

The Roles of Media, Social Comparison and Self-discrepancy on Overweight/Obese Patients' Decision to Undergo Intra-gastric Botulinum Toxin-A Injection

Aşırı Kilolu/Obez Hastaların İntragastrik Botulinum Toksin-A Enjeksiyonu Yaptırma Kararında Medya, Sosyal Karşılaştırma ve Benlik Farklılıklarının Rolü

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Submitted/Başvuru: 29.09.2021
Revision Requested/Revizyon Talebi:
01.03.2022
Last Revision Received/Son Revizyon:
28.07.2022
Accepted/Kabul: 22.08.2022
Published Online/Online Yayın: 26.12.2022

Citation/Atf: Eşiyok, E., & Demirtepe Saygılı, D. (2022). The roles of media, social comparison and self-discrepancy on overweight/obese patients' decision to undergo intra-gastric botulinum toxin-a injection. *Psikoloji Çalışmaları - Studies in Psychology*, 42(3): 585-610.
<https://doi.org/10.26650/SP2021-1002112>

ABSTRACT

Body image is the sum of individuals' perceptions of their own bodies. There are various factors that affect body image, one of which is sociocultural factors. Sociocultural factors, including family, peers and the media, are important factors affecting the body image of individuals. The effects of being overweight on one's body image perception has been one of the most frequently researched topics in recent years. Studies have also shown that comparing one's body with people in the media, and the dissatisfaction with one's body resulting from it, motivates people to resort to various methods of losing weight. Doctors recommend various procedures for health reasons. Moreover, overweight women choose some surgical procedures such as intra-gastric botox injection, due to their concerns about their body image. Intra-gastric Botulinum Toxin-A injection (stomach botox) is one of them. This study aims to explore how sociocultural factors affect the overweight/ class I obese female patients' decision to undergo an intra-gastric botox injection treatment from an interpretative phenomenological approach. The sample of the study consisted of 12 female patients who had an intra-gastric botox injection in the last six months. Semi-structured interviews were conducted with the patients. The interpretive phenomenological analysis revealed seven themes; self-definition through physical characteristics, motivations towards intra-gastric botox injection, attitudes towards the body, the perceived effects of being overweight, comparing one's own body, the role of the media in the decision-making process, and treatment plans for changing one's appearance in the future. It has been found that the body image perceptions of the patients play an important role in the processing-decision-making processes. In addition, it has been observed that social media is a channel frequently used by patients for the purpose of obtaining information. The study is important in terms of trying to understand cognitive processes including self-evaluations and body image, their motivations behind intra-gastric BTA injection, and attitudes toward their bodies.

Keywords: Body image, obesity, social comparison, media, self-discrepancy

ÖZ

Beden imajı bireylerin kendi bedenlerine ilişkin algılarının toplamıdır. Beden imajını etkileyen çeşitli faktörler vardır, bunlardan biri de sosyokültürel faktörlerdir. Aile, akran ve medyayı kapsayan sosyokültürel faktörler kişilerin beden imajını etkileyen önemli faktörler olarak bilinmektedir. Fazla kilolu olmanın beden imaj algısı üzerinde yarattığı sorunlar son yıllarda oldukça sık araştırılan konuların başında gelmektedir. Bedeni, medyada yer alan kişilerle karşılaştırmak ve buna bağlı oluşan beden tatminsizliğinin kişileri kilo verme ile ilgili çeşitli yöntemlere başvurma yolunda motive ettiği de yapılan çalışmalarda ortaya konmuştur. Doktorlar tarafından sağlık amaçlı önerilen çeşitli yöntemler bulunmaktadır. Ayrıca, kilolu kadınlar bedenlerine ilişkin kaygıları için de kilo vermek amacıyla çeşitli uygulamalar yaptırmaktadır. Intragastrik Botulinum Toksin-A (BTA) enjeksiyonu (mide botoksu) işlemi de bunlardan biridir. Bu çalışma, sosyokültürel faktörlerin aşırı kilolu/sınıf I obez kadın hastaların intragastrik botoks enjeksiyon tedavisine karar verme süreçlerini nasıl etkilediğini yorumlayıcı fenomenolojik yaklaşım ile araştırmayı amaçlamaktadır. Araştırmanın örneklemini son altı ay içinde intragastrik botoks enjeksiyonu yaptıran 12 kadın hasta oluşturmuştur. Hastalarla yarı yapılandırılmış görüşmeler gerçekleştirilmiştir. Yapılan yorumlayıcı fenomenolojik analiz sonucunda yedi tema ortaya çıkmıştır. Bu temalar; fiziksel özellikler yoluyla kendini tanımlama, intragastrik botoks enjeksiyonuna yönelik motivasyonlar, vücuda yönelik tutumlar, fazla kiloya ilişkin algılanan etkiler, kişinin kendi bedenini karşılaştırması, medyanın karar verme sürecindeki rolü ve son olarak gelecekte görünümü değiştirmeye yönelik tedavi planları şeklindedir. Hastaların beden imaj algılarının işleme-karar verme süreçlerinde önemli bir rol oynadığı saptanmıştır. Ayrıca sosyal medyanın da hastalar tarafından bilgi edinme amacıyla sıklıkla kullanılan bir mecra olduğu görülmüştür. Çalışma, öz değerlendirme ve beden imajı gibi bilişsel süreçleri, intragastrik BTA enjeksiyonunun arkasındaki motivasyonları, bedenlerine karşı tutumları anlamaya çalışmak açısından önemlidir.

