

Analysis of the Factors Affecting Men's Attitudes Toward Cosmetic Surgery: Body Image, Media Exposure, Social Network Use, Masculine Gender Role Stress and Religious Attitudes



Ozan Luay Abbas¹ · Ufuk Karadavut²

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Abstract

Background Cosmetic surgery is no longer just for females. More men are opting for cosmetic procedures, with marked increases seen in both minimally invasive and surgical options over the last decade. Compared to females, relatively little work has specifically focused on factors predicting males' attitudes toward cosmetic surgery. Therefore, we evaluated a number of variables that may predict some facet of men's attitudes toward cosmetic surgery according to evidence reported in the literature

Methods A total of 151 male patients who applied for a surgical or minimally invasive cosmetic surgery procedure (patient group) and 151 healthy male volunteers who do not desire any type of cosmetic procedure (control group) were asked to fill out questionnaires about measures of body image, media exposure (television and magazine), social network site use, masculine gender role stress and religious attitudes.

Results Our findings showed that lower ratings of body image satisfaction, increased time spent watching television, more frequent social network site use and higher degrees of masculine gender role stress were all significant predictors of attitudes toward cosmetic surgery among males.

Conclusion The current study confirmed the importance of body image dissatisfaction as a predictor of the choice to undergo cosmetic procedure. More importantly, a new

predictor of cosmetic procedure attitudes was identified, namely masculine gender role stress. Finally, we demonstrated the effects television exposure and social network site use in promoting acceptance of surgical and nonsurgical routes to appearance enhancement.

Level of Evidence V This journal requires that authors assign a level of evidence to each article. For a full description of these Evidence-Based Medicine ratings, please refer to the Table of Contents or the online Instructions to Authors www.springer.com/00266.

Keywords Men · Attitudes · Cosmetic surgery · Body image · Media · Masculine gender role stress · Religion

Introduction

Given the importance that physical attractiveness has in contemporary Western culture, it is not surprising that many people seek a means to change their physical characteristics to meet social attractiveness ideals [1]. As a consequence, the demand for cosmetic surgery has risen greatly over the last few years [2]. The American Society of Plastic Surgeons reported that over 15 million surgical and minimally invasive cosmetic procedures were performed in USA in 2015 [3]. Moreover, this statistic possibly underestimates the real number because it does not cover procedures performed by non-plastic surgeons.

Cosmetic surgery is no longer just for females. More men are opting for cosmetic procedures, with marked increases seen in both minimally invasive and surgical options over the last decade [4]. In the USA, over 1 million cosmetic procedures were performed on males in 2015, accounting for a tenth of the total [3]. That number may seem very low, but it represents a doubling of male

✉ Ozan Luay Abbas
ozanluay@hotmail.com; ozan.luay@ahievran.edu.tr

¹ Department of Plastic, Reconstructive and Aesthetic Surgery, Ahi Evran University, 40100 Kırşehir, Turkey

² Department of Biotechnology, Ahi Evran University, Kırşehir, Turkey

cosmetic surgery in the past 10 years. With this trend has come the realization that male patients' motivations and expectations are different from female patients [5, 6]. Therefore, it is becoming increasingly important to determine the factors that could motivate this group to undergo cosmetic surgery.

The relationship between cosmetic surgery and body image has been at the center of recent work [7–12]. Among these studies, dissatisfaction with body image was found to be the strongest predictor of patients' interest in obtaining cosmetic surgery. Body image is a multidimensional construct composed of perceptions, feelings and thoughts that individuals hold about their physical appearance [13]. The preferred body image is thought to be largely determined by a combination of environmental, social and cultural influences. For many men, this image is an unattainable ideal that negatively impacts physiological well-being [14]. Therefore, it is reasonable that people who are dissatisfied with their body image would report greater interest in cosmetic surgery.

