

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	What determines patient satisfaction with surgery? A PROSPECTIVE COHORT STUDY OF 4709 PATIENTS FOLLOWING TOTAL JOINT REPLACEMENT
AUTHORS	Hamilton, David; Lane, Judith; Gaston, Paul; Patton, James; MacDonald, Deborah; Simpson, Hamish; Howie, Colin

VERSION 1 - REVIEW

REVIEWER	José Joaquín Mira Miguel Hernandez UNiversity. Elche. Spain I declare no potential conflict of interest
REVIEW RETURNED	05-Jan-2013

THE STUDY	There are not limitations The patient satisfaction literature could be reviewed (only 2 references included). Authors review articles on patient satisfaction related to knee arthroplasty.
RESULTS & CONCLUSIONS	I think that this is a good article, but discussion must be reviewed.
GENERAL COMMENTS	<p>Study focused on the variables that discriminate between satisfied and dissatisfied patients following lower limb joint arthroplasty. Large sample of patients (surgical interventions on several years). Study conducted in two hospitals. The study identifies three satisfaction precursors (pre-operative manage expectations, post-operative pain relief and hospital experience), while age, gender and co-morbidity do not influence satisfaction levels in a manner consistent with the findings of other studies.</p> <p>This study is well designed and provides interesting results. Not many studies have conducted several post-intervention satisfaction measures. My opinion is in favor of publication. However, the review of the literature on surgical patient satisfaction is limited, the discussion section includes references to topics not investigated in this study and are not presented comparative results of the evolution of the level of patient satisfaction at 6 and 12 months.</p> <p>The study has implications for the method to analyze the satisfaction of surgery patients and can serve to rethink how to organize care process in these cases. But the discussion could be deeply reviewed and enriched.</p> <p>The authors might consider the following suggestions:</p> <p>Article focus The phrase -however little is known as what actually determines the satisfaction response- be qualified and concrete for these interventions. I suggest reviewing articles about precursors of surgical patient satisfaction. In this respect the study is limited.</p> <p>Statistical analysis Explain how the transformation was performed: The satisfaction score at 1 year was simplified into a binary variable.</p> <p>Results</p>

	<p>Tabla 1 explain why a positive evaluation is considered as not satisfied (meeting expectations and rating of hospital experience). This classification should be clarified because it affects the core results of the study.</p> <p>There are no comments with respect the relationship between the duration of the stay and the satisfaction. This point requires comment from authors as one of the precursors of satisfaction are the conditions of hospitalization and the days of stay could partly explain this result. There are no comparisons of the satisfaction results at 6 and 12 months. This topic is not enough analyzed in the literature. Assessments of patients seems that they remain at 6 and 12 months which is relevant but not discussed in the text.</p> <p>Discussion</p> <p>The paragraph that begins Satisfaction as a concept you may qualify. There is a long tradition of patient satisfaction studies that are unrelated to modeling of marketing, although years ago that both trends have been found. Meet expectation it is the most widespread patient satisfaction model.</p> <p>Three components to healthcare satisfaction have been suggested previously; structure, process and outcome. Three similar 'quality domains' have also been described – safety, outcomes, and the patient experience. Review both statements.</p> <p>The study does not provide data allowing interpreting why patients' ratings unchanged despite the increase in infection rates or waiting lists.</p> <p>Stated in the same paragraph that does not vary the satisfaction of the patients in the NHS and that satisfaction rate has been reduced. Conclusions of the effect of the waiting list are not deducted from the study.</p> <p>Limitations of the study are not included.</p> <p>Only references 21 and 23 are on patient satisfaction theories and models. Both are adequate but there are more recent studies.</p> <p>STROBE</p> <p>Report missing and how them affect the analysis of results</p> <p>Expressly inform about limitations and inform of generalizability</p>
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REVIEWER	<p>Blom, Ashley University of Bristol, School of Clinical Sciences</p> <p>No conflicts of interest declared.</p>
REVIEW RETURNED	21-Jan-2013

GENERAL COMMENTS	<p>Abstract: 1)The methods section of the abstract is missing. 2) Patient demographics is not really an outcome in this study</p> <p>Introduction: 1) The authors assert that very few studies " assess overall patient satisfaction with outcome". This statement is incorrect. In the past five years numerous studies have reported patient satisfaction after joint replacement. The authors such undertake a search and identify and reference these studies.</p> <p>Discussion: 1) The authors need to discuss 2 points that are pertinent to their findings a) Satisfaction varies with domain, thus patients may be satisfied with one domain such as pain, but dissatisfied with other domains</p>
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	<p>such as function.</p> <p>b) The OHS has marked ceiling effects when used post-operatively. The authors should discuss how this effects their findings.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: José Joaquín Mira, Miguel Hernandez UNiversity. Elche. Spain

My opinion is in favor of publication. However, the review of the literature on surgical patient satisfaction is limited, the discussion section includes references to topics not investigated in this study and are not presented comparative results of the evolution of the level of patient satisfaction at 6 and 12 months.

We were concerned about the length of our manuscript, and kept to the specific joint arthroplasty literature as a consequence. We have now incorporated a wider review of post-surgery satisfaction into the revised manuscript and agree this strengthens our paper. Alas we are not able to report satisfaction at 6 months in this paper and cannot comment as to any changes in post-operative satisfaction in this manuscript.

Statistical analysis

Explain how the transformation was performed: The satisfaction score at 1 year was simplified into a binary variable.

A specific statement as to the transformation carried out has now been included in the statistical methods section.

Result

Tabla 1 explain why a positive evaluation is considered as not satisfied (meeting expectations and rating of hospital experience). This classification should be clarified because it affects the core results of the study.