Anahtar Kelimeler: Beden imajı, obezite, sosyal karşılaştırma, medya, benlik farklılığı

Obesity has been asserted to be one of the leading global chronic health problems affecting the adult population with an increasing frequency (Yumuk et al., 2015). According to World Health Organization (WHO) data, the prevalence of obesity has tripled in the recent 40 years between 1975 and 2016. In 2020, 39% of the adult global population were overweight, and over 600 million of these adults were obese (A-Mansia, 2020). A healthy weight is defined as having a BMI between 18.5-24.9kg/m² and being overweight is defined as having a BMI between 25-29.9 kg/m². Obesity is defined as having a BMI ≥ 30 kg/m² and its severity is defined as obesity class 1, class 2, and class 3 according to BMI values (BMI 30-34.9, 35-39.9, and ≥ 40 kg/m² respectively).

Obesity is associated with serious comorbidities including, but not limited to, coronary heart disease, stroke, cancer, hypertension, Type II diabetes mellitus, dyslipidemia, osteoarthritis, gout, and obstructive sleep apnea (WHO, 2000). Obesity is also associated with negative psychological aspects such as depression (Sutaria et al., 2019), body dissatisfaction (Moradi et al., 2021; Olson et al., 2018) or anxiety (Amiri & Behnezhad, 2019).

Some researchers tried to explore the correlates of obesity and body image (Diamond et al., 2009), body image concerns of massive weight loss patients (Gilmartin, 2013), and body image and body weight in obese patients (Adami et al., 1998). On the other hand, some of the researchers explored the patients' reasons (Munoz et al., 2007), expectations and motivations for bariatric surgery (Jensen et al., 2014; Libeton et al., 2004; Wee et al., 2006). In addition to these studies the effects of gastric bypass surgery on body image (Neven et al., 2002), and the perceived psychological outcomes of gastric bypass surgery (Boccheri et al., 2002) were also explored.

Different treatment strategies were used by medical doctors and dieticians to overcome the problems with being overweight and obesity. Lifestyle interventions including diet, exercise, and behavioral strategies are recommended to all overweight and obese patients in every level of obesity as a first-line treatment option (Apovian et al., 2015). Pharmacologic therapy and bariatric surgery are advanced treatment strategies for further weight loss in patients with advanced stages of obesity (Yumuk et al., 2015). Endoscopic therapies, which are one of the most preferred treatment methods, have developed as minimally invasive techniques that aims at weight loss through increased satiety, a decreased appetite by altering food intake, digestion, food absorption, and gastric empt-

ying. Injection of botulinum toxin-A (BTA) to the gastric wall is one of the endoscopic techniques being performed despite the uncertainty of its effectiveness (Bustamante et al., 2017). Since botox is known as a powerful, long-term inhibitor of muscular contractions in striated and smooth muscles (Hallett, 1999), in recent years, endoscopic intragastric BTA injection has been attempted for the treatment of obesity (Bang et al., 2015). This procedure aims to reduce food intake and as a result reduce body weight (Mittermair et al., 2007). Due to the social and psychological problems caused by obesity, interest in intragastric BTA injections, like all other methods, is increasing day by day.

As obesity and body image is one of the most discussed topics, this study attempted to explore how sociocultural factors, especially media, effect the overweight/ Class I obese patients' decision to undergo intragastric BTA injection treatment. Since this is a new treatment, no previous study has focused on sociocultural factors related to intragastric BTA injection patients, to the authors' knowledge. In this paper, firstly the literature review on socio-cultural perspective is given, this is followed by the social comparison, self-discrepancy theory, and the body. Lastly, recent studies in body image in overweight and obese patients is provided. This study aims to fill this gap, by combining the social, psychological, and medical perspectives. As it is known that media is an important tool in the dissemination of the ideals of body image, this research also tries to explore the role of media on the decisions of the patients.

Socio-cultural Perspective

The socio-cultural perspective aims to understand the behavior of people in a cultural context and how individuals' attitudes towards their bodies are affected by socio-cultural factors (Jackson, 1992). The socio-cultural perspective is also referred to as the tripartite model. The tripartite influence model of body image suggests that the relationship between media usage and body dissatisfaction is a result of the internalization of the thin ideal and appearance-based social comparisons (Thompson et al., 1999; van den Berg et al., 2002). Peers, parents, and media are the main influencers that form the basis for the development of body image, eating dysfunction (van den Berg et al., 2002), body dissatisfaction, and eating habits (Tiggemann & Pickering, 1996). The previous research findings indicate that family, peers, and media influence people's attitudes towards changing their body shape and appearance (Hill & Franklin, 1998; Irving, 1990; Jones, 2011; Ricciardeli et al., 2000; Stanford & McCabe, 2002).