In terms of factors affecting attitudes toward cosmetic surgery, the media has a significant influence in promoting acceptance of approaches for appearance enhancement [15]. The increasing exposure to cosmetic surgery in the media has mainstreamed society's awareness of cosmetic surgery [16]. Moreover, each day we are bombarded by images of the idealized body in television and magazines. The discrepancy between one's actual self and that which is perceived as being ideal can result in a feeling of dissatisfaction with the body. This dissatisfaction is correlated with the desire to engage in appearance-enhancing strategies, such as cosmetic surgery.

In addition to the traditional media, millions of people are now involved in what is called "social networking" [17]. This global revolution enables people to stay in touch with their friends, share experiences and photos and exchange personal content. Although not yet empirically documented, the strong focus on the visual content, along with the possibility to post and receive comments on personal pictures, may bring to light the self-perceived need for cosmetic surgery [18]. However, research in this field is still scarce. Therefore, the relationship between cosmetic surgery desire and social media use remains unclear.

In the current study, we suggest an additional factor that may be particularly relevant to male patients, namely, masculine gender role stress. At the core of the concept lies the assumption that males adapt to the social roles consistent with masculine ideologies imposed on them by the society [19]. These restricting roles can serve as gender-specific stressors by shaping men's preferences, emotional reactions, attitudes and behaviors. Besides appraising different events as stressful, men will also adopt different strategies to cope with these stressors. Considering that

appearing physically inadequate is a critical gender-specific stressor for males, we propose that stress associated with conforming to the masculine gender role could be associated with the desire to engage in appearance-enhancing strategies.

Most religions invariably affect attitudes profoundly, dictating rigid positions regarding crucial topics. Along with the lack of consensus on this topic, religiously conservative individuals tend to have stricter views about changing God's creation [20, 21]. However, studies evaluating religiosity as a possible factor affecting attitudes toward cosmetic procedures are sparse and the association between cosmetic surgery desire and religiosity remains unclear.

Compared to females, relatively little work has specifically focused on factors predicting males' attitudes toward cosmetic surgery. This is because of the empirical evidence suggesting that men experience dissatisfaction with their body image to a lesser extent than women. However, the few studies that exist in this area indicate that body image dissatisfaction in males is significantly higher than previously thought [9, 22]. Therefore, we evaluated a number of variables that may predict some facet of men's attitudes toward cosmetic surgery according to evidence reported in the literature

Methods

The protocol of the current study was approved by the Institutional Review Board and Ethics Committee. All procedures were conducted in accordance with the Helsinki declaration. All participants signed an informed consent for the procedure.

Participants

A total of 213 male patients who applied for surgical or minimally invasive cosmetic procedure between May of 2013 and April of 2016 were asked to participate in the study without any incentives provided. Patients were required to be at least 18 years old. Two hundred and nine patients fulfilled the inclusion criteria and 151 agreed to join the study. For the control group, we recruited 151 healthy male volunteers who do not desire to have any cosmetic procedure from the staff of the clinic and their families.

Questionnaires

All participants were informed by a research assistant about the study procedures. Thereafter, they were asked to

complete the following questionnaires anonymously before the cosmetic procedure.

