Maintaining Weight Loss After Bariatric Surgery: A Qualitative Study

Lori Liebl, PhD, RN, CNE
Assistant Professor of Nursing
University of Wyoming
Weight Loss Maintenance

• Within one year of nonsurgical weight loss
  - Overweight adults regain ~ 50% of weight lost
  - Past 1 year- regain of all or more of the weight lost

• Within 2 to 5 years of nonsurgical weight loss
  - 92% will regain most or more of the weight lost

• Within 2 to 5 years of bariatric surgical patients
  - 20% will regain >50% EWL
  - < 5% will regain all of weight loss
Obesity Treatments: Surgical Types

- **Roux-en-Y gastric bypass (RYGB)-Criterion Standard**
  - 15.34 reduction in BMI
- **Laparoscopic sleeve gastrectomy (LSG)**
  - 11.87 reduction in BMI
- **Laparoscopic adjustable gastric band (LAGB)**
  - 7.05 reduction in BMI
Background

• Pre- and post-surgical interventions
  • Psychological screening
  • Nutrition, behavior, exercise support
    • Support groups & exercise classes

• Percent & rate of weight regain - estimated 20% of the time
  • Within 2 to 5 years
Review of Literature & Gaps

• Factors & Traits oriented
  • Long-term does not consider bariatric surgical patients (pts)
  • Initial weight loss (12 to 18 mo)
  • Minimal weight loss maintenance (>24 mo)
  • Caucasian females 25 to 55, urban locations

• Quantitative:
  • Quality of life; self-efficacy r/t behavior changes, self-regulation, self-talk, goal setting, support systems, behaviors.

• Qualitative:
  • New identity clashing with old
    • Loss, shame, anger, frustration, fear, joy, excitement, support systems, coping mechanisms

• Behavior change theories – Bandura’s Social Cognitive Theory
  • Minimally studied with bariatric surgical pts
Theoretical Underpinnings

• Bandura’s behavioral change theory
  • Social Cognitive Theory
  • Triadic reciprocal causation model
• Broad assumptions used as framework
  • Semi-structured interview guide
• “open minded yet mindful of the preconceptions” (Sandelowski 2010,p. 80)

“Lasting change is dependent on reciprocal interaction of intrapersonal, behavioral, and environmental influences…”
The purpose of this qualitative descriptive study was to describe the experiences of adults who were successful and those who were unsuccessful at maintaining weight loss AT LEAST 2 YEARS after a bariatric surgery.
Interview Guide

Semi-structured questions were asked to allow the participant to answer and freely discuss their post-surgical experience.  

**Question Examples:**

Prior to surgery, why did you believe your goal weight to be realistic?
Why do you believe you have been able to maintain your weight loss?
Tell me about the lifestyle changes you have made since your surgery?
Tell me about the people who have supported you throughout this journey?

Probing questions were used during the interview in order to keep participants on topic or to help the participant find a place to start or transition. 

**Probing Question Examples:**

Has anyone helped you in your efforts to make these changes?
What makes it difficult to choose healthy diet options?
What type of activities do you do now?
Are you satisfied with your current weight?
Inclusion Criteria

1. Adult >19 years of age

2. > 24 months after a laparoscopic Roux-en-Y gastric bypass, laparoscopic sleeve gastrectomy, or laparoscopic adjustable gastric band surgery

3. Able to speak, read, and understand English

Success defined: ≥ 50% of excessive weight loss (EWL)
Unsuccessful: ≤ 50% of EWL

EWL: \[
\frac{\text{preoperative weight} - \text{postoperative weight}}{\text{preoperative weight} - \text{ideal body weight}}\]
\[
\frac{380 - 250}{380 - 155} = 57\% \text{ EWL}
\]
Recruitment results

• 20 adults agreed to participate

• 14 Successfully maintained weight loss
  • 3 more recruited – did not participate

• 6 Regained weight
  • At least 6 more adults were recruited but did not participate
Findings: Successful Participant Interviews

