



# Unsupervised Exercise vs Formal Therapy after Primary TKA

Yash Chaudhry DO<sup>1</sup>, Hunter Hayes DO<sup>1</sup>, Zachary Wells DO<sup>1</sup>, Efstratios Papadelis DO<sup>1</sup>, Mark LaGreca DO<sup>1</sup>, Joseph D'Alonzo, DO<sup>1</sup>, Harpal Khanuja MD<sup>2</sup>, Carl Deirmengian MD<sup>3</sup>

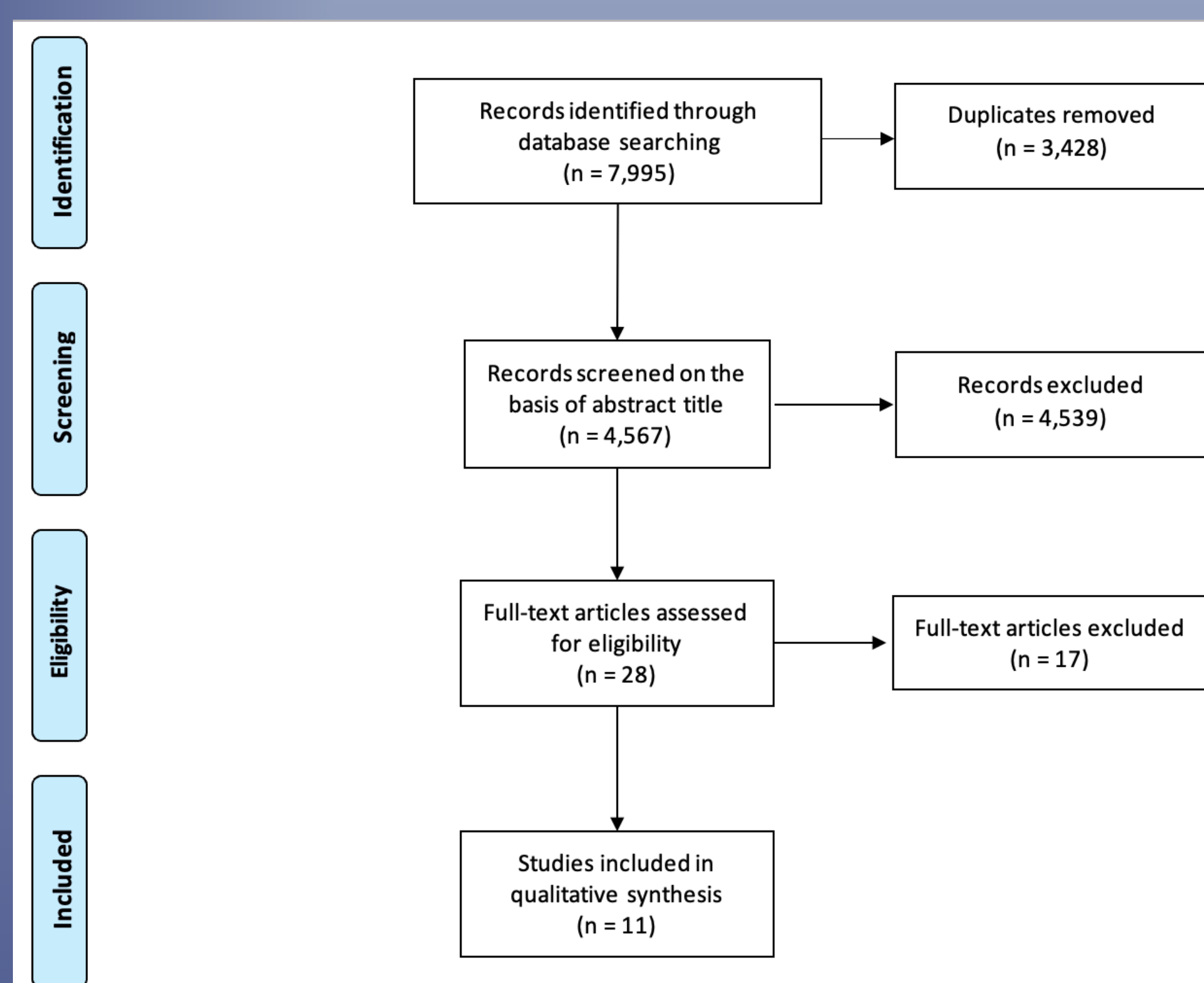
<sup>1</sup>Philadelphia College of Osteopathic Medicine, Department of Orthopaedic Surgery  
<sup>2</sup>Johns Hopkins School of Medicine, Department of Orthopaedic Surgery  
<sup>3</sup>The Rothman Institute, Thomas Jefferson University

## INTRODUCTION

- Postoperative rehabilitation and therapy has long been considered an essential component to a successful total knee arthroplasty (TKA) procedure.
- Recent evidence has challenged the necessity of formal supervised therapy after discharge.
- The authors aimed to compare objective and self-reported measures following primary TKA between patients who received supervised therapy and patients who were given unsupervised exercise regimens following discharge.