1. *Demographics* Participants were asked to provide demographic information that included their age, weight, height, income status, highest educational qualification, marital status, religion and presence of psychiatric disorder.
2. *Body Image Scale* This 40-item scale was developed by Secord and Jourand in 1953 [23] and had been adapted into Turkish by Hovardaoğlu in 1989. Each item in this scale is related to a part of the body or a function. Participants rated items on a scale from 1 “I disagree strongly” to 5 “I agree strongly”. The total score varies between 40 and 200, with higher scores indicating positive body image. Reliability for the present sample was adequate (Cronbach’s alpha = 0.78).
3. *Media Exposure* Participants were evaluated for appearance-related media exposure.
 - a. *Television Exposure* Each participant was given a list of 10 popular television shows that were on the air at the time of the study. Respondents were asked to score the frequency with which they viewed the shows on a scale ranging from 1 “never” to 4 “each time the show is on”. Scores were then summed to produce a final score. Reliability of the scale for the present sample was adequate (Cronbach’s alpha = 0.80).
 - b. *Magazine Exposure* Each participant was given a list of 5 popular male-related magazines that were available at the time of the study. They were asked to score the frequency with which they read magazines on a scale ranging from 1 “never” to 4 “each time the magazine comes out”. Scores were then summed to produce a final score. A high score on the scale indicates higher magazine exposure. Scale’s reliability for the present sample was adequate (Cronbach’s alpha = 0.78).
4. *Social Media Use* The frequency of social media use was measured with the question: “How often do you visit Facebook/Instagram/Snapchat?”. Participants rated the frequency with which they visited the site on a scale from 1 “never” to 4 “always”. The reliability for the present sample was adequate (Cronbach’s alpha = 0.79).
5. *Masculine Gender Role Stress Scale* This 40-item scale evaluates men’s experience of stress associated with events related to the masculine gender role [24]. Participants rate each situation according to how stressful they feel it would be if it happened to them. Respondents rated each item on a scale from 0 “not stressful” to 5 “extremely stressful”. The total score

varies between 0 and 200, with higher scores indicating higher masculine gender role stress. The scale was translated into Turkish using the forward and backward translation procedure as recommended by Brislin [25]. Shortly, one independent translator performed the initial translation of the original English scale into Turkish, and another translator back translated the Turkish scale into English. Finally, three translators assisted the author with revisions of the Turkish scale. Reliability for the present sample was adequate (Cronbach’s alpha = 0.81).

6. *The Ok Religious Attitude Scale* This scale, consisting of 8 items, was developed by Ok in 2011 to measure religious attitudes in the Islamic tradition [26]. Each of the items was measured by a five-point Likert scale with “strongly disagree”, “somewhat disagree”, “neither agree or disagree”, “somewhat agree” and “strongly agree” statements as possible answers to the question “How much do you agree or disagree with the following statements?” Reliability for the present sample was adequate (Cronbach’s alpha = 0.77).

Statistics

Power analysis was conducted to calculate the optimal sample size. The homogeneity of group’s variances was checked by Levene’s test. Compliance with the normal distribution of continuous variables was checked with the Shapiro–Wilk test. According to the results, to compare two independent groups, either the Independent Samples T-test or the Mann–Whitney U test was used. Correlations between variables were evaluated using Spearman’s rho correlation coefficient. All analyses were performed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA). Results were considered statistically significant at $p < 0.05$.

Results

Demographics

A total of 151 male patients who fulfilled the inclusion criteria were enrolled in the study as the patient group. The ages of our patients ranged from 18 to 63 years, with an average of 29.6 years. The control group was composed of 151 male participants with an average age of 33.8 (range, 18–65). Participants’ demographic characteristics are presented in Table 1.

Of the 151 male cosmetic surgery patient, 59 (39%) applied for traditional cosmetic surgical procedures including rhinoplasty (37), gynecomastia correction (9),

Table 1 Demographic characteristics of the control group and the patient population

Demographic characteristic	Control <i>n</i> = 151	Patient <i>n</i> = 151
Age, mean ± SD	33.8 ± 14.1	29.6 ± 11.4
Body mass index, mean ± SD	25.4 ± 3.6	25.7 ± 3.7
Income status, <i>n</i> (%)		
Low	8 (5.3)	2 (1.3)
Middle	74 (49)	76 (50.4)
High	64 (42.3)	42 (27.8)
Very high	5 (3.4)	31 (20.5)
Educational status, <i>n</i> (%)		
Elementary	17 (11.3)	15 (9.9)
Middle	24 (15.9)	22 (14.6)
High	53 (35.1)	42 (27.8)
College/University	57 (37.7)	72 (47.7)
Social status, <i>n</i> (%)		
Married	79 (52.3)	82 (54.3)
Single	62 (41.1)	57 (37.8)
Divorced	10 (6.6)	12 (7.9)
Religion		
Islam	151 (100)	151 (100)
Presence of psychiatric disorder, <i>n</i> (%)		
No	130 (86.1)	128 (84.7)
Yes	21 (13.9)	23 (15.3)
Type of cosmetic procedure, <i>n</i> (%)		
Surgery	–	59 (39.1)
Minimally invasive	–	92 (60.9)

