

Shared Decision-Making in Total Hip and Knee Arthroplasty: Understanding Surgeon and Patient Perspectives Regarding When it is Time for Operation



INTRODUCTION

Deciding whether a patient is a good candidate for Total Hip/Knee Arthroplasty to treat arthritis is a complex decision with variable outcomes. In recent years there has been increased emphasis on shared decision-making between the patient and surgeon regarding candidacy for TKA/THA. However, successful shared decision-making requires clear communication of symptoms and mutual understanding of expectations. Understanding a patient's perspective and recognizing where communication gaps may occur can be helpful in facilitating productive shared decision-making conversations. The OPTION (Objective Performance Threshold Indicating Operative Need) Survey is currently being studied as a tool to guide this conversation between patient and surgeon. The pilot data from this study can be analyzed for insights into patient and surgeon perspectives during this shared decision-making conversation. Specifically, how do surgeons perceive the patient's experience, how do the priorities of different groups of patients differ in treating their arthritis, and how do radiographic data align with the patient experience of arthritis?

METHODS

As the pilot phase of the OPTION trial, OPTION criteria surveys were completed during 643 patient-surgeon encounters discussing TKA/THA candidacy at 15 different clinical sites in the US. The OPTION survey was independently and anonymously completed by the patient and then filled out by the surgeon. Data collection was approved by local site IRBs. The OPTION survey interrogates Pain VAS, readiness for surgery, activity limitation, prior treatments, duration of treatment, Xray changes, and patient priorities in treatment.

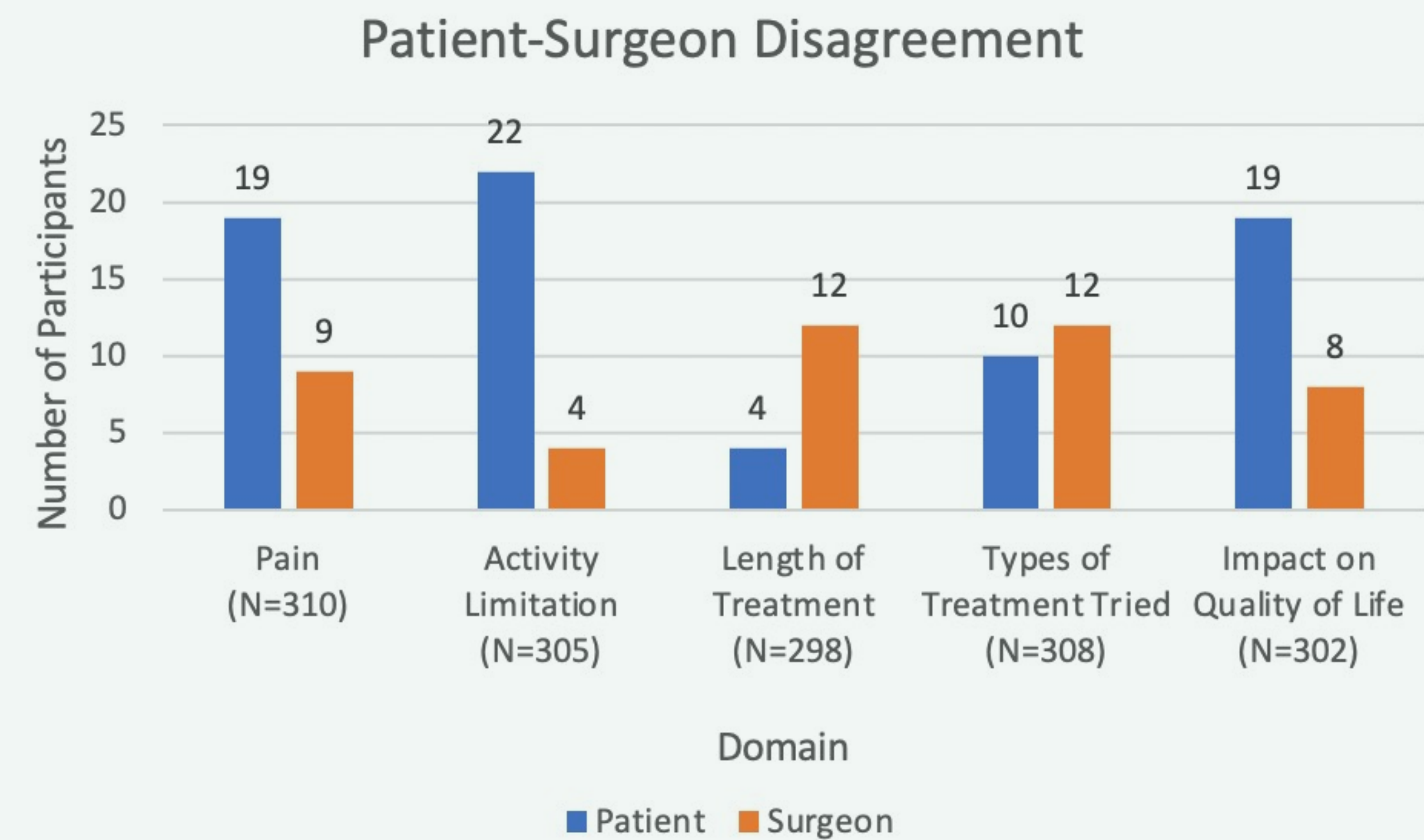


Figure 1: Patient Surgeon Disagreement Direction: In cases of disagreement between patient and surgeon, the cases where the patient response was higher than the surgeon response (i.e. 'more pain') were counted (blue bar, "patient") and cases where the surgeon response was higher than the patient were counted (orange bar, "surgeon")

