bottoni, MD³, Daniel J. Song, MD³, John M. Tokish, MD⁴

¹Tripler Army Medical Center, TAMC, HI, USA, ²University of Utah, Salt Lake City, UT, USA, ³Tripler Army Medical Center, Honolulu, HI, USA, ⁴Steadman Hawkins Clinic of the Carolinas, Greenville, SC, USA.

Objectives: Resilience, which is a psychometric property related to “hardiness” or the ability to respond to challenging situations, is a recognized predictor in many outcomes’ domains. This has been studied extensively in stressful situations such as military returning from deployment, serious disease, and traumatic injury. To date however, no study has assessed the role of patient resiliency with respect to surgical outcome. The purpose of this study was to assess the role of preoperative resiliency as calculated by the Brief Resiliency Score (BRS) on relevant surgical outcomes, including the time required to return to full unrestricted activity following an arthroscopic Bankart repair. In addition the correlation between pre-operative BRS with post-operative BRS, post-operative Western Ontario Instability Index (WOSI), American Shoulder and Elbow (ASES) and Single Assessment Numeric Evaluation (SANE) scores was also assessed.

Methods: This is a retrospective review of prospectively gathered data on 25 consecutive active duty military patients undergoing an arthroscopic Bankart repair for instability. The mean follow-up was 24.3 months (range, 23-27) as the primary outcome was return to unrestricted duty which occurs within the first year post-intervention. There were 24 males and 1 female. All patients were on unrestricted active military duty prior to injuring the operative shoulder. All patients completed BRS, WOSI, ASES, and SANE questionnaires prior to operative intervention. They then completed the same questionnaires at the most recent follow-up as well as an additional questionnaire on military duty status (unrestricted duty, limited duty, medical separation from the military). Patients were divided into low resiliency and high resiliency groups based on a score of <4.0 for low and ≥4.0 for high in the BRS, and their outcomes were compared.

Results: All patients had been cleared for return to full-duty or were undergoing a medical separation at final follow-up. There were no differences between groups in demographics, glenoid bone loss, or glenoid track status. Pre-operative BRS was significantly correlated with time to return to full duty, need for medical separation from the military, post-operative WOSI, SANE and ASES scores and change between pre- and post-operative WOSI, ASES and SANE scores. Those patients with high resiliency returned to full duty significantly faster than the low resiliency group (4.4 v 6.7 months, $p<0.01$), had better post-operative WOSI (86.4% v 48.9%, $p<0.01$), SANE (92 v 72, $p=0.03$), ASES scores (91.5 v 67.6, $p=0.03$) and were 5 times less likely to be medically separated from the military (7.7% v 38.5%, $p<0.01$). Also, patients with high resiliency had significantly greater improvement comparing pre-operative to post-operative WOSI (44.8% v 20.3%, $p=0.04$), ASES (22.0 v 7.5, $p=0.04$) and SANE scores (2.5 v 1.3, $p=0.01$). There were no patients with a change between pre- and post-operative resiliency classification.

Conclusion: Preoperative resiliency was highly predictive of the time required to return to full, unrestricted military duty. It was also predictive of post-operative subjective and objective outcomes as well as overall improvement between pre- and post-operative outcomes scores. Highly resilient patients were able to return to duty 2 months faster with significantly fewer requiring medical separation from the military than those lacking resiliency.

The Orthopaedic Journal of Sports Medicine, 5(3)(suppl 3)

DOI: 10.1177/2325967117S00113

©The Author(s) 2017

This open-access article is published and distributed under the Creative Commons Attribution - NonCommercial - No Derivatives License (<http://creativecommons.org/licenses/by-nc-nd/3.0/>), which permits the noncommercial use, distribution, and reproduction of the article in any medium, provided the original author and source are credited. You may not alter, transform, or build upon this article without the permission of the Author(s). For reprints and permission queries, please visit SAGE’s Web site at <http://www.sagepub.com/journalsPermissions.nav>.