blepharoplasty (6), abdominoplasty (3), liposuction (3) and rhytidectomy (1). On the other hand, the remaining 92 (61%) patients applied for minimally invasive procedures including botulinum toxin injection (73), chemical peeling (13) and soft tissue filler application (6).

Body Image Dissatisfaction

We evaluated body image dissatisfaction in the patient group and compared the results with those obtained in the control group. As expected, the mean body image score for the patient group was poorer than the mean score for the control group (Fig. 1). The difference between the two groups was statistically significant ($p < 0.001$). In the patient group, subgroup analysis revealed that the mean body image scores for patients who applied for surgical procedures were significantly poorer than the scores for those who applied for minimally invasive procedures (Fig. 2) ($p < 0.01$). There was a significant inverse correlation between the body image scale scores and the scores gained in the masculine gender role stress scale (Spearman $\rho = -0.214$, $p < 0.01$). On the other hand, we found no

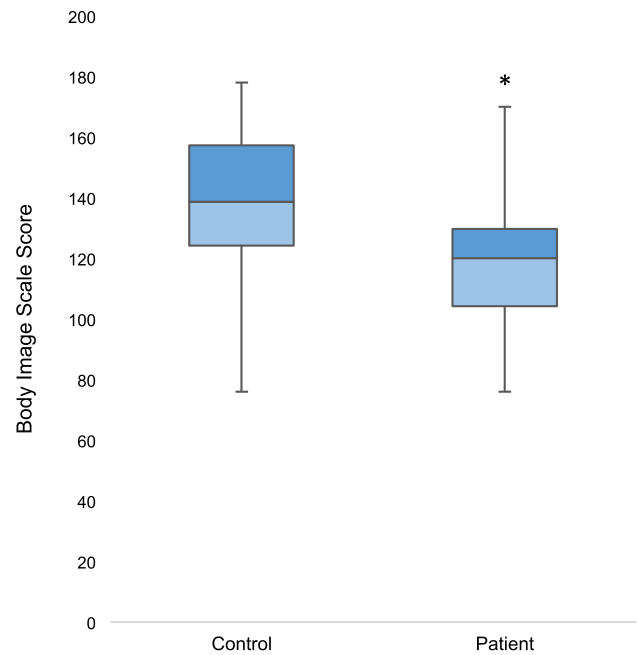


Fig. 1 Body image scale scores in the control and patient groups. The sample size was $n = 151$ for each group. Data are presented as mean ± SD. * $p < 0.001$ versus control

