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Comparison of Body Dissatisfaction and Cosmetic Rhinoplasty with levels of Veil Practicing in Islamic Women

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Abstract

Objective—The relationship between Islamic veiling, body dissatisfaction and desire for cosmetic rhinoplasty (CR) has not been studied. We therefore compared body dissatisfaction (BD), depression, self-esteem, and prevalence and desire to have CR in 1771 Iranian females.

Method—A battery of questionnaires was administered and participants were categorized into three groups of Islamic veil practicing: voluntarily and ideologically (IVP), non-complete (NCIVP) and Inconsiderate (IIVP).

Results—Despite a similar BMI, the IVP group scored significantly lower on BD, prevalence of dieting and exercising in order to be sexually appealing, and depression, higher on self-esteem, and had a lower desire for a CR than the two other groups. Prevalence of CR was significantly higher in the IIVP group than the other groups.

Conclusions—Women who practiced more strict Islamic veiling techniques had increased body satisfaction and self esteem, and decreased depression scores and desire for CR. Consistent with other studies, our findings show that observance of a strict religious practice has a protective effect on psychological health.

Keywords

body image; Islamic veil practicing; cosmetic surgery; depression; self-esteem

Body dissatisfaction (BD) is associated with dieting 1–4, low self-esteem 5–11, depression 5–7, 12–14, and preoccupation with appearance 15. Recent studies suggest that in contrast to the wider society, religious individuals may place less emphasis on the physical body and use their relationship with a higher power and/or the ability to meet moral/religious obligations to evaluate self-worth 16. This may be especially true for women who practice religions that prescribe guidelines related to modest dress or covering the body. Haddad, Smith, and Moore (2006) 17 indicated that Muslim women who choose to dress “Islamically” commonly feel free of Western views of women as sex objects. In one recent study, Orthodox Jewish women, who also dress modestly, scored significantly higher on measures of BD, eating pathology, and laxative and diuretic use, and were more likely to have a fear of becoming fat and four times more likely to be influenced by their shape and weight than secular Jewish women, despite similar BMIs 18.

BD has been commonly associated with cosmetic surgery 15. The demand for cosmetic procedures has increased dramatically over the past few years 19–21, in part fueled by the increased prevalence of media coverage, easy accessibility to the internet, and overall growing social acceptance of aesthetic surgery 20. CR refers to surgery which reshapes the nose and is done mainly for facial beauty 19. It is said informally that the Islamic Republic of Iran (IRI), has the highest rate of CR in the world, although precise figures are hard to establish. The growing popularity of CR in IRI can be attributed to several independent factors. Among these are better, safer surgical techniques and the extremely inexpensive cost for CR. In Iranian society, beauty and the ability to attract people are prized in the female. Thus, a majority of the females in the country who chose CR, indeed, don't have a nose deformation; rather they want to look beautiful. Because overall body image dissatisfaction is a primary motivator for cosmetic surgery 22 and breast surgery 13;23, we predict that those who desire CR will have greater BD than those who do not desire CR.

The introduction of satellite television might also be a contributing factor to higher rates of CR in IRI. Exposure to media depictions of the “thin ideal” can have harmful effects for women 24 and has been related to weight concerns 2;25 and BD 26;27. Veil practicing, which is partly influenced by media exposure, is clearly a behavior that has an impact on how one's appearance is perceived by others. Islamic veil practicing (IVP) is a symbolic marker of observing social and religious norms. In modern IRI, wearing of the Islamic veil, Chador, is primarily the identity of resistance to western values, and access to Satellite or Western TV is banned. In IRI, women may be classified as those who are consciously and voluntarily IVP, non-complete IVP (NCIVP), and inconsiderate to IVP (IIVP). In all three types of veiling, the face can be uncovered and viewable in public.

Only 3 studies to date have investigated the eating disorders and body image in Iranian women 28–30. Abdollahi & Mann (2001) 28 compared eating disorder symptoms between Iranian women living in Iran and Iranian women living in America and found that neither exposure to western media nor acculturation to western norms related to eating disorder symptoms or body dissatisfaction. However, none investigated the relationship between body image and eating disorder variables and levels of veiling practice. Thus, literature is lacking information on the relationship between level of veiling practice and motivation for cosmetic surgery, depression, self-esteem and BD. We hypothesized that IVP women would score lower on BD, depression and self-esteem and would have less of a desire for CR.