## METHODS

- A systematic literature search was conducted of six databases to identify randomized controlled trials (RCT) comparing supervised and unsupervised exercise regimens following discharge after primary TKA.
- The change from baseline was extracted for objective measures including knee flexion ROM, lower extremity strength, aerobic capacity, and self-reported measures including physical function outcomes and quality of life and was compared between the two groups using meta-analysis when possible.
- Outcomes were divided into short-term (<6 months from surgery) and long-term (≥6 months from surgery).



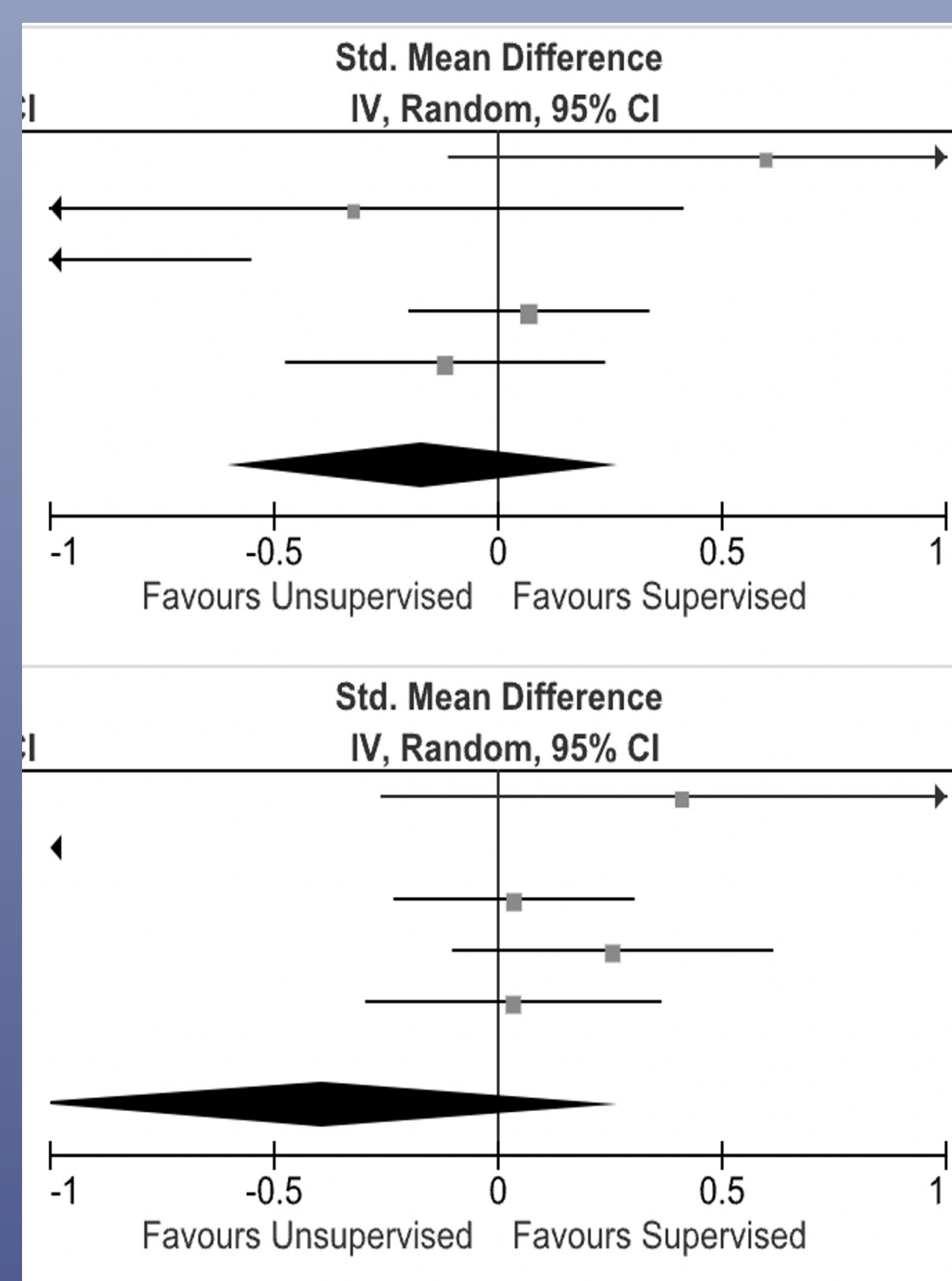
**Figure 1:** Demonstrates Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart.