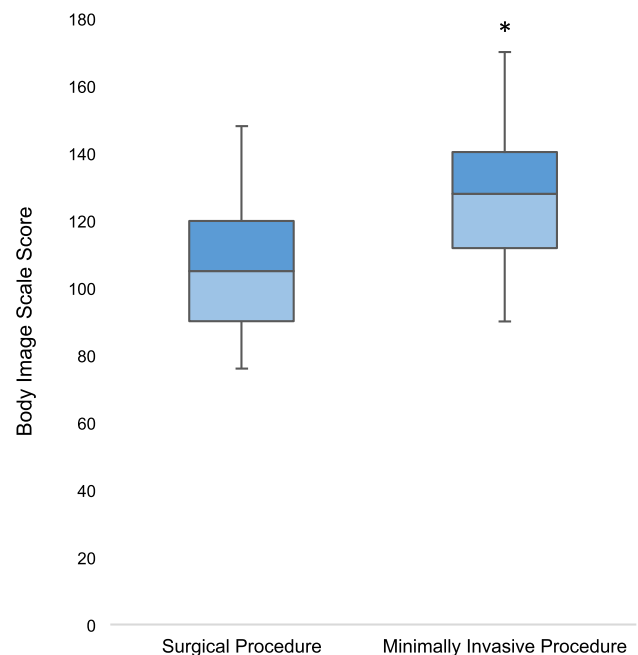


Fig. 2 Subgroup analysis of body image scale scores in the patient group with respect to type of cosmetic procedure. The sample size was $n = 59$ for the surgical procedure group and $n = 92$ for the minimally invasive procedure group. Data are presented as mean ± SD. * $p < 0.01$

significant relationships between the body image scores and television exposure, media exposure, social network site use and religious attitudes (Table 2).

Media Exposure

Participants of both groups reported their habitual exposure to popular television shows and magazines. We found that television exposure was significantly higher in the cosmetic patient group (Fig. 3) ($p < 0.01$). While 43% of the patient group reported that they are regularly watching television shows, this ratio was 21% in the control group. Contrary to television exposure, no significant difference was observed between the patient and control groups with respect to magazine exposure (Fig. 3) ($p = 0.247$).

Social Media Use

We measured participants' frequency of social media use and documented more frequent social media use in male cosmetic plastic surgery patients in comparison with community participants (Fig. 4) ($p < 0.001$). Among the patient group, 85% visited social network sites "regularly" to "always". In the control group, this ratio was 44%. In contrast, only 4% of the cosmetic surgery group and 27% of the control group never used any of the social network sites.

Masculine Gender Role Stress

Using the validated masculine gender role stress scale, we evaluated items thought to be relevant to men's experience of stress in upholding traditional masculine values. In comparison with community participants, cosmetic patients showed higher levels of masculine gender role stress (Fig. 5). The difference between the two groups was statistically significant ($p < 0.05$).

Religious Attitudes

We evaluated the religious attitudes in the patient group and compared the results with those obtained in the control group. No significant difference was observed between both groups with respect to religious attitudes scale scores (Fig. 6) ($p = 0.114$).

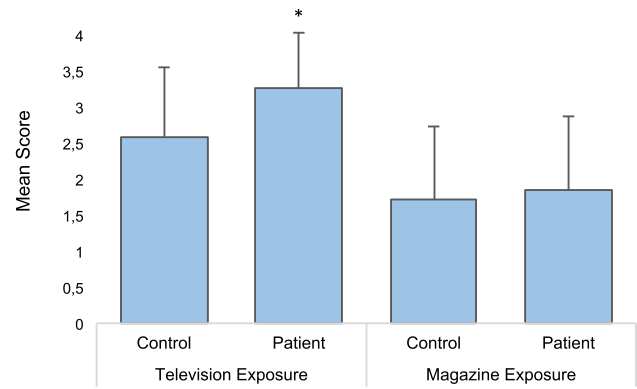


Fig. 3 Television and magazine exposure scores in the control and patient groups. The sample size was $n = 151$ for each group. Data are presented as mean \pm SD. * $p < 0.01$ versus control