Socio-culturally transmitted ideal appearances are accepted and internalized by many women and girls, which results in the need to be thin (Tiggemann, 2006, 524). These thin messages are spread through different channels. These channels could be either family, peers, or media. Sinton and Birch (2006) found that exposure to certain messages from family and friends has an impact on an individual's values and self-development (Sinton & Birch, 2006). Parental messages were found as the strongest influence on body image (Stanford & McCabe, 2005). Especially weight-related comments from families (Field et al., 2001) are seen as a factor that affects one's body image. Especially for girls, best female friends and mothers are important predictors for body-change strategies (McCabe & Ricciardeli, 2003). Media is another important factor that influences the decisions with the body image. Media not only disseminates the body-related ideal images and appearance standards (Levine et.al., 1994), but it also advises on achieving those ideals through the coverage of topics such as diet, lifestyle, and physical exercise (Rodríguez-Fernández et al., 2013). As a result, both the body ideals and the ways of achieving those ideals are conveyed to individuals through the media. Generally, it is assumed that issues related to the body are generally given with a sense of urgency and it is emphasized that individuals should have a healthy body, be youthful, and have good clothing (Sault, 1994, 1).

Social Comparison, Self-Discrepancy Theory, and Body

According to the social comparison theory, individuals tend to compare themselves with others to improve themselves and understand their competencies (Buunk & Schaufeli, 2017). According to Festinger (1954), when individuals are not sure about their competencies, they compare themselves with others to increase their level of competence. The studies explored that, people tend to compare themselves more with others, and are more affected by socio-culturally generated pressures - especially those related to external appearances (Wykes & Gunter, 2004). It is known that people who are in a particular group and who have similar attitudes with the group members frequently compare themselves with people in that group (Franzoi & Klaiber, 2007). However, social comparison can be made not only with the group members but also with different models, who could be from the individual's environment, as well as from the media (Wykes & Gunter, 2004, 143).

Social comparison with people in the media generally results in the person evaluating his/her own body and having negative feelings about their weight and body shape

(Ridolfi et al., 2011). In a study, it was found that women who had seen photos of slim models were more likely to have negative thoughts about their bodies than women who had seen photos of overweight models (Groesz et al., 2002). Additionally, when women compare themselves with celebrities in the media, body dissatisfaction, depressive feelings, a decrease in self-esteem, and a desire to go on diets have occurred (Jeffers et al., 2013).

While social comparison theory (Festinger, 1954) focuses on comparisons of the self with others, the self-discrepancy theory focuses on comparisons of different selves with each other. Self-discrepancy theory (Higgins, 1987) examines self-representations in three aspects: *Actual self* represents the characteristics of the present self. *The ideal self* represents desired characteristics, while the *ought self* represents obligated attributes. A comparison is made by the person among the actual self and ideal and ought selves. Adjustments are made if necessary, with the aim of achieving congruence between them. If discrepancies continue to exist between the actual and ideal selves, negative psychological consequences follow, such as disappointment, dissatisfaction, or negative emotions like anxiety (Higgins, 1987; Moretti & Higgins, 1990). This is theory-guided research in terms of body image (Woodman & Steer, 2011), eating disorders (Snyder, 1998), and age identity (Yu et al., 2013).

Moreover, people who are dissatisfied with their bodies spent more time talking about weight or body-related issues in their daily talk, i.e., fat talk (Clarke et al., 2010). Women with body dissatisfaction were shown to have an attentional bias in a way that they respond to thin-ideal stimuli more positively (Johansson et al., 2004). Ideal and actual weight discrepancies contribute to this relationship as a part of body dissatisfaction (Arroyo, 2014). Gender can be considered an important variable in terms of body shape and weight. Women checked their bodies more frequently compared to men, and behaviors such as weight monitoring and body checking were related positively to body-related shame (Solomon-Krakus & Sabiston, 2017).

In the last decades, among all the media tools, social media was found to be an important source of social comparison (Chua & Chang, 2016). Especially for those who pay more priority to their body image reported more discrepancies between their actual and ideal body images, which further lead to worse body image satisfaction. Therefore, being exposed to ideal images on social media contributed to defining the self by comparison (Ahadzadeh et al., 2017).

Likewise, results showed a positive relationship between Facebook usage and body image concerns, which was mediated by appearance comparisons in general, including the frequency of comparisons to close friends and distant peers, and by upward comparisons to distant peers and celebrities (Fardouly & Vartanian, 2015). On the other hand, the frequency of seeing images of fit women on Instagram was associated with greater body image concerns, and that relationship was mediated by internalization, appearance comparison tendency in general, and appearance comparisons to images of fit women. Together, these results suggest that Instagram usage might influence a women's appearance-related concerns and beliefs negatively (Fardouly et al., 2018).

Body Image in Overweight and Obese Patients

In the last decades, obesity and being overweight have become increasing problems. It is also known that being overweight/obese causes additional health-compromising conditions such as biological (e.g., hypertension), psychological (e.g., depression), and social (e.g., social isolation) consequences (Papadopoulos & Brennan, 2015). As a result of these, life dissatisfaction and body image distress produced by obesity motivate people to lose weight (Schwartz & Brownell, 2004). Since the psychological and social status of an individual is important to maintain life, research on obese and overweight individuals has started to grab attention worldwide.