## RESULTS

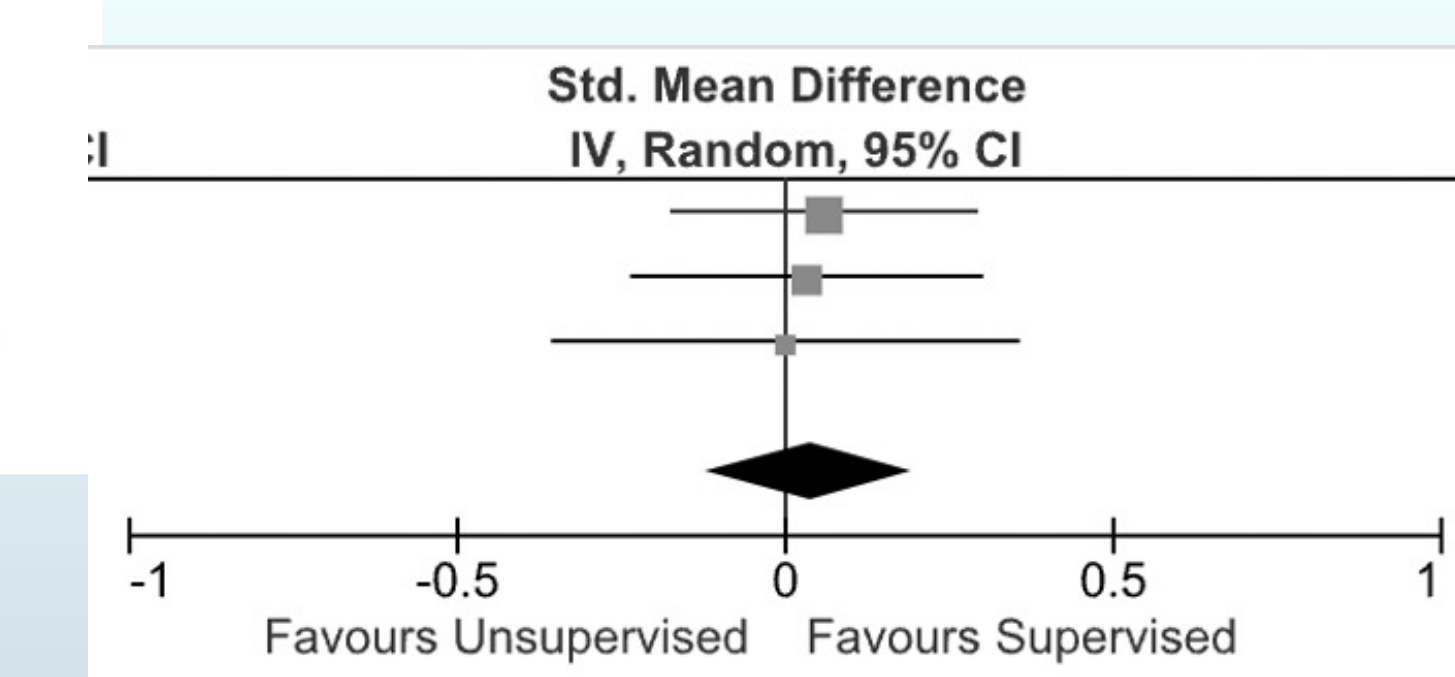
- Eleven studies involving 1,884 cases were included
- No significant differences between the two groups were observed with regards to any of the observed outcomes except for short-term patient reported physical outcomes, which was found in favor of the supervised cohort (SMD 0.29 [0.01, 0.56];  $p = 0.04$ )



