

Abstract

Patient-Reported Impact of Arthroplasty on Access to Food, Cooking, Transportation, Work

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INTRODUCTION: Access to nutritious food depends on the ability to shop, prepare meals, use transportation, and maintain income. While functional impairment from osteoarthritis is well documented, its downstream impact on food-related activities and economic stability has not been systematically studied. Total joint arthroplasty (TJA) reliably relieves pain and restores mobility, yet its influence on patients' ability to shop for food, prepare meals, use transportation, and work remains unknown. By directly asking patients about these domains, this study introduced a patient-centered perspective that extends beyond traditional outcome measures to capture the lived experience of osteoarthritis, TJA, and its impact on daily life.

METHODS: We conducted a prospective, mixed-methods study of TJA patients at Yale New Haven Health. All patients completed surveys incorporating novel questions about how joint pain and/or total joint arthroplasty impacted their ability to shop for food, prepare or cook meals, use transportation, and work or earn income. These questions were incorporated in a comprehensive 10-minute survey administered verbally in English or Spanish. Chart review captures demographics, surgical variables, and outcomes; thematic analysis of qualitative responses and key stakeholder interviews is planned. To date, 539 patients have been enrolled, with 28.6% of chart reviews complete. Data collection will conclude by September 2025, and full analysis will be available at the presentation.

RESULTS SECTION: Among 539 patients surveyed, 341 (63.3%) were female and 198 (36.7%) were male. There were 250 (46.3%) post-operative patients who answered both pre-op and post-op questions, and 289 (53.6%) osteoarthritis patients awaiting surgery who were only administered joint pain-related questions.

- **Shopping for food:** Among those surveyed, 359 (66.6%) reported that they do their own grocery shopping. Out of 539 patients, 357 (66.2%) report that joint pain "sometimes, often, or always" made it difficult to shop for food. Of these, 170 (31.5%) report that joint pain always made it difficult to shop for food. Out of 250 patients, 169 (67.6%) report that getting joint replacement surgery helped them have consistent access to shop for food.
- **Preparing food:** Out of 539 patients, 303 (56.2%) report that joint pain "sometimes, often, or always" made it difficult to prepare or cook their own food with 129 (23.9%) reporting that joint pain always made it difficult to prepare or cook their own food. Out of 250 patients, 165 (66.0%) report that getting joint replacement surgery helped them consistently prepare or cook their own food.
- **Transportation:** Out of 539 patients, 372 (69.0%) report that joint pain "sometimes, often, or always" made it difficult to use transportation. Out of 250 patients, 169 (67.6%) report that getting joint replacement surgery helped them use transportation more easily.
- **Work and Income:** Out of 539 patients, 183 (33.9%) report that joint pain made it difficult to work or earn income. Out of 250 patients, 65 (26.0%) report that getting joint replacement surgery has helped them work or earn income more easily.

DISCUSSION: This study provides novel evidence that osteoarthritis pain substantially limits patients' ability to perform essential daily activities – including shopping, cooking, transportation, and income generation – that directly affect nutrition and overall well-being. Importantly, patients reported that TJA improved their capacity in each of these domains, suggesting that the benefits of surgery extend beyond pain reduction and functional scores to include restoration of independence and basic self-sufficiency. These findings add to the orthopedic literature by demonstrating how surgical recovery intersects with patients' lived experiences and social needs, offering a broader framework for evaluating outcomes. Limitations include reliance on self-reported data and ongoing chart review, but the large sample size and inclusion of both pre- and post-operative patients strengthen confidence in these preliminary findings.

SIGNIFICANCE/CLINICAL RELEVANCE: This study highlights an underrecognized dimension of total joint arthroplasty: its ability to restore patients' capacity for food access and daily living activities. By situating surgical recovery within the context of patient-centered outcomes and social determinants of health, these findings suggest new pathways through which TJA may advance equity and long-term musculoskeletal health.

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