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RESEARCH ARTICLE

Support Group Meeting Attendance is Associated with Better Weight Loss

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Abstract
Background Support group meetings (SGM) are assumed to be an integral part of success after bariatric surgery. This investigation studies the effect of SGM on weight loss as well as factors associated with attendance of SGM. It is our hypothesis that patients who attend SGM (ASGM) lose more weight than those patients who do not attend SGM (NASGM).
Methods Postoperative bariatric patients completed a questionnaire regarding their opinions of SGM. Change in body mass index (BMI) was computed for each patient. The patients were then divided into two groups: ASGM and NASGM for data comparison.
Results There were 46 patients in the investigation. Patients in the NASGM group tended to feel that SGM are not needed after bariatric surgery compared to the ASGM group (5.29 vs. 7.06; $p=0.07$). Patients in the NASGM group tended to feel that they would lose the same amount of weight with or without attending SGM compared to the ASGM group (5.67 vs. 7.38; $p=0.07$). There were no differences in distance to clinic nor in time to clinic between both groups. Gastric bypass patients in the ASGM group had a statistically significantly higher percent decrease in BMI than the patients in the NASGM group (42% vs. 32%; $p<0.03$).
Conclusion Patients in the ASGM group lose more weight than patients in the NASGM group. The importance of attending SGM should be incorporated in preoperative patient counseling and encouraged during postoperative follow-up visits.

Keywords Morbid obesity · Bariatric surgery · Support group · Weight loss · Patient compliance

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Introduction

Support group meetings (SGM) are assumed to be an integral part of success after bariatric surgery. In fact, the American Society for Metabolic and Bariatric Surgery has set up the Bariatric Centers of Excellence (BCOEs) program via the Surgical Review Corporation (SRC). The SRC outlines that BCOEs must make available organized and supervised support groups for patients who have undergone a bariatric procedure (http://www.surgicalreview.org/pcoe/tertiary/tertiary_provisional.aspx). Furthermore, starting in July 1, 2007, the SGM requirement from the SRC

further states that the SGM must have a licensed health professional present or leading all meetings.

SGM have the ability to aid patients with the drastic dietary and lifestyle changes that accompany bariatric surgery. In addition, patients need help to assure that they do return to their previous dietary and lifestyle habits [1]. Unfortunately, some patients do not attend SGM. Factors related to this lack of participation in SGM are not well understood. This investigation studies these potential reasons as well as the effect of SGM on weight loss. It is our hypothesis that patients who attend SGM (ASGM) lose more weight than those patients who do not attend SGM (NASGM).

Methods

This investigation received an Institutional Review Board exemption as a survey study. Postoperative bariatric patients who were seen in our clinic completed an anonymous questionnaire regarding their opinions of SGM. The Support Group Survey can be obtained through the senior author (AKM). Likert scaling was utilized to determine whether a patient strongly agreed or disagreed with certain SGM related statement (Likert scale: 1= strongly agreed; 10=strongly disagreed). Other questions included factors that may be associated with SGM attendance.

For each patient, body mass index (BMI) was computed. Percentage change of BMI was calculated for all patients who had undergone gastric bypass. The patients were then divided into two groups: ASGM (attended postoperative SGM) and NASGM (did not attend postoperative SGM). Comparisons were made between the groups. Statistical analysis was performed with GraphPad InStat Version 3.05 (San Diego, CA, USA). Two-tailed Mann–Whitney tests and Fisher's exact tests were utilized as appropriate. A p value less than 0.05 was considered statistically significant.

Results

There were 46 patients in this investigation. Most patients underwent a gastric bypass (59% laparoscopic and 13% open), whereas the others underwent laparoscopic adjustable gastric banding (24%), open vertical banded gastroplasty (2%), and laparoscopic revision bariatric surgery (2%). The average number of support groups who attended was 2.5 (range 0 to 36). There were 28 patients whom did not attend any postoperative SGM and 18 patients who ttended postoperative SGM. In the NASGM group, only one (4%) attended a SGM preoperatively, whereas eight (44%) attended a SGM preoperatively in the ASGM group.