Health-related issues and psychosocial concerns are important factors in a patient's decision to undergo surgery (Wee et al., 2006). Especially, medical health (Kitto et al., 2007; Libeton et al., 2004), appearance and embarrassment (Libeton et al., 2004), the pressure to look slim and beautiful (Gilmartin, 2013), and the need to have a new life-style (Jensen et al., 2014), are important factors that cause overweight/obese people to undergo surgical treatments.

By using a socio-cultural perspective, the general aim of this research is to explore the body image concerns of women who had intragastric BTA injection procedures. To achieve this aim, the following research questions were developed:

RQ1. What is the role of body image concerns in the decision-making process of intragastric BTA injection?

RQ2. How do socio-cultural factors affect patients' decisions to undergo intragastric BTA injection?

RQ3. What are the roles of social comparison and self-discrepancy in this process?

RQ4. How does media affect those who had the intragastric BTA injection?

Methodology

Participants

As suggested by Smith and Osborn (2003), a homogeneous participant group was formed to allow an interpretative phenomenological analysis. Twelve women who underwent an intragastric BTA injection procedure in the last six months participated in the present study. The participants' age ranged between 25 and 48 ($SD = 37.7$). While most of the participants were university graduates (72%, $N = 8$), a few of the participants had a two-year degree ($N = 2$) and a high school degree ($N = 1$). The average body mass index (BMI) before the procedure was 32.1 while the average body mass index three months after the procedure was 29.5. The demographic characteristics of the participants are given in Table 1.

Materials

Interview Questions Form

Open-ended questions about self and body image included emotions and thoughts before and after the intragastric BTA injection, social comparison, and the use of media. In order to explore the patients' attitudes towards stomach botox procedure and body image in total seven questions were asked. Some representative examples for the questions are; "What were your feelings about your body before the operation?" and "How does your body image affect your lifestyle?". To explore the role of the media on patients' decisions to undergo BTA injections seven questions were asked, some examples are; "Is the media influential on your body feelings, eating habits, and exercise/sport routines?" and "Did the media have an impact on your decision to take this action?". To explore the patients' operation/ treatment plans for changing appearance in the future four questions were asked, some examples of these questions are; "Would you consider having another operation/procedure for your appearance?" and "Will you use extra support treatments for weight loss as well as stomach botox?". Moreover, a few questions with a Likert scaling, such as the frequency of change in the exercise routine, were also used for the semi-structured interviews. The aim of these questions was to determine the intervening factors for weight loss so that a homogeneous sample could be created.

Table 1
Characteristics of Participants (N = 12)
 The BMI of the patients is calculated through the formula: BMI = kg (weight) /m² (Height)

Participants	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
Age	47	37	25	32	37	35	47	46	28	48	33	46
Education	BA	Two-year degree	High school	BA	Two-year degree	BA	BA	BA	BA	BA	BA	PhD.
Marital stat.	Married	Married	Married	Married	Married	Married	Single	Married	Single	Married	Married	Single
Pre-procedure BMI (kg/m ²)	30.4	34	34.7	26	30.8	32.7	34.4	30.9	33.2	29.3	30.9	31.6
Post-procedure (kg/m ²)	27.1	30.1	31.2	24.8	29.5	30.05	33.3	28.5	28	27.4	29.4	29.0
Percent reduction in body weight	10.8%	11.4%	10.3%	5.7%	5.7%	6.8%	3.1%	7.6%	15%	6.5%	4.8%	8%

Demographic Information Form

To get information about the age, education level, occupation, and marital status a demographic information form was given to the participants. Moreover, to calculate BMI, height and weight were asked in addition to the total weight loss after the operation. The presence of any physical or psychological diagnoses was also checked by asking both participants and their doctors.

Procedure

Open-ended questions were prepared by the authors, whose expertise areas include media and health psychology. The question list was then shown to a medical doctor (MD in Gastroenterology) for the quality of the questions as well as content validity. Ethical approval was obtained from the Ethical Review Board of Atılım University (No: 59394181-604.01.01-2398) and written informed consent forms were obtained from all of the participants. The inclusion criteria included having an intragastric BTA injection procedure in the last six months, not having any other chronic physical illness or psychological diagnosis, being able to express themselves verbally, and giving consent to share their contact information for participation. Lists of eligible participants were obtained from two private clinics. Then, they were contacted via phone or during their hospital control visits. Data saturation was used for determining the sample size, as suggested by Sousa for phenomenology research (2014). That is, when the same themes begin to repeat themselves and new themes stopped emerging, the interviews were completed. Semi-structured interviews were conducted by the first author between May and June 2021. The duration of the interviews was approximately 40 minutes, the minimum length was 32 minutes, the maximum was 47 minutes.

Data Analysis

The theoretical orientation of analyses of the qualitative data is Interpretative Phenomenological Analysis (IPA). IPA suggests that the use of semi-structured interviews to understand the perspectives of the participants in an interaction with the interviewer (Smith, 1995). This approach assumes that every individual has a unique evaluation of their experiences of a certain phenomenon (Smith, 1997), in this case, the process of intragastric BTA injection. It is highly preferred in health and illness research (Smith, 2011).