- $M=82$ minutes, between 60 and 117 minutes
- Upbeat and very willing to share information
- Participant did the majority of speaking, with minimal use of probing questions
- Demeanor and outlook on life were positive
- Awakened to a new life that came with a healthier weight
<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Marital Status</th>
<th>Education</th>
<th>Employment</th>
<th>Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48</td>
<td>Female</td>
<td>Cauca</td>
<td>Divorced</td>
<td>College</td>
<td>Part time &amp; Self</td>
<td>Rural</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>Male</td>
<td>Asian</td>
<td>Married</td>
<td>College</td>
<td>Full Time</td>
<td>Suburban</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>Male</td>
<td>Cauca</td>
<td>Married</td>
<td>S. College</td>
<td>Unemployed</td>
<td>Suburban</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>Female</td>
<td>Cauca</td>
<td>Separated</td>
<td>S. College</td>
<td>Unemployed</td>
<td>Suburban</td>
</tr>
<tr>
<td>5</td>
<td>46</td>
<td>Female</td>
<td>Hispan</td>
<td>Married</td>
<td>S. College</td>
<td>Part time</td>
<td>Urban</td>
</tr>
<tr>
<td>6</td>
<td>29</td>
<td>Female</td>
<td>Cauca</td>
<td>Married</td>
<td>College</td>
<td>Other</td>
<td>Urban</td>
</tr>
<tr>
<td>7</td>
<td>60</td>
<td>Female</td>
<td>Cauca</td>
<td>Divorced</td>
<td>College</td>
<td>Unemployed</td>
<td>Rural</td>
</tr>
<tr>
<td>8</td>
<td>29</td>
<td>Female</td>
<td>Cauca</td>
<td>Married</td>
<td>College</td>
<td>Other</td>
<td>Suburban</td>
</tr>
<tr>
<td>9</td>
<td>73</td>
<td>Male</td>
<td>Cauca</td>
<td>Married</td>
<td>College</td>
<td>Retired</td>
<td>Urban</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
<td>Female</td>
<td>Cauca</td>
<td>Divorced</td>
<td>College</td>
<td>Full Time</td>
<td>Suburban</td>
</tr>
<tr>
<td>11</td>
<td>46</td>
<td>Female</td>
<td>Cauca</td>
<td>Married</td>
<td>Tech</td>
<td>Full Time</td>
<td>Suburban</td>
</tr>
<tr>
<td>12</td>
<td>56</td>
<td>Female</td>
<td>Cauca</td>
<td>Married</td>
<td>Tech</td>
<td>Part time</td>
<td>Rural</td>
</tr>
<tr>
<td>13</td>
<td>57</td>
<td>Female</td>
<td>Cauca</td>
<td>Married</td>
<td>College</td>
<td>Retired</td>
<td>Suburban</td>
</tr>
<tr>
<td>14</td>
<td>43</td>
<td>Female</td>
<td>Af. Am</td>
<td>Single</td>
<td>College</td>
<td>Full Time</td>
<td>Urban</td>
</tr>
</tbody>
</table>
Successful participant surgical & weight information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Surgery Type</th>
<th>Months Post-Surgery</th>
<th>Highest Pre-surgical Weight &amp; BMI</th>
<th>Lowest Post-surgical Weight &amp; BMI</th>
<th>Current Weight &amp; BMI</th>
<th>Successful Weight &amp; Ideal Body Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RYGB</td>
<td>30</td>
<td>386 / 62.3</td>
<td>180 / 29</td>
<td>195 / 31.5</td>
<td>270 / 144</td>
</tr>
<tr>
<td>3</td>
<td>RYGB</td>
<td>157</td>
<td>412 / 41.7</td>
<td>245 / 32.3</td>
<td>255 / 33.6</td>
<td>293 / 174</td>
</tr>
<tr>
<td>5</td>
<td>RYGB</td>
<td>39</td>
<td>482 / 60.2</td>
<td>275 / 34.4</td>
<td>295 / 39.6</td>
<td>332 / 182</td>
</tr>
<tr>
<td>6</td>
<td>RYGB</td>
<td>29</td>
<td>225 / 38.6</td>
<td>110 / 18.9</td>
<td>115 / 19.7</td>
<td>182 / 138</td>
</tr>
<tr>
<td>7</td>
<td>RYGB</td>
<td>28</td>
<td>256 / 42.6</td>
<td>110 / 18.3</td>
<td>164 / 27.3</td>
<td>199 / 141</td>
</tr>
<tr>
<td>8</td>
<td>RYGB</td>
<td>129</td>
<td>297 / 56.1</td>
<td>136 / 25.7</td>
<td>136 / 25.7</td>
<td>213 / 129</td>
</tr>
<tr>
<td>9</td>
<td>RYGB</td>
<td>148</td>
<td>500 / 91.4</td>
<td>235 / 43</td>
<td>275 / 50.3</td>
<td>316 / 132</td>
</tr>
<tr>
<td>10</td>
<td>RYGB</td>
<td>52</td>
<td>301 / 55</td>
<td>118 / 21.6</td>
<td>143 / 26.2</td>
<td>219 / 137</td>
</tr>
<tr>
<td>12</td>
<td>LAGB</td>
<td>65</td>
<td>300 / 38.5</td>
<td>220 / 28.2</td>
<td>235 / 30.2</td>
<td>248 / 195</td>
</tr>
<tr>
<td>14</td>
<td>RYGB</td>
<td>46</td>
<td>238 / 43.5</td>
<td>116 / 21.2</td>
<td>131 / 24</td>
<td>188 / 137</td>
</tr>
<tr>
<td>15</td>
<td>LAGB</td>
<td>73</td>
<td>225 / 36.3</td>
<td>162 / 26.1</td>
<td>175 / 28.2</td>
<td>185 / 144</td>
</tr>
<tr>
<td>16</td>
<td>LSG</td>
<td>31</td>
<td>248 / 40</td>
<td>138 / 22.3</td>
<td>189 / 30.5</td>
<td>196 / 144</td>
</tr>
<tr>
<td>17</td>
<td>LAGB</td>
<td>65</td>
<td>207 / 37.9</td>
<td>115 / 21</td>
<td>122 / 22.3</td>
<td>170 / 132</td>
</tr>
<tr>
<td>18</td>
<td>LAGB</td>
<td>79</td>
<td>298 / 49.6</td>
<td>163 / 27.1</td>
<td>195 / 32.4</td>
<td>220 / 141</td>
</tr>
</tbody>
</table>
Awakening: Major Themes