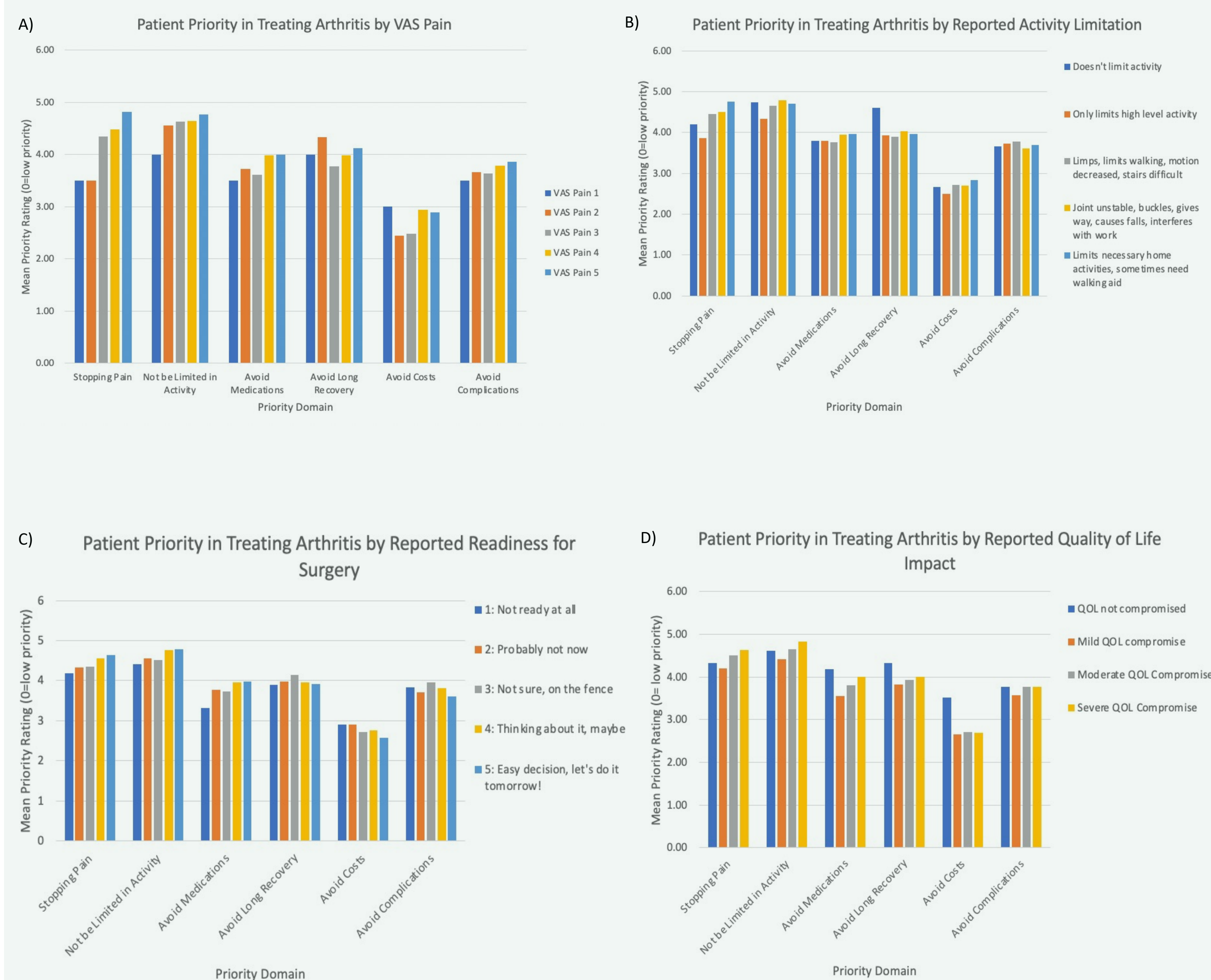


Fig 2: Patient Priorities in Treatment by Patient Survey Response: The average patient-reported priority level for each priority domain was calculated for the group of patients self-identifying to each acuity level for survey questions.