In table 1 we report the median score of the separate satisfaction questions split into 2 groups by the patients overall satisfaction response (either positive or negative). Some facets of satisfaction are reported as being positive (in median score) within an overall negative satisfaction report. We have revised the title of the table, and description of the table in the results section to make this point clearer.

There are no comments with respect the relationship between the duration of the stay and the satisfaction. This point requires comment from authors as one of the precursors of satisfaction are the conditions of hospitalization and the days of stay could partly explain this result.

We do mention to this in the results section and highlight that it did not contribute to the modelling in the discussion. We have now incorporated some further discussion surrounding this individual factor as it has been suggested as relevant, however the important finding of our analysis is that it did not contribute to our modelling (that explained virtually all the variation in satisfaction response).

There are no comparisons of the satisfaction results at 6 and 12 months. This topic is not enough analyzed in the literature. Assessments of patients seems that they remain at 6 and 12 months which is relevant but not discussed in the text.

In this article we have been able to report 6 and 12 month PROMS scores (Oxford Score and SF-12) but satisfaction scores were only available at 12 months, therefore unfortunately we cannot comment further on this.

Discussion

The paragraph that begins Satisfaction as a concept you may qualify. There is a long tradition of patient satisfaction studies that are unrelated to modeling of marketing, although years ago that both trends have been found. Meet expectation it is the most widespread patient satisfaction model.

We thank the reviewer for his insight here. We believe the link to marketing to be particularly relevant to this paper in terms of access to surgical services and to the any chosen provider system within the NHS, however have rewritten this paragraph.

Three components to healthcare satisfaction have been suggested previously; structure, process and outcome. Three similar 'quality domains' have also been described – safety, outcomes, and the patient experience. Review both statements.

We have redrafted the text surrounding these statements, and hope that the revised wording makes our point more readily comprehensible.

The study does not provide data allowing interpreting why patients' ratings unchanged despite the increase in infection rates or waiting lists. Stated in the same paragraph that does not vary the satisfaction of the patients in the NHS and that satisfaction rate has been reduced. Conclusions of the effect of the waiting list are not deducted from the study.

In our introduction and towards the end of the manuscript we make the point that consistent overall satisfaction with arthroplasty has been reported in recent years despite the better access to services (including waiting times) and a reduction in the complications associated with surgery. Interestingly, the overall satisfaction with the NHS has reduced recently. We make this point to suggest that clinical results are not the sole driver of patient satisfaction, as is supported by the findings of our study. We cannot and do not make inferences as to the effect of waiting times this doesn't apply to the cohort we report here. In Scotland we have a limit in statute to ensure that the waiting time from the decision to operate to actually performing surgery is 12 weeks. We have included some discussion around this point in the revised submission.

Limitations of the study are not included.

Only references 21 and 23 are on patient satisfaction theories and models. Both are adequate but there are more recent studies.

As previously noted we have now incorporated a wider discussion surrounding satisfaction in general surgery and have referenced the published literature more widely.

STROBE Report missing and how them affect the analysis of results expressly inform about limitations and inform of generalizability

A STROBE report was included as part of the manuscript submission; however we have specifically addressed the study limitations as discussed above.

Reviewer: Ashley Blom, University of Bristol, School of Clinical Sciences

Abstract:

1) The methods section of the abstract is missing. 2) Patient demographics is not really an outcome in this study

Although the title methods is indeed 'missing' from the abstract, we have presented the required format for BMJ open. In retrospect we agree with Professor Blom that patient demographics, though pertinent inclusions to our modelling of outcome, are clearly additional co-variables – not outcomes in themselves. We have removed this from the abstract.

Introduction:

1) The authors assert that very few studies " assess overall patient satisfaction with outcome". This statement is incorrect. In the past five years numerous studies have reported patient satisfaction after joint replacement. The authors should undertake a search and identify and reference these studies.

Satisfaction is generally not well reported when considering outcome following joint arthroplasty. As Professor Blom points out, there are many individual papers that discuss satisfaction following joint surgery (827 in the last 5 years as reported on PubMed) however this is only 6% of the total number of papers on joint arthroplasty in the same timeframe (13, 645). We have reworded this sentence to clarify our point.

Discussion:

1) The authors need to discuss 2 points that are pertinent to their findings; a) Satisfaction varies with domain, thus patients may be satisfied with one domain such as pain, but dissatisfied with other domains such as function. b) The OHS has marked ceiling effects when used post-operatively. The authors should discuss how this affects their findings.

We are happy to include further discussion as to these aspects in the revised discussion. The Oxford Score ceiling effect is a particularly pertinent and interesting point, though re-analysis suggests that our data does not suffer from this. We have included it in the strengths and limitations discussion.

A further point of correction;

When reviewing our manuscript, we noticed small errors in transcribing 3 data points in table 1 from the statistical analysis package. To ensure the accuracy of our report we have gone back to the original master dataset and re-run all analyses. We now report very slightly different values for these 3 factors in table 1, and as a result, some minor changes as to the odds ratios presented in table 3. These are very minor value changes and do not influence the variables that contribute to the regression model nor the results, or message of the paper. All of these changes are highlighted clearly in the revised submission.

VERSION 2 – REVIEW

REVIEWER	JOSE JOAQUIN MIRA Professor Universidad Miguel Hernández. Elche. Spain I declare no potential conflict of interest
REVIEW RETURNED	20-Feb-2013

GENERAL COMMENTS	Tables and text: review the number of decimals. In some cases there are four. Authors must review references. Some of them include volume and number. Other references only include volume. Reference 9: review
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	the third name, there is a mistake. The name of the journals sometimes is complete and sometime is the abbreviation.
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