Method

Participants

This study was conducted in Tehran, the major cosmopolitan center and capital of Iran. The city was strongly influenced by Western values up until the 1979 revolution, after which time, traditional Islamic values, have been reintroduced. In 2006, in a cross-sectional study, a total of 2200 prepaid envelopes containing a battery of questionnaires were distributed to female members in one of 35 randomly selected aerobic health clubs in Tehran, IRI, on the basis of convenient sampling by the research manager. These clubs were randomly selected from 832 registered aerobic health clubs in Tehran based on a random number table. The response rate was 89.3%. The study protocol conformed to the ethical guidelines of the Declaration of Helsinki. Informed consent was obtained after the nature of the procedures had been fully explained and participants were assured anonymity.

Measures

Eating Disorders Inventory-2 (EDI-2) 31—Persian translated version: The EDI-2 is a 64 item, self-report measure that was used as a screening instrument to detect the high-risk

population based on previous results in an Iranian population. Although the EDI is not a diagnostic instrument, it has been used to estimate the proportion of the population with traits that are closer to the clinical population than the normal population 32. Reliability (Cronbach alpha >0.95) and construct validity (>0.95) of Persian EDI-2 had been determined in our previous study (test-retest reliability 0.87 for total score; Rastmanesh et al., unpublished data). In the current study, the cutoff point was set at a score > 40, indicating risk for developing an eating disorder.

Body Shape Questionnaire (BSQ) 33—BD was assessed with the Persian translation of the BSQ. The total score was the sum of all items, where higher scores indicate more BD. It has concurrent validity with the Persian translation of EDI-2. The reliability (Cronbach alpha >0.94) and construct validity (>0.94) of Persian BSQ had been determined in our previous study with 751 non-clinical Iranian college females. The test-retest reliability was satisfactory (Pearson $r = 0.88$ to 0.94 for individual items and 0.85 for total score).

A “shame” index was defined by summing three items from the BSQ: item #7 (“Have you felt so bad about your shape that you have cried”), item #20 (“Have you felt ashamed of your body”), and item #29 (“Has seeing your reflection made you feel bad about yourself?”) 18. Respondents were dummy-coded as having “fear of fat” if they scored a 4 or higher on both item # 13 (“Have you had a definite fear that you might gain weight or become fat?”) and item #14 (Have you ever felt fat?). Participants were dummy-coded as overvaluing the importance of shape and weight if they scored a 4 or higher on both item #30 (“Has your shape influenced how you think about yourself as a person?”) and item #31 (“Has your weight influenced how you think about yourself as a person?”) 18.

Beck Depression Inventory-II (BDI-II Persian version) 34—The BDI-II is a widely used, 21-item self-report inventory designed to assess severity of depressive symptoms. Higher scores indicate more severe depressive symptomatology.

Rosenberg Self-Esteem Scale (RSES; Persian version) 35—The RSES measures global self-esteem and personal worthlessness. Higher scores indicate higher self-esteem 36.

Importance of slimness—Participants were dummy-coded as overvaluing the importance of public’s view to slimness if they answered “agree” or “strongly agree” to two questions “do you diet to be in the focus of public’s attention?” and “do you exercise to be in the focus of public’s attention?”

Veil Practicing—Women in IRI are by law required to practice Islamic veiling. However, there is also normative observance of this law which varies based on location (i.e. living in the metropolitan center versus the outskirts) and levels of education, etc. Participants were self-reportedly categorized into three groups: 1) *Hijab*: voluntarily and ideologically Islamic veil practicing (IVP), 2) *Rupush*: non-complete Islamic veil practicing (NCIVP) and; 3) *Tight Rupush*: Inconsiderate to Islamic veil practicing (IIVP) female based on definitions provided to them:

- IVP was defined as wearing a “Chador” or “Islamic Hijab” which is referred to a full-length semi-circle of fabric open down the front. It is thrown over the head and held shut in front. A chador has no hand openings or closures but is held shut by the hands or teeth or by wrapping the ends around the waist and may be made of various materials in various textures. Chador covers the body and hair but not necessarily the face and usually is worn in IRI and among Lebanese Shiite women.
- NCIVP was defined as wearing a “Rupush”, a long-sleeved, non-form fitting coat that resembles a raincoat and a headscarf covering the hair, ears and neck.

IIVP was defined as wearing a short scarf, with hairs uncovered, and wearing a short and “tight” Rupush.

Rhinoplasty—Participants were asked to answer if they ever wished to have had/a cost-free CR operation. Answers included “Yes” or “No”. We used the term “cost free” because the aim of our study was to determine the prevalence of true desire for CR, without undue influence of considering practicalities, such as cost.

