

Socioeconomic Disadvantage Associated with Lower Rates of Clinical Benefit Achievement and Higher Risk of Adverse Events After Hip Arthroscopy: A Systematic Review

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INTRODUCTION: Socioeconomic status (SES) and social determinants of health (SDOH) are increasingly recognized as critical factors influencing musculoskeletal outcomes. Disparities in income, neighborhood environment, and insurance status may influence postoperative recovery, complications, and long-term outcomes. The purpose of this systematic review was to evaluate the association between SES/SDOH and postoperative outcomes following hip arthroscopy.

METHODS: This study was conducted following Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Figure 1) and registered with PROSPERO. PubMed, Scopus, and Embase were systematically searched in July 2025 for studies evaluating hip arthroscopy outcomes stratified by SES or SDOH indices, including the Area Deprivation Index (ADI) and Social Deprivation Index (SDI). Eligible studies included retrospective or prospective cohorts that reported patient-reported outcome measures (PROMs), minimum clinically important difference (MCID), Patient Acceptable Symptomatic State Scores (PASS), complication rates, revision procedures, or healthcare utilization. Case reports, review articles, opinion pieces, and technique-only papers were excluded.

RESULTS: 13 studies met the inclusion criteria. Of the studies that reported sex, male representation ranged from 20.4% to 53.9%, while female representation ranged from 55.7% to 75.1%. Seven studies examined the impact of SDOH using validated indices of social disadvantage such as ADI or SDI. Remaining studies stratified cohorts using other socioeconomic factors such as insurance type. Follow-up ranged from 90 days to 12 years, with the most commonly reported being a minimum of 2 years. Four studies demonstrated that patients residing in socioeconomically disadvantaged areas, as measured by ADI or SDI, had significantly lower baseline PROMs and were less likely to achieve MCID postoperatively. In contrast, one study reported comparable achievement of MCID across all SES groups despite baseline disparities (mHHS: 72–80%, NAHS: 71–76%, or VAS Pain: 67–76%, $P > 0.2$) for all. Socioeconomic disadvantage stratified by both ADI and insurance status demonstrated significantly decreased likelihood of achieving PASS in 2 out of the 4 studies that reported PASS. At 10-year follow-up, patients in the highest ADI quartile were substantially less likely to achieve PASS on multiple PROMs, including mHHS (55.6% vs. 92.3%, $P = .002$; OR 0.09, 95% CI 0.01–0.51) and HOS-ADL (63.0% vs. 88.5%, $P = .031$; OR 0.10, 95% CI 0.01–0.66). Three studies also demonstrated significantly higher rates of adverse events in the 90-day period for socioeconomically disadvantaged cohorts.

DISCUSSION: This systematic review demonstrates that socioeconomic disadvantage, measured by validated indices such as ADI and SDI, is consistently associated with inferior postoperative outcomes after hip arthroscopy. These findings align with broader orthopedic literature showing that patients from socially deprived areas face barriers to recovery due to limited healthcare access, lower health literacy, and delayed presentation. Increased 90-day complication rates among disadvantaged patients may reflect both biological and systemic inequities, including disparities in rehabilitation access and follow-up adherence. Despite methodological heterogeneity among studies, the overall trend demonstrates the need for integrating social risk factors into preoperative counseling and perioperative optimization. Future research should focus on identifying modifiable pathways through which social determinants influence outcomes and developing targeted interventions to reduce disparities in hip preservation surgery.

CLINICAL RELEVANCE: Understanding how socioeconomic disadvantage influences outcomes after hip arthroscopy is essential for advancing equitable musculoskeletal care. Recognizing disparities can guide clinicians to implement targeted resource allocation for at-risk populations. Integrating social determinants of health into perioperative risk assessment may ultimately promote equitable recovery and inform policy-level interventions within orthopedic practice.

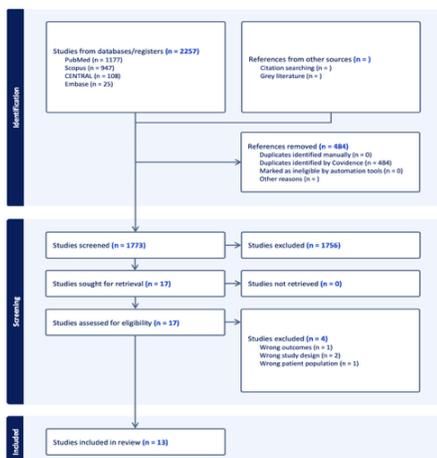


Figure 1. Depiction of PRISMA Article Screening Process