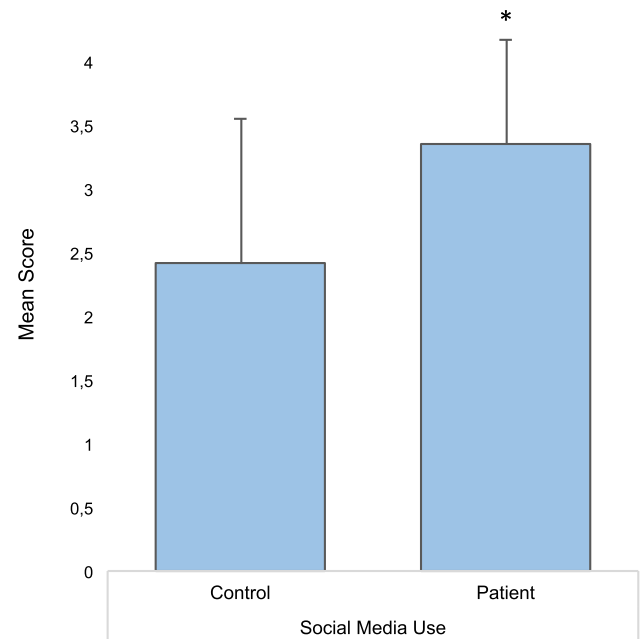


Fig. 4 Social network site use scores in the control and patient groups. The sample size was $n = 151$ for each group. Data are presented as mean \pm SD. * $p < 0.001$ versus control

Table 2 Correlations between major variables (Spearman r)

	BI	TE	ME	SNSU	MGRS
Body image (BI)	–	–	–	–	–
Television exposure (TE)	–0.086	–	–	–	–
Magazine exposure (ME)	0.158	–0.038	–	–	–
Social network site use (SNSU)	0.042	0.118	–0.051	–	–
Masculine gender role stress (MGRS)	–0.214*	0.011	0.097	0.157	–
Religious attitude (RA)	–0.021	0.46	–0.007	0.530	0.390

* $p < 0.01$

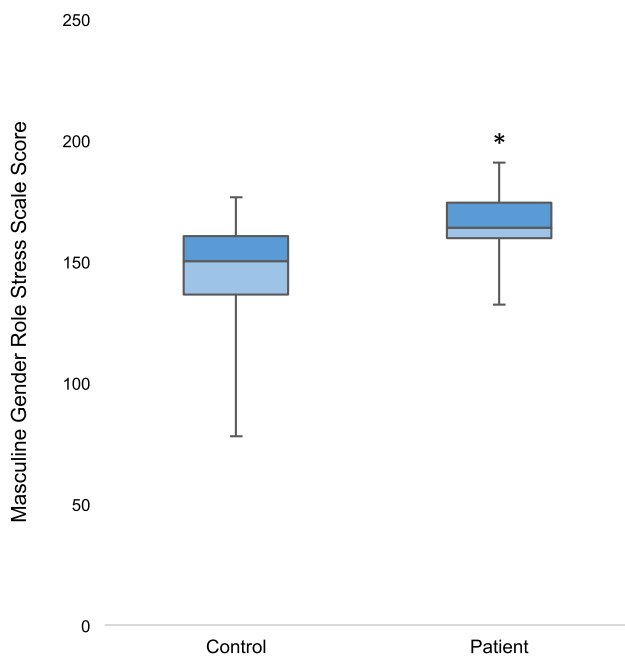


Fig. 5 Masculine gender role stress scale scores in the control and patient groups. The sample size was $n = 151$ for each group. Data are presented as mean \pm SD. $*p < 0.05$ versus control

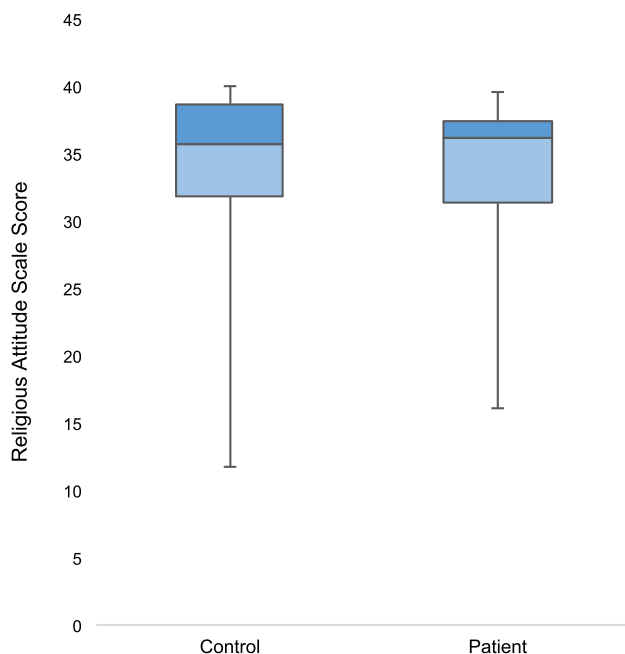


Fig. 6 Religious attitudes scale scores in the control and patient groups. The sample size was $n = 151$ for each group. Data are presented as mean \pm SD