There was not a statistically significant difference between the ASGM and NASGM groups on how they thought it was best to remind them about SGM (email: 39% vs. 26%, phone: 39% vs. 29%, and newsletter: 61% vs. 43%). A majority of both groups received the monthly newsletter reminding them of SGM (NASGM=57% vs. ASGM=78%; p=NS). Most of the patients who received the newsletter claimed to read all of them (NASGM=74% vs. ASGM=88%; p=NS).

Table 1 Responses from the NASGM and ASGM groups

	ASGM	NASGM
Support group meetings are useful	2.3	2.8
Support group meetings are necessary to lose weight after surgery	3.8	5.2
Support group meetings are helpful to deal with stress	3.4	3.8
Support group meetings are difficult to make because of work/school	4.7	3.9
Support group meetings are difficult to make because I forget	6.3	5.4
Support group meetings are difficult to make because of family obligations	6.1	3.8
Support group meetings are difficult to make because I live to far away	6.4	5.0
Support group meetings are only useful if the surgeon is there	5.7	5.8
Support groups meetings are better if the surgeon is there	3.1	4.4
Support group meetings are only useful if the clinic dietitian is there	5.0	4.7
Support group meetings are better if a clinic dietitian is there	3.6	4.0
Support group meetings are not needed after bariatric surgery for everybody	7.1	5.3
I would do the same with or without attending support group meetings	7.4	5.7
Support group meetings focus too much on weight loss only	7.6	6.1
Support group meetings are only useful for the first year after surgery	7.8	6.4
Support group meetings would be useful for patients before surgery	2.2	3.1
Support group meetings are useful for patients who are greater than 2 years from their surgery	4.8	5.6
Support group meetings are useful for patients who are greater than 5 years from their surgery	5.6	5.6

Patients were more likely to agree with lower scores.

We compared the average scores for the Likert statements in the survey between the NASGM and ASGM groups as shown in Table 1. The patients in the NASGM group were more likely to feel that SGM are not needed after bariatric surgery compared to the ASGM group (5.3 vs. 7.1; $p=0.07$). The patients in the NASGM group were also more likely to feel that they would lose the same amount of weight with or without attending SGM compared to the ASGM group (5.7 vs. 7.4; $p=0.07$). Furthermore, the patients in the ASGM group were more likely to feel that SGM were needed after surgery compared to the NASGM (3.8 vs. 5.2; $p=0.07$). None of these differences reached statistical significance. Patients in the NASGM felt family obligations made attendance more difficult compared to the ASGM group (3.8 vs. 6.1; $p<0.03$).

The NASGM group did not live farther from the clinic compared to the ASGM group. (NASGM=53 miles vs. ASGM=86 miles; p=NS). In addition, there was no difference between the time it took to reach the clinic between the two groups (ASGM=71 min vs. NASGM=66 min; p=NS). In the gastric bypass patients in the ASGM group, there was a statistically significant difference in percentage decrease of BMI compared to the gastric bypass patients in the NASGM group (42% vs. 32%; $p<0.03$). Follow-up for each group was not significantly different (27 vs. 23 months; p=NS). Table 2 lists many of the answers that patients felt that would most encourage their attendance to SGM. Table 3 displays the topics that patients reported they desire to be discussed at SGM.

Discussion

Our data demonstrate that gastric bypass patients in the ASGM group lose more weight than gastric bypass patients in the NASGM group. Furthermore, distance and time to clinic are not issues in SGM attendance. The issues that determine SGM attendance included family obligations and patient's belief of the necessity of SGM.

