

## Relationship Between Patient Mental Health and Hip Arthroscopy Outcomes

Srish Chenna<sup>1</sup>, Jeffrey Mun<sup>1,2</sup>, Rachel Poutre<sup>1</sup>, Brandon Allen<sup>1</sup>, Bilal Siddiq<sup>1,3</sup>, Stephen Gillinov<sup>1,4</sup>, Jackson Woodrow<sup>1,5</sup>, Rishi Earla<sup>1</sup>, Scott Martin<sup>1</sup>

<sup>1</sup>Sports Medicine, Department of Orthopaedic Surgery, Massachusetts General Hospital, Boston, MA, USA

<sup>2</sup>Geisinger Commonwealth School of Medicine, Scranton, PA, USA

<sup>3</sup>Department of Internal Medicine, The University of Tennessee Health Science Center, Memphis, TN, USA

<sup>4</sup>Department of Surgery, Yale University School of Medicine, New Haven, CT, USA

<sup>5</sup>University of Arizona College of Medicine – Phoenix, Phoenix, AZ, USA

jwoodrow@mgh.harvard.edu

**Disclosures:** Srish Chenna (N), Jeffrey Mun (N), Rachel Poutre (N), Brandon Allen (N), Bilal Siddiq (N), Stephen Gillinov (N), Jackson Woodrow (N), Rishi Earla (N), Scott Martin (N)

**INTRODUCTION:** A patient's mental health can have a significant impact on their post-operative outcomes after orthopaedic surgery. Therefore, the purpose of this study is to understand the association between preoperative mental health status and functional outcomes and postoperative mental health scores up to 5 years after surgery.

**METHODS:** This prospective study included patients who, after failing conservative treatment, underwent primary hip arthroscopy for symptomatic labral tears secondary to femoroacetabular impingement by a single surgeon. Patients were enrolled for this study prior to surgery and completed surveys for modified Harris Hip Score (mHHS), International Hip Outcome Tool (iHOT-33), Hip Outcome Score Sports Specific Score (HOS-SSS), and RAND-36 up to 5 years after surgery. Excluded patients were <18 years of age and/or had a history of ipsilateral hip surgery or revision surgery. A score of 45.6 in the Mental Component Summary (MCS) extracted from RAND-36 has been defined in the literature as a threshold for poor mental health (PMH). Patients who scored <45.6 were placed in the PMH cohort, and those who scored ≥45.6 were placed in the high mental health (HMH) cohort. This study was approved by the institutional review board and all patients provided consent.

**RESULTS:** This study included 201 patients (47.8% female, mean age ± SD: 36.7±11.3) with an average body mass index (BMI) of 25.4±3.9 kg/m<sup>2</sup>. At 3 months postoperatively, the PMH cohort's mean mental health improved significantly from baseline by 5.5 points (p=0.001), reaching above the 45.6 threshold. For mHHS, iHOT-33, and HOS-ADL, the PMH cohort outcomes at baseline, 3, 6, and 12 months remained significantly lower than those of the HMH cohort (all p<0.05). However, beyond 12 months until 60 months postoperatively, patients in the PMH and HMH cohorts did not have any statistically significant differences in mHHS, iHOT-33, and HOS-ADL (all p<0.05).

**DISCUSSION:** Hip arthroscopy surgery, especially for those with poor preoperative mental health, has the potential to significantly improve patient mental health and functional outcomes up to 5 years postoperatively. Those in the HMH cohort experienced statistically greater functional outcomes compared to those in the PMH cohort up until the 12-month timepoint. Beyond 12 months, no significant differences in functional outcomes were observed regardless of preoperative mental health status.

**SIGNIFICANCE/CLINICAL RELEVANCE:** Patients with poor mental health had a substantial increase in both mental and physical health outcome measures following hip arthroscopy for symptomatic labral tears.