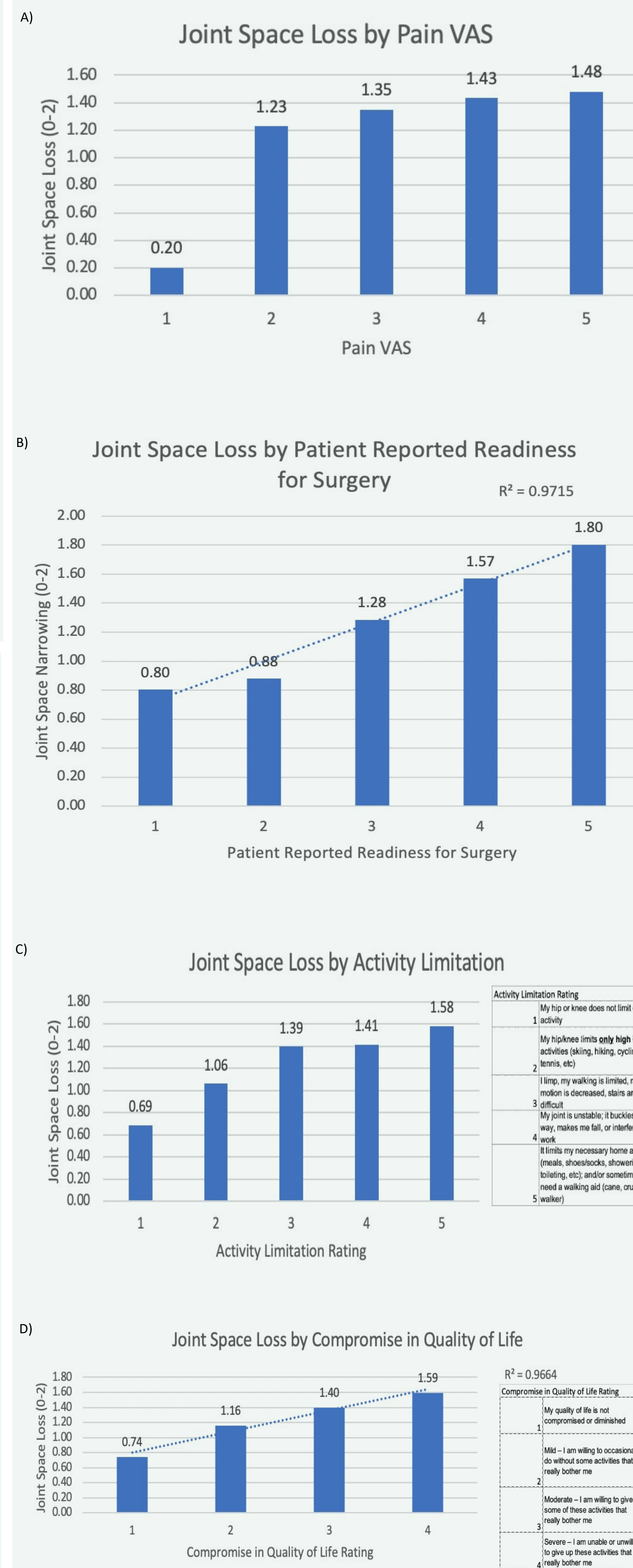


Fig 3: Radiographic Data by Patient Survey Response: The average surgeon-reported radiographic change level was calculated for the group of patients self-identifying to each acuity level for survey questions.

RESULTS

On subjective questions of pain VAS, activity limitation, and impact on quality of life in cases where the surgeon and patient gave different responses, the surgeon more often assessed severity at a lower measure than did the patient (fig 1). This suggests that surgeons may tend to underestimate a patient's subjective experience of pain, activity limitation, and impact on quality of life. Patient and surgeon disagreement occurred in less than 10% of cases (Pain: 9%; Activity limitation = 8.5%; Treatment duration = 5.4%; Treatment type = 7%; QOL = 8.9%).

Figure 2 portrays relationships between patient reported levels of acuity and stated priorities in treating the arthritis. Increased pain VAS correlated with an increasing priority of treating pain (a). The priority of treating activity limitation also had a constant relationship with severity of pain (b). Increasing readiness for surgery correlated with an increased priority of treating both pain and managing activity limitation (c). Cost was consistently the lowest priority in all groups. Interestingly, cost was least important when quality of life was severely impacted. (d).

In figure 3, severity of surgeon-reported narrowing of radiographic joint space correlated most linearly with patient's self-reported level of impact on quality of life (d) and readiness for surgery (b). A ceiling effect of pain severity was observed with early (grade 2) joint space loss (a). Activity limitation exhibited a similar ceiling effect with moderate (grade 3) joint space loss (c), suggesting that patients may experience severe pain with only mild joint space loss and severe functional limitation with moderate joint space loss, prior to complete loss of joint space.

CONCLUSIONS

1. When patient and surgeon disagree, surgeons tend to *underestimate* the severity of the patient's subjective experience of arthritis.
2. Patient's priorities in treating their arthritis vary depending on certain factors describing their individual experience.
3. Radiographic joint space data do not give the full picture of a patient's experience with arthritis.