Discussion

The main contribution of our study was its evaluation of factors affecting the likelihood of having cosmetic surgery in males, a growing consumer group. Our findings showed

that lower ratings of body image satisfaction, increased time spent watching television, more frequent social media use and higher degrees of masculine gender role stress were all significant predictors of the willingness to undergo cosmetic surgery. However, some of our conclusions are worthy of further comment.

Traditionally, most studies investigating dissatisfaction with body image have focused on females. However, over the last years, research has paid more attention to body image in males [27]. The few studies that exist in this area reported that body image dissatisfaction in this population is significantly higher than was previously thought [28]. *Psychology Today's* Body Image Survey documented that 43% of men were dissatisfied with their bodies in some manner [29]. Moreover, this statistic possibly underestimates the real numbers because men might feel themselves forced to remain silent about their dissatisfaction to avoid appearing “girlie” to their peers [30]. This dissatisfaction is correlated with the desire to engage in appearance-enhancing strategies, such as cosmetic surgery [31]. Unsurprisingly, results of the current study showed higher degrees of body image dissatisfaction in male cosmetic plastic surgery patients compared to community participants. This finding supports previous studies conducted in different populations, in which dissatisfaction with the body was reported as a main motivation for surgical enhancement [32, 33]. Of note, body image scores were obtained using a questionnaire that assesses dissatisfaction with specific parts and functions of the body. This is important because preoperative patients generally report feature-specific, rather than global body dissatisfaction.

In the last few years, the male body has become increasingly visible in the media due to several reasons including changing gender roles, the style press, feminism and consumerism [34–36]. The currently idealized male form is defined by well-developed muscularity in the upper torso, a flat abdomen, and a slim waist [37]. Moreover, these physical standards of the ideal body are complicated with the social and physiological dynamics of masculinity [38]. Being bombarded by these unattainable idealized images may lead males to focus more attention than ever before on their physical characteristics [14]. Additionally, according to the self-discrepancy theory [39], the discrepancy between the media-portrayed idealized images and the perceived actual physique may promote feelings of body dissatisfaction. The degree to which individuals experience dissatisfaction has been shown to correlate with the desire to engage in appearance changing strategies, such as cosmetic surgery [33].

According to our results, television exposure was significantly higher in the cosmetic patient group. However, the non-experimental nature of the study prevented the drawing of firm causal conclusions. The quite complex

relationship between the two variables necessitates finding a mediator that could explain how exposure to media can motivate males to undergo cosmetic procedures. The process of normalization may account for the possible influences of television exposure. According to the theory of cultivation [40], continuous television exposure may shape people's perception of social reality. Therefore, exposure to cosmetic surgery on television may over time modify attitudes. A recent study has hypothesized that television exposure could influence attitudes in both indirect and direct fashions [41]. In terms of the direct effect, regular exposure to cosmetic surgery on television has generated a public awareness for cosmetic procedures that propagates ideal attractiveness standards that are not achievable by natural means. On the other hand, the indirect effect of television exposure is proposed to occur through body image dissatisfaction. While the exact underlying mediators remains to be determined in further work, a recent study documented that television exposure was not related to any mediator and had only direct effects on cosmetic surgery attitudes [41]. In line with this finding, we found no correlation between television exposure and body image scores.