- Taking My Life Back
- New Lease on Life
- Without Supportive People Around You, You’re Lost
- I Do Not Like Focusing on the Negative
- The Void
- Food Demons
- Finding the Happy
- Ripple Effects

“There’s no way I could've lived and enjoyed life in general the way I was then as compared to how I am now.”

“I decided it's my responsibility to take care of it and that's just how it is.”
“I cannot be 72 and pass away because I didn't take care of myself. So she was really the reason why I was like ‘Oh my goodness I can't be my mom.’

“To participate more with my kids… to be active in their lives.”

“Life now as I know it, I love life!”

“I wasn't happy, fat, and I'm happy now and it makes a lot of difference in your life emotionally and physically.”

“My oldest daughter now she says ‘Mom stop stealing my pants!’ I love it!”

“If I drop something I enjoy bending over to pick it up because I can.”

“I'd probably still be sleeping 10 to 12 hours a day because I didn't have energy or just sitting around the house because I couldn't move, I was so sore. Now, I'm never home.”

**Taking My Life Back**

“My goal is to take my life back”

**New Lease on Life**

- Energy
- Physical ability
  - Family life
- Confidence
- Appreciation
Without Supportive People Around You, You’re Lost

- Encouraging
- You’re not alone
- Honest professionals

“I know that they’re gonna be very honest with me and do things not just from a ‘friend’ perspective but from a nursing perspective and from someone who’s been a patient perspective.”

“I want supportive people around you, you’re lost…I think if I didn't have those people in my life my success would be minimal.”

I Do Not Like Focusing on the Negative

- This is something for me
- Shedding the negative
- Not the support I needed

“He didn't really want me to have it. He would say ‘Your fine the way you are’…We’re not together anymore.”

“The boyfriend at the time, who I had been together with for seven years, was not so supportive. I had lost about 100 pounds, and he decided he didn't want to be together anymore.”

“If I was still was with the same old guy, he would be asking if I wanted ice cream at night because he thought that was the way you took care of each other, you fed each other.”
The Void

- Food is an addiction
- Filling the void with another addiction
- Center of my life

Food Demons

- Cravings
- Negotiating with food demons
  - Distractions
  - How, why, and what I eat
- Tuning into your mind and body

“Those first two or three weeks after surgery it sets in very quickly that you had an addiction and you’re going through detox and its hell.”

“I've been through the gamete of the different things that you can be addicted to.”

“I just have never been big on taking care of myself, it’s always everybody else….I've just never been okay with that. I'm getting ok with that.”

“I had to change my way of thinking. How I eat, why I eat, what I eat.”

“There are times I'll get Magnum ice cream bars and I'll want to eat three of them, right off the bat…That never goes away.”

“I can eat half a burger and throw it away…And before I didn’t eat half of something and throw it away.”

“Surgery doesn't fix everything and you have to always pay attention to it.”
Finding the Happy Weight

“I feel good about myself. I feel good about my size.”