For data analysis, as suggested by Smith and Osborn (2003), the audio-recorded interviews were transcribed verbatim. The authors read and coded the transcriptions separately. Then the codings were compared in terms of the coded material and the code names for each transcript. In this context, the percentage agreement of the coded materials showed the result of 83%, which reflects the proper reliability (Percentage Agreement – $Poa = A/n$). After the discussion of prominent ideas, comments, and codes, the subthemes and themes were decided by the authors and explained in the Results section including representative quotes. Consistent with IPA, the subjective experiences of the

participants about the process of intragastric BTA injection were interpreted from the perspectives of the researchers. For example, a question was “how do you define yourself?”. A participant responded “I am honest, cheerful. I don’t like being overweight, I wasn’t overweight before. I look younger than my age.” This answer was examined under Theme 1-Self-definition through physical characteristics.

Reflexivity

It was acknowledged that researcher experiences and characteristics may play a role during data collection and analysis, i.e., reflexivity (Palagnas et al., 2017). Thus, researcher characteristics are also included: The two authors represent two different disciplines. To prevent variation between different backgrounds, all the interviews were conducted by the same researcher. The first author who conducted the interviews has research experience in media and marketing while the second author has research and application experience in clinical psychology. None of the authors had a former personal interaction with any of the participants.

Results

The main themes that emerged are self-definition through physical characteristics, motivations towards having an intragastric BTA injection, attitudes towards the body (negative attitudes towards the body before the procedure, positive attitudes towards the body after the procedure). Additionally, the perceived effects of weight (the link between weight and appearance, the link between weight and health, and the wish to be thinner), comparing one’s own body (with celebrities in the media, with others, with friends, with one’s ideal self), the role of media in the decision making process, and operation/treatment plans for changing appearance in the future. The themes of this study are shown in Table 2.

Table 2*The Themes and the Sub-themes*

Themes	Sub-themes
1. Self-definition through physical characteristics	
2. Motivations towards to undergo intragastric BTA injection	
3. Attitudes towards the body	a. Negative attitudes towards the body before the procedure b. Positive attitudes towards the body before the procedure
4. Perceived effects of weight	a. The link between weight and appearance b. The link between weight and health c. Wish to be thinner
5. Comparing one's own body	a. With the celebrities on the media b. With others c. With friends d. With one's ideal self
6. The role of media in the decision-making process	
7. Operation/ treatment plans for changing appearance in the future	

Theme 1. Self-definition through Physical Characteristics

Participants defined their physical characteristics as an answer to the question “How do you define yourself?”. The self-definitions usually included being overweight. The ones that define themselves through physical traits used negative attribution for themselves such as;

P10: “I don't like being overweight, I wasn't overweight before”.

P12: “After I gave birth I become overweight and I am feeling negative towards my body”.

Participants also defined their physical characteristics through their hair color, eye color, and their heights which can be defined as neutral. While they were defining themselves through personality traits, the patients used positive attribution for themselves such as “positive and calm”.

P5: “I could define myself as blonde and someone who has a positive view of life”.

P7: “Among all, I am a positive person and I am glad to be happy and joyful”.

Another important point is, the participants avoided using the word ‘beautiful’ instead they appraised themselves as cute and pretty.

Theme 2. Motivations towards to Undergo Intra gastric BTA Injection

In order to explore the general motivation towards the body, the questions as “What were the main motivations that forced you to have an intra gastric BTA injection?”. The participants stated a need to lose weight and want to look slim. However, another point that needed to be emphasized is that they reported that they become aware of the procedure through their friends and social media. Once they become aware of it, their curiosity about the procedure and their need to look better motivated them for this procedure.

P1: “From Instagram I learned that this procedure doesn’t have side effects, I was curious and wanted to give it a try”.

P9: “I couldn’t lose weight for a long time with a diet program, I talked with my doctor and decided to undergo a procedure”.

P2: “I wish to be slim and to look fitter. The clothes that I wear did not show my appearance as beautiful”.

P4: “Some of my friends had the same operation, and after I talked with them, I decided to have the same procedure”.

Theme 3. Attitudes towards the Body

The patients’ attitudes towards their bodies are divided into two subthemes: Negative attitudes towards the body before the procedure, and positive attitudes towards the body after the procedure.

Negative Attitudes towards the Body Before the Procedure

Before the procedure, they used to have daily thoughts about losing weight, being uncomfortable with the body that they saw in the mirror, and as a result they felt dissatisfaction with their body and appearance. All of the patients mentioned that before the procedure they were unhappy, and that they didn’t look beautiful because of their weight. Therefore, they attempted to link being beautiful with weight loss.

P2: “I want to have a slimmer and fitter body. The clothes that I wear don’t fit me well. As a result, even if I had purchasing power, because of my body size I may not be able to buy the clothes that I would like to wear.”

P5: "I think, my self-confidence is lower due to being overweight."

P6: "I cannot say that I love my body, I am unhappy with my weight. Sometimes I am angry with myself just because of this situation".

Positive Attitudes towards the Body After the Procedure

After the procedure patients mentioned that they had positive attitudes towards their bodies. At least they mentioned that they feel free to wear what they would like to wear. It was emphasized that the level of their self-reliance also improved once they started to lose weight. Also, this time losing weight is linked with being healthy and satisfaction with the appearance. Some of these attitudes are related with their health and some with their appearance.

P1: "After I lose weight, I started to become happy. I could easily fit in my clothes."