Hatoum et. al. [42] evaluated men's media viewing habits and found that reading male-directed magazines was associated with the degree of how much they wanted to change their physical appearance. Contrary to this study, we found no significant difference between cosmetic patients and community participants with respect to magazine exposure. We think that this situation is associated with the low rate of habitual exposure to magazines in our groups.

Although not empirically documented, social network sites may exert appearance pressure on their users. This is because evaluating one's own and others' physical appearance is a critical component of social media use. People who present themselves through a picture-oriented profile are directly subjected to the objectifying comments of other users [43]. One theoretical framework for the investigation of the relationship between social media use and attitudes toward cosmetic surgery is objectification theory [44]. According to this theory, individuals who are valued primarily for their physical appearance start to view themselves in an objectifying way. This theory posits that the appearance pressure, exerted by social media use, will lead people to engage in appearance changing strategies. Therefore, more frequent social media use may predict increases in appearance pressure, which in turn is associated with an augmented desire to undergo cosmetic procedures. In line with this notion, we have documented more frequent social media use in male cosmetic plastic surgery patients in comparison with community participants.

During the late twentieth century, women have made big advances in every field as many roles considered to be men-only have been taken by women. According to the "threatened masculinity" hypothesis [45], these societal changes led to an identity crisis in some men, who would then consider their bodies as the sole way to assert their masculinity [46]. In support of this hypothesis, men's muscularity dissatisfaction was found to be significantly higher in gender-equal societies than where the traditional gender hierarchy remains in place [28]. In line with this notion, we found that male cosmetic plastic surgery patients reported higher degrees of masculine gender role stress. This suggests that stress associated with conforming to the masculine gender role is associated with the desire to engage in appearance-enhancing strategies. However, it is difficult to determine the way in which gender role stress might influence the attitudes toward cosmetic surgery in men. The mediating role of body image dissatisfaction has been previously proposed [47]. Moreover, it has been suggested that the dual-pathway model of disordered eating could be extrapolated to male body image and muscularity [47]. According to this model [48], social pressure to conform to unrealistic ideals of thinness results in body dissatisfaction, which in turn encourages unhealthy weight loss behaviors.

All of our participants were Muslims. In Islam, the rule is that Muslims should be satisfied with the physical appearance God has created them [20]. Alongside with modernization, the Islamic world has recently been facing the dilemma of changing God's creation. While some Muslim Scholars have stated against appearance-changing procedures, many others have approved cosmetic surgeries if the procedure will provide a better quality of life. Moreover, Muslims cannot be considered a homogenous group because they have different customs and cultures, as well as different schools of jurisprudence. In our study, no significant difference was observed between male cosmetic plastic surgery patients and community participants with respect to religious attitudes scores. We think that this situation is related to the fact that people in the Turkish society are still reluctant to provide information about their religious attitudes.

Some limitations of the current study warrant mention. First, our participants were from a relatively narrow socioeconomic group in a specific geographical location. Thus, the extent to which the results are generalizable remains a question. It has been shown that cross-cultural variations in attractiveness ideals may provoke varying interest in cosmetic surgery. Second, the non-experimental nature of the study prevented the drawing of firm causal conclusions. Finally, controls were not asked if they would consider cosmetic surgery if it was offered free of charge.

Conclusion

In conclusion, we specifically examined determinants of attitudes toward cosmetic procedures in men, thus providing an important platform for future research. Our results confirmed the importance of body image dissatisfaction as a predictor of the choice to undergo cosmetic procedures. More importantly, a new predictor of cosmetic procedure attitudes was identified, namely masculine gender role stress. Finally, we demonstrated the effects of television exposure and social media use in promoting acceptance of surgical and nonsurgical routes to appearance enhancement.

Author Contributions All authors have made substantial contributions to the conception and design of the study, acquisition of data, analysis and interpretation of data, drafting the article and revising it critically for important intellectual content and final approval of the version to be submitted. Ozan Luay Abbas: Corresponding author, Ufuk Karadavut: Biostatistical analysis.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was given by all participants, who were included in this study.

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