

Measuring Quality of Life in Cosmetic and Reconstructive Breast Surgery: A Systematic Review of Patient-Reported Outcomes Instruments

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Dr. Pusic and co-authors present a startling investigation on the use of patient-based outcome studies in plastic surgery of the breast. It is startling because it encompasses 40 years of plastic surgery literature, examines 223 separate outcomes questionnaires, and finds that in that time only one instrument was developed, tested, and validated according to sound investigative principles. Looking at it another way, more than 99.5 percent of the plastic surgery literature on patient-reported breast surgery could be faulty. Of course, it is not reasonable to think that nearly the entirety of breast-related outcome studies is incorrect, but it is important to understand what is wrong with the current system and what can be done to fix it.

“Outcome studies aim to gain a more thorough understanding of how often a treatment works and what about it works for whom.”¹ This definition serves as a reasonable starting point to examine just what an outcome study is, why it is important, and how we should go about understanding and performing such studies in the future.

Outcome studies look at the end result of treatment, not at the molecular or organ-system aspects of the intervention. Traditional medical tests, measured in such familiar units as grams per liter or mean survival time, are applied easily in standard medical research but cannot be applied as simply to outcome studies. Outcome studies need to be teased apart to look at the reasons behind a treatment’s success and failure. Investigators look beyond the effects on a cell or organ to accurately designate a successful outcome. Broader viewpoints are used to establish the definitions of success and failure, and these broader viewpoints introduce the concept of subjectivity into medical research. While traditional medical investigation shuns any aspect of subjectivity

and strives to maintain scientific objectivity using absolute units and reporting results that can be verified and duplicated, outcome studies must look beyond those parameters. Patient satisfaction, quality of life, and similar measurements are now acknowledged to be as important as the measured quantity of life in terms of days or years. In plastic surgery, these factors are even more important and widespread, since so much of our specialty deals with restoring form and improving aesthetics, neither of which can be measured objectively.

The need for subjective testing in plastic surgery is clear. This article documents 223 attempts at subjective assessment in breast surgery alone. The problem, however, is that researchers often assume that subjective research needs no specific validation. I am guilty of this same error. In a recent outcome study on breast surgery,² I formulated my own ad hoc questionnaire and tabulated its results. I believe that the results were valid and the findings important, but I cannot defend my study’s potential lack of reliability, validity, and responsiveness, which was so well elucidated in this article. In a subsequent research study,³ I saw the possible shortcomings of an ad hoc questionnaire and I chose to use several of the generic instruments mentioned in this article (the Short Form-36 and the Multidimensional Body Self-Relations Questionnaire) as well as the Breast-Related Symptoms Questionnaire developed by Collins et al.⁴ I found, however, that the difficulties in using generic instruments in plastic surgery are readily apparent as studies proceed. Patients do not understand the broad questions in regard to their specific operation, and their particular state of health on a given day can easily undo all the improvements brought by an operation well done and an overall excellent outcome. This is why the particular type of outcome study addressed by Pusic et al., the patient-reported outcome, is so important in plastic surgery and all the more reason why such instruments need to function properly.

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A plastic surgery adage states, “function over form and form over scar,” meaning that as we give a patient an improvement in function, he or she will tolerate a variation from the norm in form, and as we give an improvement in overall form, a patient will tolerate the obligatory scar. I believe this maxim is generally true, and it contains all the subjectivity of plastic surgery rolled into a simple phrase. We are constantly striving to improve our patients’ condition, but there is always a trade-off involved. The final outcome of many operations can never be objectively measured and will rely on subjective, patient-reported outcome instruments to help us understand our successes and failures. It is imperative, therefore, that we have at our disposal a set of reliable, validated, and responsive measuring instruments. The use of these instruments is no less important than the use of standardized rulers in our markings or scales in our operating rooms. I agree with the authors that the development of such instruments is sorely needed, and I believe the widespread introduction and

availability of such instruments would tremendously aid plastic surgeons and their patients.

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DISCLOSURE

The author of this discussion has no financial interest in any of the products, devices, or drugs mentioned in this article.

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Future Meetings of the American Society of Plastic Surgeons

The following are the planned sites and dates for future annual meetings of the American Society of Plastic Surgeons:

2007	Baltimore, Md.	October 26 to 31
2008	Chicago, Ill.	October 31 to November 4
2009	Seattle, Wash.	October 23 to 28
2010	Toronto, Canada	October 1 to 6
2011	Denver, Colo.	September 23 to 28
2012	Washington, D.C.	November 1 to 7