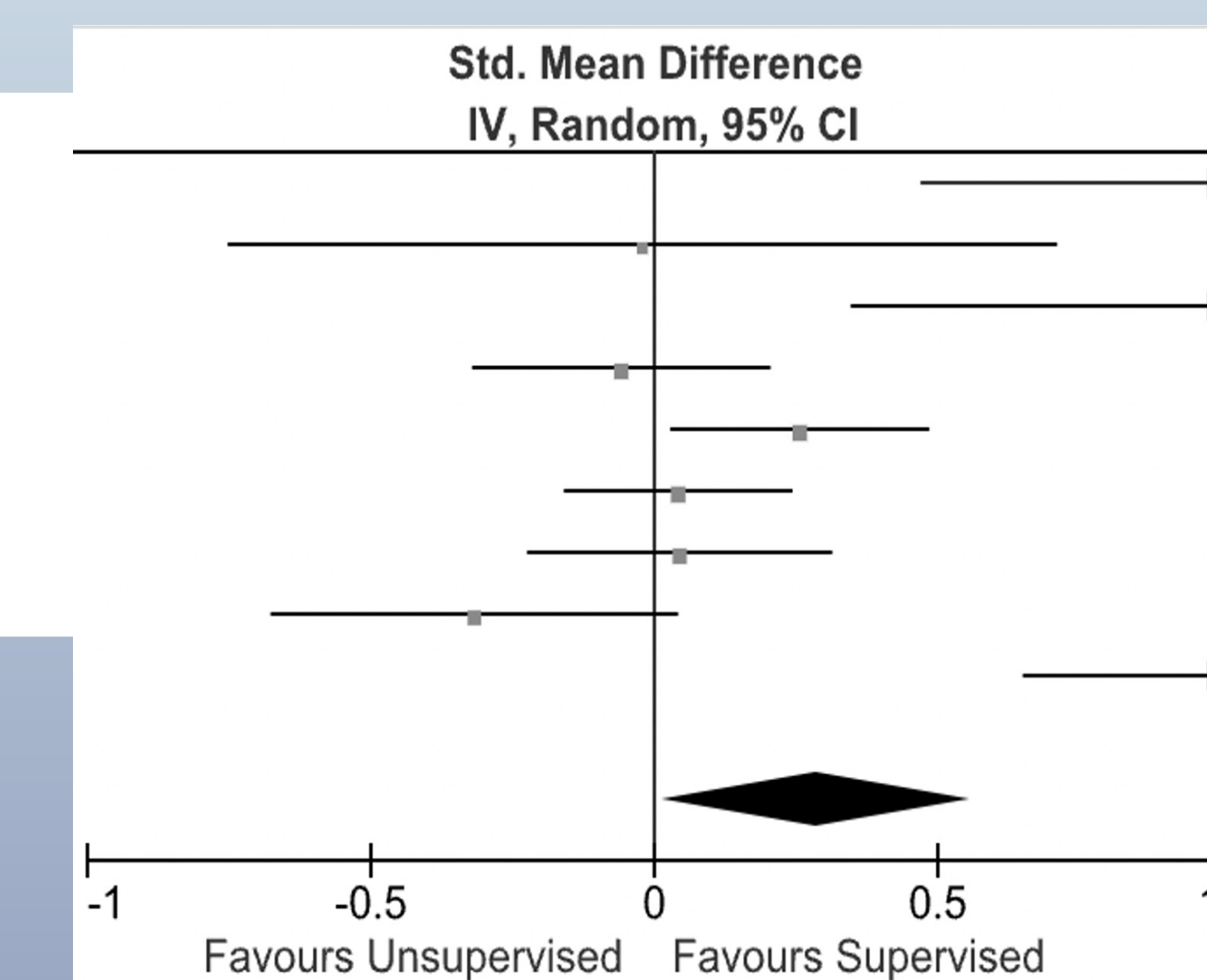
**Figure 2:** Forest plot for short-term (above forest plot) and long-term (below forest plot) knee flexion ROM



**Figure 4:** Forest plot for short-term (above forest plot) and long-term (below forest plot) patient-reported quality of life scores



**Figure 3:** Forest plot for short-term lower-extremity strength



**Figure 5:** Forest plot for short-term (above forest plot) and long-term (below forest plot) patient-reported physical function scores

**Legend for Figures/Table:**  
*SD:* standard deviation  
*IV:* weighted mean difference  
*CI:* confidence interval  
*P:* p-value

Outcome	Supervised Participants (n)	Unsupervised Participants (n)	SMD (95% CI)	Risk of Bias	Certainty of Evidence
Knee Flexion ROM Short Term	450	420	-0.14 (-0.82, 0.53)*	Low	Low ⊕⊕○○
Knee Flexion ROM Long Term	521	492	-0.21 (-1.15, 0.72)	Low	Low ⊕⊕○○
LE Extremity Strength Short Term	377	281	0.04 (-0.12, 0.19)	Low	Moderate ⊕⊕⊕○
Self-Reported QoL Long Short Term	286	182	-0.17 (-0.60, 0.27)	High	Very Low ⊕○○○
Self-Reported QoL Long Long Term	344	241	-0.39 (-1.05, 0.27)	High	Very Low ⊕○○○
Self-Reported Physical Outcome Short Term	778	733	0.29 (0.01, 0.56)	High	Low ⊕⊕○○
Self-Reported Physical Outcome Long Term	634	602	0.10 (-0.09, 0.29)	High	Low ⊕⊕○○

SMD: Standardized Mean Difference, CI: confidence interval, ROM: range of motion, LE: lower extremity, QoL: quality of life

**Table 1:** Summary of Findings Table

## CONCLUSION

- Supervised therapy provides no clinically significant improvement over unsupervised regimens in the post-discharge period after primary TKA for most patients.
- Further study is warranted to determine which subset of patients may benefit from supervised care.

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