Media Exposure—Participants were asked to report, on Likert scales from 1 (not at all) to 7 (very much), if they have access to Western TV.

Demographic Variables

- Socioeconomic status was measured by self-reported household income and education level. Membership to an aerobic club in Tehran usually entails a high or mid-high socioeconomic status and education.
- Ethnicity was defined by the participant as Azeri, Fars, Arab, Kurd, Guilaki, and Turkmen.
- BMI was calculated from self-reported height and weight.

Statistical Analysis

Data were analyzed with SPSS version 11.5 (SPSS Inc, Chicago). The normality of all variables was assessed by examining their normal plots and using Kolmogorov-Smirnov test. No significant deviation from normality was observed among the data. Analysis of variance (ANOVA), analysis of covariance (ANCOVA), and χ^2 were performed to compare the three groups. Stepwise linear regression was applied to determine significant predictors of BD. Post hoc comparisons were made using the Tukey’s HSD test. The correlations between variables were examined by Pearson correlation. All tests were two-tailed and P-values less than 0.05 were taken as significant.

Results

Demographics

One hundred and ninety four participants were considered to be at risk for having an eating disorder based on the EDI-2 (score > 40) and were excluded from the analysis. Therefore, data from the remaining 1771 non-clinical females who were engaged in a regular exercise program (at least 2x/wk), were analyzed. The characteristics of the three groups of women are presented in Table 1. There were no significant differences among the three groups on any demographic variable including age, BMI, education level, ethnicity, and socioeconomic status. Subject’s veiling practices were evenly distributed across these 35 health clubs ($\chi^2 = 0.54$; $p = 0.93$) and participants in the three veiling groups reported comparable access to western TV ($M = 4.0 \pm 0.37$; $\chi^2 = 0.56$; $p = 0.97$). We conducted the analysis both with and without site as a covariate and the results were the same, thus we will present the main results without considering site as a covariate.

Psychopathology

ANOVA showed significant differences between all 3 groups, with females in the IVP group scoring significantly lower on measures of BD ($F = 353.54$, $p < 0.0001$) and depression ($F = 54.30$, $p < 0.0001$), and significantly higher on self-esteem ($F = 54.97$, $p < 0.0001$), compared to females in NCIVP, who also scored significantly lower and higher, on each scale respectively, compared to the IIVP (Table 2).

Prevalence of CR

Prevalence of CR was significantly higher in the IIVP group (19.6%) than NCIVP (12.9%) and IVP (13.6%) groups ($p < 0.01$), but the difference between the IVP and NCIVP groups was not significant. Those who had a history of CR had a significantly higher BMI, more body dissatisfaction and depression, and lower self esteem scores than those without a history of CR both before and after controlling for BMI (all p 's < 0.001). This was also true within all 3 subgroups (IVP, NCIVP and IIVP): scores were higher on each measure in those with a history of CR compared to those who had not had CR (all p 's < 0.001). Of the females who had a history of CR, those in the IIVP group had significantly higher BD scores compared to those in the IVP and NCIVP groups ($F=54.90$, $p = 0.001$), but there were no differences in BMI, depression or self-esteem between any of the groups both before and after controlling for BMI (all p 's > 0.05).

Desire for CR

As seen in Table 3, significantly more females in the IIVP group (53%) reported "YES" to the question "do you wish to have a cost-free opportunity for CR," compared to the IVP (7%) and NCIVP (2%) groups ($p < 0.05$), with no differences between the IVP and NCIVP groups.

BMI was significantly higher in the group who reported "YES" compared to those who reported "NO" to that same question. After adjusting for BMI, those in the "YES" group scored significantly higher on BD and depression, and lower on self-esteem compared to those in the "NO" group.

Dieting, Shame, and Fear of Becoming Fat

The prevalence of dieting to be sexually appealing was common among all 3 groups: IVP (30%), NCIVP (31%) and IIVP (40.1%) and was significantly higher in IIVP group than in IVP group ($p < 0.05$), with no differences between the IVP and NCIVP groups. Significantly more women in the IIVP group (53%) reported that they mainly exercised to be sexually appealing to their spouses, compared to IVP (7%) and NCIVP (2%; $p < 0.001$).