“I couldn't believe I was that skinny and I’d still see myself as fat though.”

“Scary weight is 175…168 is happy weight.”

“I like my weight best at 140, that's where I'm happiest, and I wasn't too skinny, I wasn't too fat, I'm comfortable in that skin.”

“Probably about 145 pounds, people said ‘Your face looks a little bit gaunt’”

Ripple Effects

“I think they’re probably more conscious about making good choices than they would have been if I had not had the surgery, because I wouldn't have been conscious about it.”

“If I don't eat it, the rest of the family doesn't really get it either.”

“We don't really do the whole in-house fitness or going to the gym or whatnot. But we go out swimming. We go camping, hiking, a lot of cardio, ride our bikes, stuff like that.”

“With the kids, we want to make sure they are instilled with good healthy values so that they don't have to go through what we did.”
Findings: Unsuccessful Participant Interviews

- $M=54$ minutes, between 40 and 70 minutes
- Hesitant to share details
- Reserve and a sadness resonated
- Multiple probing questions were used to extract information
- Somber but hopeful outlook on life
- Not ready to give up on their weight loss efforts
## Unsuccessful Participant Description

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Marital Status</th>
<th>Education</th>
<th>Employment</th>
<th>Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>62</td>
<td>Male</td>
<td>Cauca.</td>
<td>Single</td>
<td>Masters</td>
<td>Full Time</td>
<td>Suburban</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>Male</td>
<td>Cauca.</td>
<td>Married</td>
<td>S. College</td>
<td>Self</td>
<td>Suburban</td>
</tr>
<tr>
<td>11</td>
<td>43</td>
<td>Female</td>
<td>Cauca.</td>
<td>Married</td>
<td>H. School</td>
<td>Self</td>
<td>Suburban</td>
</tr>
<tr>
<td>13</td>
<td>55</td>
<td>Male</td>
<td>Cauca.</td>
<td>Divorced</td>
<td>S. College</td>
<td>Other</td>
<td>Urban</td>
</tr>
<tr>
<td>19</td>
<td>44</td>
<td>Female</td>
<td>Hispan.</td>
<td>Widowed</td>
<td>S. College</td>
<td>Full Time &amp; Self</td>
<td>Urban</td>
</tr>
<tr>
<td>20</td>
<td>55</td>
<td>Female</td>
<td>Cauca.</td>
<td>Married</td>
<td>College</td>
<td>Part Time</td>
<td>Rural</td>
</tr>
</tbody>
</table>
**Unsuccessful participant surgical and weight information**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Surgery Type</th>
<th>Months Post-Surgery</th>
<th>Highest Pre-surgical Weight &amp; BMI</th>
<th>Lowest Post-surgical Weight &amp; BMI</th>
<th>Current Weight &amp; BMI</th>
<th>Successful Weight &amp; Ideal Body Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>RYGB</td>
<td>87</td>
<td>329 / 45.9</td>
<td>190 / 26.5</td>
<td>269 / 37.5</td>
<td>254 / 179</td>
</tr>
<tr>
<td>4</td>
<td>RYGB</td>
<td>45</td>
<td>430 / 55.2</td>
<td>260 / 33.4</td>
<td>317 / 40.7</td>
<td>313 / 195</td>
</tr>
<tr>
<td>11</td>
<td>LSG</td>
<td>44</td>
<td>263 / 39.3</td>
<td>165 / 32.8</td>
<td>197 / 32.8</td>
<td>193 / 150</td>
</tr>
<tr>
<td>13</td>
<td>LAGB</td>
<td>102</td>
<td>496 / 62</td>
<td>340 / 42.5</td>
<td>445 / 55.6</td>
<td>348 / 200</td>
</tr>
<tr>
<td>19</td>
<td>RYGB</td>
<td>28</td>
<td>276 / 44.5</td>
<td>207 / 33.4</td>
<td>214 / 34.5</td>
<td>216 / 155</td>
</tr>
<tr>
<td>20</td>
<td>LAGB</td>
<td>74</td>
<td>298 / 49.6</td>
<td>196 / 32.6</td>
<td>238 / 39.6</td>
<td>224 / 150</td>
</tr>
</tbody>
</table>
Not Giving Up

• To Be Healthy and Active
• Lasting Changes
• I Failed the Surgery
• I’m Working On It
• Support Systems

“I wanted it so bad and I wanted the surgery for so long and I had read all about how it wasn't successful for some people and I said ‘I will not be one of those people’ and two years later I feel like I am one of those people.”