P2: "I started to wear my pants which I couldn't wear before. I am not feeling hungry therefore I feel more comfortable, now I could control my appetite."

P7: "I feel slim, once my body is slim, I could easily move and wear whatever I want".

P9: "I have lost almost 14 kg. I am happy. My eating habits have changed after the procedure".

Theme 4. Perceived Effects of Weight

Participants mentioned that they experience the negative effects of their weight on their lives. They formed links between their physical appearance and their weight, their health, and their weight, and they expressed a wish to be thinner.

The Link between Weight and Appearance

The patients had a positive attitude toward losing weight for their physical appearance. They reported selecting their clothes accordingly, such as swimsuits instead of bikinis. Feeling lighter included wearing clothes both comfortably and confidently. They stated that shopping became an enjoyable activity after losing weight. Thus, being overweight was perceived as negative for their appearance and restricted their choice of clothing.

P1: "When I am overweight, I am upset. I think what I wear does not suit me and everybody stares at me. When I am overweight, I don't want to go out, I want to stay in my world. Maybe it affects my self-esteem a little bit."

P5: *“I am affected psychologically by my weight and about fashion. When I am about to buy something that looks good on a model, I think that it won’t be the same for me and I give up. If the fashionable colors do not help me to look slim, I cannot wear them. For this reason, I think my self-esteem is threatened.”*

The Link between Weight and Health

The patients mentioned health-related benefits of losing weight as well as physical appearance. Being able to breathe and move easily, and getting rid of pain, especially in the legs, were reported as the health benefits of losing weight.

P6: *“Being overweight influences my health, not my appearance. I think my knees cannot carry my weight and they sore. I get out of breath very easily. As for physical appearance, my weight does not bother me, because my weight is distributed evenly to my body.”*

P10: *“I wanted to have this operation for my health rather than my appearance. It limits my ability to do physical exercise. If I were younger, I would also be uncomfortable with my appearance, but priorities change with age”*

A Wish to Be Thinner

As an extension of the links between appearance and weight, the participants stated a wish to be thinner. They used the expression of “*wish*” in terms of their desires to lose weight with less effort than the actual behaviors that result in lower body weight. Moreover, being taller, having a fast metabolic rate, or having a healthier body was mentioned as part of their wishes. Therefore, this subtheme refers to the effects of uncontrollable factors on their weight.

P8: *“I wish I were taller. I wish I were able to lose weight easily.”*

P5: *“I wish I were thin. I think I can be happier by losing weight. I want to look good in what I wear.”*

P11: *“I say I could be thinner but some people, because of their nature, can be size zero without effort. I know that I cannot, that’s why I do not model them and internalize that aim.”*

Theme 5. Comparing One's Own Body

As an answer to the question “Do you compare yourself with others?”, the participants reported comparing their bodies and physical appearance with celebrities on the media, with other people in general, with friends, and with their previous selves. Thus, the comparison is part of their self-perception as well as the decision-making process.

With Celebrities in the Media

The participants reported media as an information source as well as a database for comparison. The use of social media, especially Instagram was mentioned.

P5: “Generally, we saw slim women in the media and this makes me feel negative about my appearance.”

P10: “I compare myself with celebrities I saw in the media. I follow their experiences.”

P11: “Because of the media, I started to compare my body with the others in the media. There is an ideal body, and it makes me feel that I need to reach that ideal. I compare myself with famous people, especially influencers on Instagram”.

With Others

Comparison with others included random people that they come across in their daily lives. The subject of comparison is again physical appearance. People reported comparing themselves with people who are fatter, thinner, or both. The emotional consequence of the comparison process depended on their perception. A perception of oneself as more overweight as a result of the comparison made them feel bad. On the other hand, a perception of oneself as thinner made them feel good.

P4: “Generally I compare myself with people I encounter with. As I walk on the street, I compare myself with people with similar weights. I don't need to know them. I look at what they wear, whether it fits them. When I compare myself with others, if the person is thinner than me, I feel bad. If s/he fatter, I feel good.”

P3: “I compare myself with overweight people. Generally, if the person is more overweight than me or if their weight is unequally distributed in their body, I try to perceive my body's positive sides.”

P11: "I also compare myself with fit and well-built people wandering around at the gym. The comparison makes me feel worse."

With Friends

The comparison with people from their lives consisted of their friends, people from work, people who gave birth, or best friends. The comparison with friends was sometimes followed by a change in their behaviors such as exercise routine or diet.

P1: "I compare myself with people from work. These comparisons are important, especially in order to change my exercise routine."

P8: "I make comparisons a lot. My best friend is very thin and tall."

P5: "My friend from work had a similar injection. I think I can have it if she had."

With One's Ideal Self

The patients had an aimed weight in their minds and they compared their current weights with that aim. Although they perceive themselves as being far away from an ideal weight, trying to achieve that aim and being able to lose weight encouraged them to continue.

P2: "I still have a long road. I lost 10 kilograms in 3 months but I am still overweight. Yet, I have begun to wear pants I could not fit in before. That's something nice"

P8: "I lost 6 kilograms. I became happy by myself. At least I can fit in what I wear. I cannot say 'that's super' but still it is something. I enjoy shopping, I can buy what I like."