Females in the IIVP group were more likely to have a fear of becoming fat and overvalue both the importance of shape and weight and the public's view about slimness compared to the two other groups ($p < 0.001$). Females in the IVP group were twice more likely to have a fear of becoming fat, four times less likely to overvalue the importance of public's view, and about six times more likely to have "shame" than NCIVP group ($p < 0.01$). Females in the IVP group were about six times less likely to have a fear of becoming fat, ten times less likely to overvalue the importance of public's view, five times less likely to overvalue the importance of shape and weight, and about six times less likely to have "shame" than IIVP group ($p < 0.001$).

We then investigated predictors of BD by conducting a stepwise multiple linear regression (MLR) analysis. Body dissatisfaction was entered as constant and BDI-2, BMI, RSES and level of veil practicing were entered as predictors. BDI-2, BMI and level of veil practicing, but not RSES, predicted 58.5 % of the variance in BD scores (standardized beta = 0.360, 0.345 and 0.424, respectively, $p < 0.001$).

Discussion

In the present study females in the incomplete veiling group (IIVP) scored significantly higher on measures of BD and depression, significantly lower on a measure of self-esteem, and had more reports of dieting and exercising to be sexually appealing. This is consistent

with our hypothesis, because it has been suggested that breaking the social norm can lead to depression 37 and IIVP females are, by some, considered to be acting against the social norms. These findings might also be explained by the protective effect of observing social dressing norms and religion that are associated with Islamic veiling practicing, in accordance with previous studies 7:8:18. For example, Gluck and Geliebter 18 showed that membership in a strict, insulated religious group such as Orthodox Judaism may protect women from developing BD and eating pathology. Females in IIVP group were also more likely to have fear of becoming fat, to overvalue the importance of shape and weight and overvalue the importance of public's view on slimness, consistent with findings observed between Orthodox and Secular Jewish women 18.

The use of satellite and western television is formally banned in IRI; however, females in the present study reported access to Western TV. Exposure to thin-ideal advertisements is related to increased BD, negative mood, and levels of depression, as well as lower self-esteem 12. Females in the IIVP group were more likely to overvalue the importance of public's view than the two other groups and were more likely than the other groups to desire CR. This is consistent with a recent study showing that three years after television was introduced in Fiji, societal values and body image began to reflect the western values to which they had been exposed 38. The same effect was found in IRI, where Iranian women had higher body satisfaction than their American counterparts, before the introduction of satellite TV 29. In a study conducted after the introduction of satellite TV, the prevalence of eating disorders among female adolescents in Tehran was comparable to prevalence rates reported by studies in Western societies, and somewhat higher than what has been reported in other non-Western societies 30. Similarly, in the present study, even though women in the IIVP likely had less exposure than individuals living in completely Westernized societies, they had, interestingly, a higher level of BD. In a religious context with unique sociocultural properties, it is possible that even a lower level of exposure to Western influences may have equal or more harmful effects of body image and body shape in females.

In our study, IVP females reported having less shame about their bodies compared to the IIVP group, consistent with a recent study which found that Orthodox Jewish women felt significantly less shame than their less religious counterparts 18. Another study showed that in a predominately Caucasian treatment seeking population, shame was significantly associated with the attitudinal features of eating disorders 39, similar to the increased BD, depression and lower self-esteem observed in the IIVP group, who reported the most shame. In addition, the NCIIIP and IVP females were less likely to report a fear of becoming fat, overvaluing the importance of shape and weight, and overvaluing the importance of public's view compared to the IIVP females, which may stem from an Islamic value system that places due emphasis on dignity and internal beauty, rather than shame about how one may look. Interestingly however, the IVP group reported having *more* shame compared to the NCIIIP group. One possible explanation is that hiding body features through the use of veil may lead to an increased self consciousness about one's own body.

Interestingly, our findings are inconsistent with those of Panteha et al 40, who failed to observe a relationship between eating disorder symptomatology, body image and the influence of western culture or acculturation. It is possible though; that women in that study who practiced more strict veiling techniques may have had decreased psychopathology and decreased levels of media exposure and acculturation, but this was not assessed. Future studies should include multiple measures of both acculturation and media exposure, in addition to questions about veil practicing so that outcomes can be analyzed based on this practice.