Table 2 Comments patients listed that would encourage attendance

Comments
Different times
Discussion of food, diets, and weight loss
Food samples
Helpful topics
Physician's presence
Reminders
Something new at each meeting
Structured discussion of current/personal issues
Weekend meetings

Table 3 Topics for discussion at SGM

Topics
Adjusting after surgery
Best foods to eat for individual needs
Diet
Difficulties after surgery
Eating less years after surgery
Exercise
Food preparation after surgery
Health and fitness
Helpful suggestions after surgery
How to continue to lose weight
How to deal with plateaus
Life altering changes
Nutrition
Protein
Recipe swap
Society changes
Plastic surgery
Weight loss tips from long term patients

Psychosocial factors that continue after bariatric surgery can affect the rate of compliance and, therefore, weight loss [2]. It is possible that poor eating habits continue after surgery. Patients may need continual education regarding healthy food choices to maximize success after bariatric surgery. Our previous investigations have shown that patients will often not remember certain preoperatively known facts [3, 4]. Organized patient SGM are often used to help with continual education after surgery.

A previous study in gastric bypass patients also showed that patients who participated in group therapy had better weight loss than those who did not participate in support groups [5]. Their data demonstrated a statistical significant difference in weight loss in those patients who attended more than five SGM compared to those patients who attend less than or equal to five SGM during the first year after surgery. In their study, patients in the ASM group had a 55.5% excess body weight loss (EBWL) versus the NASM group who had a 47.1% EBWL. This finding suggests that the repetitiveness of support group attendance during the first 12 months after surgery may be important for sustaining healthy behaviors long term. The SGM in their study were led by the surgeon, nurse practitioner, or nutritionist. The support group leader used the support group as an opportunity to continue patient education in areas such as healthy diet choices, exercise, and emotional eating. The monthly reinforcement and extra social support for these postoperative patients may have assisted in better weight loss.

Another study demonstrated a trend of more weight loss in gastric bypass patients who attended SGM than those who did not [6]. SGM also seem to play a role in patients

who undergo laparoscopic adjustable gastric banding. One group demonstrated a higher decrease in BMI in patients who attended SGM [7, 8].

Many patients are not compliant in attending SGM. Our study shed some light on some possible factors. Distance was not an issue in regard to attending SGM in our study. Another study examined the reasons for lack of follow-up compliance for office visits in the post-bariatric surgery population and found that distance to the clinic was not an issue at the initial, 3-month, and 12-month follow-up appointments [9]. The study suggested that possible factors associated in poor follow-up compliance included poor surgical weight loss, weight regain, noncompliance with postsurgical diet, and/or discontentment with the office staff [9].

We feel that the same patients who are noncompliant with office visit follow-ups would be also noncompliant in attending SGM. Although our study did not examine all the specific reasons for lack of support group attendance, we feel that patients who have poor surgical weight loss, weight regain, and/or are noncompliant with the post-surgical diet would be less likely to attend SGM as well. In addition, many patients have not been forthright about the specific reasons due to embarrassment and feelings of failure. Thus, patients, who do not do as well in terms of weight loss, may feel less likely to attend SGM.

Our study does have some limitations. For example, our sample size is relatively small. Thus, the group may not properly represent the whole bariatric surgery population. In addition, we did not have enough patients to examine our laparoscopic adjustable gastric banding population. Despite noting a difference in weight loss, we failed to establish a cause and effect relationship between attendance of SGM and better %EBWL. A randomized trial could be designed to help ascertain if there truly is a cause and effect relationship, although the issue of randomizing patients not to attend SGM may have some ethical concerns. There is a strong possibility of self-selection bias in any study examining the differences in weight loss in patients who attend SGM versus those that do not. It is not definitive whether our findings (or findings of others) of better weight loss were because of inherent patient motivational characteristics, to attending SGM, or both. It could be that those who were most motivated to lose weight were also those most compliant to the recommended care. Recommended care includes following the nutrition and exercise guidelines to enhance weight loss and attending SGM.

Overall, multiple studies [5, 6], including this study, have reported increased weight loss in those patients who attend SGM compared to those who do not. Therefore, the importance of attending SGM should be incorporated in preoperative patient counseling and encouraged during postoperative follow-up visits.

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