Theme 6. The Role of Media in the Decision-Making Process

All of the participants ($N = 12$) mentioned that media has a role in their decision-making process to undergo intragastric BTA injection. Especially they showed social media as the most important source, having a central role in providing information about the procedure. Either they searched for information on medical doctors' social media accounts, or followed patients who had undergone the same procedure previously. They also attempted to compare themselves with the others who had had an intragastric BTA injection before.

P6: "When I was deciding on an intragastric BTA injection, I searched people who had had the operation. As it had not harmed them, I decided to have it, too."

P1: "I found media to be an important tool for my thoughts regarding my body, eating habits, and exercise habits. The images in the media affect me. Especially Instagram is an important source. I followed the people who had had the same procedure."

P5: "From the media, I think television is the most important tool... But Instagram affected my decision to undergo this procedure. I followed the patients who had had the same procedure before, but also I followed the medical doctors' accounts."

P11: "Media is an important tool... For example, I learned about this treatment from a newspaper, then I searched on Instagram and Twitter. In general, I try the suggestions that I saw on the media. Once a celebrity or a doctor suggests a diet or a treatment, I want to try it."

Theme 7. Operation/ treatment Plans for Changing Appearance in the Future

As an answer to the question about their future operation plans, nearly all of the patients mentioned future plans for having an operation or treatment regarding their appearance. They mentioned that they would have a laparoscopic sleeve gastrectomy¹, abdominoplasty², or the same procedure in the future to look slim. Moreover, to change the parts of their bodies that they feel uncomfortable with, they considered esthetic surgery operations, such as silicone breast implants.

P1: "To look beautiful or to be slim I will have abdominoplasty"

P6: "For droopy skin, I may consider having abdominoplasty or breast augmentation surgery"

P8: "If it was up to me, I would have the same operation but my doctor recommends waiting for 6 months."

Discussion

To investigate the personal experiences of women's intragastric BTA injection process concerning body image in a socio-cultural context, interviews were conducted and seven themes were revealed from their interview transcripts. It was observed that the participants pay importance to physical appearance, especially weight, therefore, their

1 The aim of this operation is to minimize the capacity of the stomach by resection (Yehoshua et al., 2008).

2 Abdominoplasty is technique for the patients who seeks treatment for upper abdominal tissue excess (Pacifico et al., 2010)

frame of reference in evaluating themselves and others are also based on physical appearance and weight. Therefore, they focus on their bodies, compare themselves with others, and engage in behaviors like having an intragastric BTA injection.

The participants' self-descriptions usually included negative physical characteristics. Therefore, the *self-definition through physical characteristics* theme addressed the importance of body image in self-definitions. Contrary to negative physical characteristics, positive personality characteristics were declared, when they defined themselves in terms of personality traits. Although describing themselves with physical characteristics may also be an extension of being interviewed about the experience of intragastric BTA injection, however the use of more negative adjectives for physical characteristics as compared to personality is still a key finding. These complaints about physical appearance may be related to body dissatisfaction, i.e., a perceived negative evaluation of the body (Stice & Shaw, 2002). Lantz and colleagues (2018) suggested that individuals with body image distortion may have a greater discrepancy between their actual and ideal selves, which in turn contributes to eating disorders. Moreover, higher levels of body dissatisfaction were reported by women in the contexts of negative attractiveness feedback, such as romantic rejection (Harrington & Overall, 2021). Thus, body dissatisfaction is related to self definitions including a negative body image.

Regarding motivations towards intragastric BTA injection, all of the participants mentioned that “they want to look slim” and “want to look good in their clothes”. Once one compares their own body with their sociocultural environment (media, family, and peers), s/he starts to search for options to lose weight. Once their motivation for an intragastric BTA injection is explored, the patients concluded that they became aware of this procedure from their families or friends, and then searched on the internet. Participants also highlighted that their friends had had the same procedure before, and once they saw that their friends were losing weight, they decided to undergo an intragastric BTA injection. Franzoi and Klaiber (2007) reported that people who are in a particular group and who have similar attitudes with the group members frequently compare themselves with people in that group. The findings of the current research also support this. Once the patients compared their bodies with their friends, they preferred to try the procedure.

In terms of the *attitudes towards the body*, it is seen that the attitudes towards the body were negative before the procedure. Patients tend to show their weight as a reason

for being unhappy. Similarly, Wadden and colleagues (2006), found that women with extreme obesity reported lower levels of happiness than class I-II obesity. Many of the participants mentioned that the reason for their unhappiness was related to their weight and weight loss made them feel happy.

When the *perceived effects of weight* were explored, the participants formed links between their weight and appearance, weight and health, and they reported a wish to be thinner. Moreover, being overweight affected their selection of clothes, because they suffered from the effect of others' negative attitudes. Therefore, to have higher self-esteem, they wish to lose weight. Because all the participants had prior diet experiences to lose weight, this wish may be one of the reasons to decide for a gastric botox injection. Links between body image and self-esteem were supported by previous research (Bailey et al., 2017). Furthermore, it alleviated the negative effects of body-related guilt on the frequency of depressive symptoms in a young community sample (Brunet et al., 2019).