This study has several limitations. First, we included only the use of self reported questionnaires. Given that western television is banned in Iran, participant disclosure of exposure to western television may not be fully accurate. We also did not separately assess levels of religious practice and it is indeed possible that veiling practice would not be correlated with levels of religiosity in our study population. Also, the current data are taken from a sample of women with a higher socioeconomic status than is representative of the general female population in IRI. Additionally, as we were interested primarily in examining a non-pathological sample, we did not include a substantial proportion of respondents who were likely to be at a high risk for having an eating disorder, again, making our findings somewhat less generalizable. Nevertheless, we found for the first time, that Islamic veil practicing was associated with increased body satisfaction and decreased desire for nose surgery. These findings support the previously identified protective model of a positive relationship between body dissatisfaction and religious ideology.

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Table 1

Characteristics of subjects*

	IVP[†]	NCIVP[‡]	IIVP^{††}
No (%)	539 (30.4)	769 (43.4)	463 (26.2)
Marital status			
Single	262 (48.6)	375 (48.7)	222 (47.9)
Married	242 (44.9)	362 (47.0)	209 (45.1)
Divorced	6 (1.1)	7 (1.1)	5 (1.2)
Unknown	29 (5.4)	25 (3.2)	27 (5.8)
Age ^{††}	29.0 ± 8.8	28.80 ± 8.80	28.50 ± 8.80
Body Mass Index	23.33 ± 3.82	23.25 ± 3.60	23.65 ± 4.15
Ethnicity			
Azeri	201 (37.3)	295 (38.3)	170 (36.7)
Fars	258 (47.8)	369 (48.0)	220 (47.5)
Arab	15 (2.8)	21 (2.7)	13 (2.8)
Kurd	40 (7.4)	43 (5.5)	34 (7.3)
Guilaki	15 (2.8)	24 (3.1)	9 (2.1)
Turkmen	10 (1.9)	17 (2.4)	17 (3.6)
Socioeconomic status			
High	243 (45)	369 (48)	215 (46.5)
Medium-high	296 (55)	400 (52)	248 (53.5)

* n = 1764 females

[†] Islamic veil practicing,[‡] Non-complete Islamic veil practicing,^{††} Inconsiderate to Islamic veil practicing,^{†††} Data are Mean ± SD.

There were no significant differences between the groups on any variable.

Table 2

The IVP group had less psychopathology compared to the NCIVP and IIVP groups^{*}

	IVP	NCIVP	IIVP	Total
Body Dissatisfaction	65.3 ± 27.1	79.2 ± 17.4	107.5 ± 33.4	82.40 ± 30.1
Self-Esteem	22.6 ± 4.0	20.8 ± 7.3	18.8 ± 4.5	20.85 ± 5.9
Depression	8.6 ± 2.0	9.6 ± 3.6	10.6±2.2	10.4 ± 3.0

IVP = Islamic veil practicing

NCIVP = Non-complete Islamic veil practicing

IIVP =Inconsiderate to Islamic veil practicing

^{*} All comparisons between the 3 groups were significantly different (all p's ≤ 0.001).

Table 3

Comparison of psychological variables with regard to the question “have you ever wished for a cost-free opportunity for cosmetic rhinoplasty?”

	IVP	NCIVP	IIVP
“YES”*			
No (%)	37 (7)	16 (2)	245 (53)
Body mass index	29.30 ± 3.35 ^a	29.25 ± 6.55 ^a	25.60 ± 4.20 ^b
Body Dissatisfaction	132.1 ± 15.1	129.9 ± 14.4	132.3 ± 15.8
Self-Esteem	17.2 ± 1.5	17.0 ± 1.4	17.2 ± 1.6
Depression	12.4 ± 2.2	12.5 ± 0.7	12.2 ± 0.8
“NO”*			
No (%)	500 (93)	751 (98)	218 (47)
Body mass index	22.90 ± 3.50 ^a	23.10 ± 6.55 ^{a,b}	21.50 ± 2.85 ^c
Body Dissatisfaction	60.3 ± 2.4 ^a	78.2 ± 15.8 ^b	79.7 ± 24.9 ^{b,c}
Self-Esteem	23.0 ± 3.9 ^a	20.9 ± 7.3 ^b	20.6 ± 5.8 ^{b,c}
Depression	9.2 ± 2.0 ^a	10.3 ± 3.7 ^b	10.4 ± 2.9 ^{b,c}

IVP = Islamic veil practicing

NCIVP = Non-complete Islamic veil practicing

IIVP = Inconsiderate to Islamic veil practicing

* All respective comparisons between **YES** and **NO** groups were significantly different (all p's ≤ 0.001).

^{a, b, c} Superscripts (read horizontally) with the same letter indicate non-significant differences. Values with different superscripts represent significant differences, (all p's ≤ 0.001).