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Original article

Predictors of bariatric surgery among an interested population

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Abstract

Background: Severely obese patients considering bariatric surgery face a difficult decision given the tradeoff between the benefits and risks of surgery. The objectives of this study was to study the forces driving this decision and improve our understanding of the decision-making process.

Methods: A 64-item survey was developed to assess factors in the decision-making process for bariatric surgery. The survey included the decisional conflict scale, decision self-efficacy scale, EuroQol 5D, and the standard gamble. Patients were recruited from a regularly scheduled bariatric surgery interest group meeting associated with a large, university-based bariatric practice and administered a survey at the conclusion of the interest group. Logistic regression models were used to predict who pursued or still planned to pursue surgery at 12 months.

Results: 200 patients were recruited over an 8-month period. Mean age was 45 years; mean BMI was 48 kg/m^2, and 77% were female. The 12-month follow-up rate was 95%. At 12 months, 33 patients (17.6%) had surgery and 30 (16.0%) still planned to have surgery. There was no association between age, gender, or obesity-associated conditions and surgery or plan to have surgery. Patients having surgery or still planning to have surgery had significantly worse scores for quality of life and better scores for decisional conflict (indicating readiness to make a decision).

Conclusion: The decision to have bariatric surgery is strongly associated with patients' perceptions of their current quality of life. In addition, lower decisional conflict and higher self-efficacy are predictive of surgery. Interestingly, factors that clinicians might consider important, such as gender, age, and the presence of obesity-associated co-morbidities did not influence patients' decisions. (Surg Obes Relat Dis 2013;▮:00–00.)

Keywords: Quality of life; Decisions; Bariatric surgery

Bariatric surgery remains the most effective treatment for severe obesity. However, severely obese patients considering bariatric surgery may face a difficult decision given the tradeoffs between the benefits [1–6] and risks [1,7–9] of surgery. Patients who seek bariatric surgery have been shown to have more obesity-associated conditions and lower quality of life than patients not seeking bariatric surgery [10–12].

Several studies have explored the attitudes of physicians and patients regarding bariatric surgery. Physicians are willing to refer patients with type 2 diabetes for bariatric surgery when they meet the current criteria for bariatric surgery with a body mass index (BMI) >35 kg/m^2 [13]. However, obese patients with type 2 diabetes are less likely to have positive views about bariatric surgery and are more

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concerned about its safety and effectiveness [14]. Considering this disconnect between physician and patient comfort with bariatric surgery, shared decision-making between the physician and patient is critical.

Shared decision-making involves information sharing between the 2 parties involved and a treatment decision to which both parties agree [15]. To help patients make an informed decision regarding bariatric surgery and to facilitate shared decision-making, many surgical weight loss programs offer an initial interest group meeting as a forum to discuss the various benefits and risks associated with bariatric surgery.

The goal of this study was to establish what factors influenced patient decision-making when considering the decision to have bariatric surgery. We hypothesized that patients with higher BMIs, more obesity-associated conditions, and lower health-related quality of life would be more likely to decide to pursue bariatric surgery.

Methods

We conducted a prospective study of morbidly obese adults considering bariatric surgery, recruited from the bariatric surgery interest group meeting associated with a large, multidisciplinary, university-based bariatric practice. The interest group meeting is the first step in the process toward bariatric surgery, and patients are self-referred. All patients undergoing bariatric surgery at the weight loss practice must attend the meeting. No screening occurs before the interest group. The purpose of the interest group meeting is to educate the attendees on the various weight loss procedures, to discuss the risks and benefits of each procedure, and to have an open forum for questions and answers. Typically, the meetings are attended by 25 participants, run by a bariatric surgeon or trained physician assistant, and last an average of 2 hours. The institutional review board reviewed and approved all study procedures.

On the basis of published models of shared decision-making, we developed a 64-item survey to assess potential predictors of having bariatric surgery. The survey included quality-of-life measures, an assessment regarding knowledge of bariatric surgical risks, the decisional conflict scale, the decision self-efficacy scale, and potential clinical predictors of surgery. The survey was administered to participants at the conclusion of the interest group from which they were recruited.

Three measures of quality of life or utility were included in the survey. We used the EuroQol-5 D, a well-validated 5-item questionnaire, to characterize the patient's current health-related quality of life [16]. These 5 questions were then used to calculate the EQ-5 D index score based on the U.S. population's preference weights. We used the paper standard gamble to assess patients' utilities for obesity [17]. This is a validated utility assessment tool designed for self-completion and consists of a series of questions that ascertain how much risk they are willing to accept in exchange for a cure to their obesity. The third quality of life measure was a visual analog scale, or "feeling thermometer", on which patients indicate their current health level on a scale of 0 to 100 [18].

The decisional conflict scale is a 16-item questionnaire with 5 response categories for each statement [19]. The scale measures personal perceptions of uncertainty in choosing options, modifiable factors contributing to uncertainty, and effective decision-making. Scores range from 0 (no decisional conflict) to 100 (extremely high decisional conflict). This scale has been used in >30 studies and is well–validated [20]. It has been used in both medical and surgical studies of patient decision-making, including studies of breast cancer surgery [21–23], surgical treatment of benign prostatic hyperplasia [24], and bariatric surgery [25]. Scores have been shown to be responsive to change in evaluation studies of decision support interventions [26]. Scores <25 on this scale are associated with implementing a decision.

The decision self-efficacy scale is an 11-item questionnaire with 5 response categories for each statement [26]. The scale measures self-confidence in decision-making. Scores range from 0 (extremely low self-efficacy) to 100 (extremely high self-efficacy). It has been used in evaluation studies of decision aids.

Patients were contacted by telephone 6 months after attending the interest group to determine if they had undergone bariatric surgery, still planned to undergo bariatric surgery, or had decided against surgery. The reasons for deciding against surgery also were ascertained during the telephone interview. Those patients who reported still interested in having surgery at 6 months but who had not undergone surgery were contacted again at 1 year to determine if they had surgery or still planned to at that time.

Other potential clinical predictors of having bariatric surgery, including gender, age, body mass index, the presence of obesity-associated conditions (hypertension, diabetes, obstructive sleep apnea, hypercholesterolemia, osteoarthritis, and depression), and factors related to the bariatric surgery program visited were collected at the interest group.

Statistical analysis

We calculated means, medians, and frequencies for variables to characterize the study sample. Because both the decisional conflict scale and the self-efficacy scale use ordinal ratings, we computed linear person measures using the Rasch Model [27]. Patients having bariatric surgery or still planning to have bariatric surgery were compared with those deciding against surgery using t tests and χ^2 tests, as appropriate. Each potential predictor of deciding to have bariatric surgery (having had bariatric surgery or still planning to) was considered for inclusion in a multivariable