The participants mentioned comparing themselves with celebrities, others in general, friends, and with their ideal selves, constituting the *comparing one's body* theme. When the contents of the comparisons with others were examined in detail, mostly upward, and a few downward comparisons were seen in the participants' scripts. Upward comparison, i.e., comparing themselves with others who are perceived as superior, results in evaluating oneself as worse as compared to others (Tesser et al., 1988). On the other hand, downward comparison, i.e., comparing themselves with others who are perceived as inferior, leads to a better evaluation of oneself and positive feelings (Gibbons, 1986). The participants described both downward and upward comparisons and feelings accordingly afterwards.

Comparison with one's ideal self represents comparison with an imaginary positive self-image that a person wants to be. From a self-discrepancy theory (Festinger, 1954) perspective, themes of wish to be thinner (not thin but thinner), fitting in fashionable clothes, and mentioning looking good in clothes includes comparisons of the actual and ideal selves. The discrepancy may be triggered by comparison with thin people, self-criticism, or being teased about weight (Mason et al., 2019). Because discrepancy makes people uncomfortable, getting closer to the ideal self, in this case losing weight, is reported as a way to feel happier. Intra-gastric BTA injection and diet can be evaluated as

the behavioral counterpart of attempts to close the discrepancy. Otherwise, negative outcomes of discrepancy may include depression, anxiety disorders, and eating disorders (Mason et al., 2019). Future plans for treatments to change their bodies in terms of weight and appearance show the importance of people's perceptions and psychological processes, meanings of being thin and socio-cultural attributions of weight. Thus, the psychological counterpart of these biological processes to lose weight should not be underestimated.

The role of media in the decision-making process of the participants for diet behaviors, exercise routines, as well as an intragastric BTA injection was described by the participants. Media which is known as the most important tool for disseminating body ideals is also found as an important source both for gathering information about the procedure and to be aware of appearance-related statements. The media depicts achieving ideal figures through giving suggestions on diet, lifestyle, and physical exercise (Rodríguez-Fernández et.al, 2013). Since all the participants mentioned that media has a role in their decision-making process to undergo intragastric BTA injection, they showed social media as the most important source, and that it may also be an accomplice or a supporter as well. Similarly, another study showed that there is a relationship between social media influence and considering undergoing cosmetic procedures (Arab, et al., 2019). Interestingly, participants prefer to follow Instagram accounts of people who had a similar procedure before. The success stories on social media also motivate them to lose weight. Some interviewees reported that they try to follow the suggestions of influencers, especially on diet and exercise-related topics. Wykes and Gunter (2004) also suggest that the people in the media could be a source of social comparison. Celebrities and influencers may serve as role models both in terms of how they look and how they live.

This study aimed to investigate body image, related socio-cultural factors, and their psychological mechanisms in a sample of women after an intragastric BTA injection. Intragastric BTA injection is a relatively new technique for losing weight, preferred especially for physical appearance rather than health. Therefore, examining body image in this sample can clarify the processes of the appearance concerns of women. Moreover, to understand the effects of culture, cross-cultural comparisons can be made. Cultural differences in the meaning of weight and body image may exist. For example, Cameron and colleagues (2018) revealed that African American women have different attitudes

about health and a thin-ideal image. Moreover, although women's studies are more predominant in the literature, the experiences of men need focus. Because in recent years, media endorsed muscular ideals for males (Sohn, 2009). As a result they also experience body image issues related to their weight, body shape, and appearance (Truba, 2009). Lastly, all the participants mentioned a diet history as well as a future plan for new treatments after an intragastric BTA injection, showing that dealing with weight concerns is a process. Thus, longitudinal studies for an intragastric BTA injection may reveal new insights into the process.

The findings indicate the importance of the roles of social comparison processes and self-discrepancy in the decisions of changes of the body. Thus, the decision-making process of such operations is multidimensional, rather than just physical or biological. Thus, the interventions should also be multidimensional. For example, if a person feels a continuous need to make changes about their body, the psychological dimension should be considered by the medical doctors together with psychological health care professionals.

Another implication is, due to the heavy use of social media, social media users are generally exposed to different body ideals. The ideal body image that is created on social media might result in body dissatisfaction, eating disorders, or even depression. Therefore, media literacy and body awareness education could be planned to create awareness among social media users.

In conclusion, the current study aimed to examine the personal experiences of women who underwent an intragastric BTA injection. Using a qualitative method helped the understanding of the participants' own experiences in detail. The results showed the importance of women's body image in a socio-cultural context, their decision-making processes, the roles of social comparison, and self-discrepancy processes. The study is important in terms of trying to understand cognitive processes including self-evaluations and body image, their motivations behind having an intragastric BTA injection, and attitudes towards their bodies. Thus, the psychological processes of people having operations with the aim of losing weight should be considered as well as their biological processes.

Ethics Committee Approval: Approval was obtained from the Ethics Committee of Human Research in Social Sciences Atılım University. Decision no: 59394181-604.01.01-2398.

Peer-review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- E.E.; Data Acquisition- E.E.; Data Analysis/Interpretation- D.D.; Drafting Manuscript- E.E., D.D.; Critical Revision of Manuscript- E.E., D.D.; Final Approval and Accountability- E.E., D.D.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declare that this study has received no financial support.

Hakem Değerlendirmesi: Dış bağımsız.

Yazar Katkıları: XXXXXX.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemiştir.

Finansal Destek: Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir.

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