“The surgery was a success, yes but I failed the surgery”

“Giving up is a big thing. I don't think there's anything they can do to help me change. I have to do it.”
To Be Healthy and Active

“I had high cholesterol and was having some knee pains and...my mom has had both of her knees replaced. I didn't wanna end up like her. I just wanted to do what I could to try and be proactive.”

“I couldn't walk to the mailbox...All I did was stay around the house and go to the store and at the store I'd need one of those carts. That was always embarrassing.”

Lasting Changes

• What and how much I eat
• The way I eat
• Increase in activity

“I'm very aware of what I eat and what I'm doing...I'm more aware of what I'm buying and why I'm buying it.”

“I get out a lot more. I get exercise. I go to the gym and exercise, and I can walk on my paper route...I'm just more active...It’s more fun because I can ride my bike and go to the gym and lift weights, and I can just be more mobile.”

“Now, I am much more focused on three planned meals a day...I used to eat whenever I wanted.”
I Failed the Surgery

• In the beginning
• Sabotaging my stomach
• I’m struggling
  • I quit exercising
  • Old eating habits resurfaced
    • Emotional eating
    • Love of food
    • Poor food choices
    • Mindless eating
    • Anger
• Balance
  • Social, Work and Home
• The fault is mine

“I feel ashamed, I feel embarrassed that I got the surgery.”

“I'll try something, and I don't just try a couple bites, I usually try like a big piece of something…Then I really do feel sick which makes no sense. That's just stupid.”

“I started dating a guy…and I have changed my diet a lot since he's been in my life.”

“I feel the need to take care of people…I think that hopefully over time I’ll find that right balance.”

“I still choose French fries and the bread on a sandwich instead of getting fruit and a salad...It's all about poor decision-making.”

“It's so hard to have control in so many areas. Right now, I'm struggling with how to change and not lose everything.”

“I'm disgusted and mad…mad at myself.”
I’m Working On It

“I just need to try to forgive myself and say ‘Well I got to do better’ and start over.”

“I go out and look at my motorcycle sitting there…I gotta do something, or I'm gonna end up selling my bike and I'm never gonna be able to get another one.”

“I'm responsible for my own actions. Eating is my own action. If I eat too much lasagna I am responsible for that.”

“I'm gonna prioritize things in my life. I need to make healthy eating and exercise and spending quality time with my kids.”

Support Systems

• Support groups
• Family
• Non-judgmental support
• Health care support
• Co-workers

“I think he was happy that I was losing weight but…he never says anything about my weight or that I didn't look good after I had my surgery or anything.”

“When you're really, really down and then you think ‘I'm going to quit and not do it anymore’ and then you think ‘well what did they tell me in the support group’”

“My husband would get on me and say like my plate looks like a man’s plate.”

“I felt a little bit alone.”
Conclusions: Reciprocal Determinism

• Previous studies focus – initial weight loss
  • Long-term challenges

• **Reciprocal Determinism**: Interaction between intrapersonal, behavioral, and environmental influences
  • Individual’s ability to interact, modify, and alter their environment to regulate their behavior
    • Successful - identify negative attitudes, influences, and behaviors then modified their environment to support healthy behavior
    • Unsuccessful – failed to modify or alter their environment to support healthy behaviors
Discussion: Confirmed & Expanded

• Intrapersonal influences
  • Self-efficacy to make lasting changes (diet & physical activity (PA))
• Behavioral influences
  • Self-regulate healthy behaviors (seeking support, dietary, & PA)
  • Follow-up meetings, exercise classes
  • Coping strategies – disturbed eating patterns
  • Overcoming replacement addictions – Support groups (NA, AA, OA)
• Environmental influences
  • Support systems- seek out models & emulate
  • Spousal support – keep positive, eliminate negative
Discussion: Inconsistent

• Reciprocal determinism
  • Vulnerability, ill-prepared
    • “Now I can, so I will” vs. “Now I can, so I should”
  • Paradoxical – anger, fear, or frustrations with others perceptions
    • Further out, not discussed

• Behavioral & Intrapersonal influences
  • Motivated to lose weight and make lasting healthy lifestyle choices
  • Obtainable realistic goals
  • High self-efficacy to make lasting changes
Implications for Practice & Future Research

- Therapeutic education & counseling
  - Changes in relationships
- Communication techniques
  - Negativity
- Support groups
  - Different stages
  - Sponsors
- Weight fluctuations
  - Comfortable and maintainable weight
  - Guilt, shame, anger, and frustrations
Questions & Comments

Thank you for your time!