

Letter to the Editor

Pain and Depression Influence Outcome 5 Years after Knee Replacement Surgery

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To the Editor:

With interest and concern we read “Pain and Depression Influence Outcome 5 years After Knee Replacement Surgery,” by Brander et al. [1] published in the September 2007 issue of CORR. We thank the authors for the article because it addresses an important issue in knee arthroplasty. However, we have questions regarding the validity of some of the conclusions the authors drew based on their reported results.

The first paragraph of the Discussion warrants our attention: the authors state there is a strong association among psychologic state and long-term functional recovery. We would like to believe this intuitive conclusion, but unfortunately, we were unable to quantify how strong this relation was, as the authors did not describe this association with an appropriate measure. They only report a significant p value and a R^2 (which was quite low). It is unclear how the authors arrived at this conclusion. Furthermore, readers need to know the number of patients in each group (eg, in Table 1 and the figures).

(Re: Brander V, Gondek S, Martin E, Stulberg SD. Pain and depression influence outcome 5 years after knee replacement surgery. *Clin Orthop Relat Res.* 2007;464:21–26.)

Editor's note: No response to this letter was received from Brander et al.

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In the Results section, the authors refer to Figure 2 in which they showed there was a trend toward a lower visual analog scale (VAS) score 5 years after TKA. From Table 2, we can derive that the last data point 5 years postoperative must consist of only six patients. We assume the authors used the mean VAS pain score in this graph, and we question whether this is an appropriate measure for such a small group of patients. From the large standard deviation of this data point, we can see 95% of the cases could be expected to have had a VAS pain score between 0 and 85. We, therefore, think it is somewhat opportunistic to report there is a trend toward improved VAS pain score.

Table 2 suggests only six patients were included in the 5-year followup group, two of whom still experienced a higher VAS score (65 and 80) than the preoperative measure. In our opinion, the authors should have reported four of six patients experienced pain reduction, although we think the group is still too small to draw any solid conclusions.

Figure 3 lacks clarity. The authors did not fully inform the reader about the content of this graph. We see four lines with data points but do not know whether they present means, what the variation in the data is (error bars would have been appropriate), or how many patients were in the different groups. Because detailed information is missing, it is difficult for readers to interpret the results and to follow the authors' reasoning.

In the Discussion, the authors correctly point out the limitations of their study. We fully agree the results of this study cannot be easily generalized because of the small sample size in this isolated cohort, possibly skewed results, and limited use of the Beck Depression Inventory as a tool for identifying depression, as (somatic) fatigue might influence the depression score. Although we sympathize

with the authors' effort to attempt to explain the high pain levels after TKA, we prefer more detailed information regarding the data presented. Only if the necessary data are presented can readers interpret the results and believe the conclusions drawn by the authors.

Reference

1. Brander V, Gondek S, Martin E, Stulberg SD. Pain and depression influence outcome 5 years after knee replacement surgery. *Clin Orthop Relat Res.* 2007;464:21–26.