

People on higher incomes are happier with new knees

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Knee replacement surgery is a very common procedure. However, it does not always resolve function or pain in all the recipients of new knees. A study by Robert Barrack, MD and his colleagues from the Washington University School of Medicine wanted to determine if any socioeconomic factors were associated with less successful outcomes of knee replacement surgery. Their study, which appears in *Clinical Orthopaedics and Related Research*, published by Springer, found that lower-income individuals reported higher levels of dissatisfaction and poorer function than those with higher incomes.

Knee replacement surgery has improved enormously over the years since its inception and now includes much better and more focused component design, smaller [incisions](#), better [pain management](#) and improved post-surgical care and rehabilitation. However, research into outcome measures has tended to focus on the type of component used or surgical technique rather than other factors which might affect the success of surgery, especially in younger patients. It is important, therefore, to determine whether patients are benefitting from these improvements and elucidate what factors might affect a good outcome.

The researchers analyzed more than 600 patients with an average age of 54 undergoing total knee replacement surgery at one of five major total joint centers in different parts of the United States. They were all asked details about [socioeconomic variables](#) such as education, income and employment, gender, and ethnicity and completed a retrospective questionnaire to assess their degree of satisfaction with the results of

their surgery.

There was a clear relationship between income and levels of satisfaction. The study found less satisfaction with the results and greater functional limitations after the [knee surgery](#) in individuals from households reporting an annual income of less than \$25,000 a year. No other socioeconomic factor was related to levels of overall satisfaction with the procedure, however women and minority patients were more likely to express [functional limitations](#) following TKA. Employment status and educational level had the least impact on satisfaction or function as perceived by the patient. Barrack and his colleagues point out that although this is not a causative association, it is nonetheless significant.

The authors offer a number of explanations for these findings. Previous studies citing similar associations have suggested that patients from lower income households may receive less post-acute care rehabilitation. This could have a significant negative impact on results of [knee replacement surgery](#). It has also previously been reported that ethnic minority patients are more likely to be seen at low-volume hospitals. All the subjects in this study were seen at high-volume specialist centers which may be why the general levels of [dissatisfaction](#) are quite low (around 10 percent) and explain the minimal impact of minority status on the results.

The authors conclude: "It is certainly possible, based on our results, that [socioeconomic factors](#), particularly household income, may be strongly associated with satisfaction and functional results. Future studies should be directed to determining the causes of this association, and if further studies do, in fact, confirm this hypothesis, then studies of clinical results after total knee arthroplasty should consider stratifying patients by socioeconomic status."

More information: Barrack, R.L. et al (2013). Impact of

socioeconomic factors on outcome of total knee arthroplasty. *Clinical Orthopaedics and Related Research*. [DOI 10.1007/s11999-013-3002-y](https://doi.org/10.1007/s11999-013-3002-y)

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