



Baseline Anxiety and Depression Is Not Associated with Worse Postoperative Function or Satisfaction After Hip Arthroscopy

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I (and/or my coauthors) have something to disclose

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INTRODUCTION

- Hip arthroscopy has grown drastically over the past decade because of improvements in techniques and better understanding of underlying hip pathologies.
- Baseline mental health has been shown to affect preoperative functional status in hip arthroscopy patients.
- However, there is limited literature regarding the effect of baseline mental health on postoperative outcomes.

OBJECTIVES

- Determine the associations between baseline depression and anxiety and patient reported outcomes (PROs) two years after hip arthroscopy.

HYPOTHESIS

- **The hypothesis was that worse preoperative mental health would be associated with prior history of depression or anxiety and worse overall health status as well as correlate with worse functional status, pain, and satisfaction postoperatively**



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METHODS

- Of the 92 hip arthroscopy patients enrolled in the Maryland Orthopaedic Registry (MOR) from 2015 to 2020, 62 completed two-year postoperative questionnaires.
- Participant sociodemographic information was self-reported preoperatively through an electronic survey system
- Medical information such as a prior diagnosis of depression or anxiety was gathered through electronic chart review.

METHODS

- Each patient completed the following questionnaires:
 - 6 Patient-Reported Outcomes Measurement Information System (PROMIS) Domains, including both Depression and Anxiety, preoperatively and two years postoperatively
 - Musculoskeletal Outcomes Data Evaluation and Management System (MODEMS) postoperative met expectations questionnaire
 - Numeric Pain Score (NPS) for operative hip and whole body
 - Surgical Satisfaction Questionnaire (SSQ8) at two year postoperatively
 - Marx Activity Rating Scale (MARS) and Tegner Activity Rating Scale (TAS) postoperatively
- Bivariate analysis was performed via Wilcoxon rank sum and Spearman's rank correlation coefficient (ρ).



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RESULTS

- Worse baseline anxiety or depression was associated with female gender, clinical history of anxiety or depression, and greater comorbidities.
- Higher preoperative PROMIS Anxiety scores were associated with worse two-year PROMIS Fatigue and Depression and Tegner Activity Scale (Table 1).
- Higher preoperative PROMIS Depression was associated with worse two-year PROMIS Fatigue and Anxiety and NPS-Whole Body (Table 1).

Table 1: Preoperative PRO Anxiety and Depression Correlations with Two Year PROs

Preoperative Outcome Measurement	Postoperative Outcome Measurement	Spearman ρ	P value
PROMIS Anxiety	2-year PROMIS Physical Function	-0.19	0.12
PROMIS Anxiety	2-year PROMIS Pain Interference	0.15	0.22
PROMIS Anxiety	2-year PROMIS Fatigue	0.45	0.0002
PROMIS Anxiety	2-year PROMIS Social Satisfaction	-0.09	0.46
PROMIS Anxiety	2-year PROMIS Depression	0.38	0.002
PROMIS Anxiety	MODEMS Postop Met Expectations	-0.08	0.53
PROMIS Anxiety	2-year Numeric Pain Scale - Operative Hip	-0.03	0.84
PROMIS Anxiety	2-year Numeric Pain Scale – Whole Body	0.14	0.29
PROMIS Anxiety	2-year Tegner	-0.27	0.04
PROMIS Anxiety	2-year MARS Lower Extremity	-0.25	0.06
PROMIS Anxiety	SSQ8	-0.14	0.25
PROMIS Depression	2-year PROMIS Physical Function	-0.16	0.19
PROMIS Depression	2-year PROMIS Pain Interference	0.16	0.21
PROMIS Depression	2-year PROMIS Fatigue	0.54	<0.0001
PROMIS Depression	2-year PROMIS Social Satisfaction	-0.10	0.44
PROMIS Depression	2-year PROMIS Anxiety	0.56	<0.0001
PROMIS Depression	MODEMS Met Expectations	-0.10	0.44
PROMIS Depression	2-year Numeric Pain Scale - Operative Hip	0.06	0.64
PROMIS Depression	2-year Numeric Pain Scale – Whole Body	0.37	0.003
PROMIS Depression	2-year Tegner	-0.15	0.24
PROMIS Depression	2-year MARS Lower Extremity	-0.18	0.17
PROMIS Depression	SSQ8	-0.11	0.39

Bold values indicate statistically significant with p < 0.05.

PROMIS, Patient-Reported Outcome Measurement Information System.

MODEMS, Musculoskeletal Outcomes Data Evaluation and Management System

MARS, Marx Activity Rating Scale



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RESULTS

- Baseline PROMIS Anxiety and Depression was not associated with two-year PROMIS Physical Function or with change from baseline in any PRO (Table 1 & 2)

Table 2: Preoperative PRO Anxiety and Depression Correlations with CHANGE Two Year PROs

Preoperative Outcome Measurement	Postoperative Outcome Measurement	Spearman p	P value
PROMIS Anxiety	Change PROMIS PF	-0.13	0.29
PROMIS Anxiety	Change PROMIS PI	-0.04	0.98
PROMIS Anxiety	Change PROMIS Fatigue	-0.18	0.15
PROMIS Anxiety	Change PROMIS Social Satisfaction	0.10	0.41
PROMIS Anxiety	Change PROMIS Depression	-0.21	0.09
PROMIS Depression	Change PROMIS PF	-0.04	0.73
PROMIS Depression	Change PROMIS PI	-0.05	0.67
PROMIS Depression	Change PROMIS Fatigue	0.05	0.71
PROMIS Depression	Change PROMIS Social Satisfaction	0.19	0.13
PROMIS Depression	Change PROMIS Anxiety	-0.03	0.82

PROMIS, Patient-Reported Outcome Measurement Information System.



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DISCUSSION

- Worse baseline mental health was associated with female gender, greater co-morbidities, and prior clinical history of anxiety or depression
- Worse baseline anxiety and depression were associated with greater fatigue, anxiety, depression, and whole-body pain two years following hip arthroscopy.
- Baseline mental health was not associated with function, pain interference, satisfaction or met expectations two years postoperatively.

CONCLUSION

Worse preoperative mental health, although associated with continued mental distress postoperatively, may not be a barrier to achieving adequate functional outcomes and satisfaction following hip arthroscopy.



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