Internalization of sociocultural standards of beauty and disordered eating behaviours: the role of body surveillance, shame and social anxiety

Interiorizzazione degli standard socioculturali di bellezza e comportamenti alimentari problematici: il ruolo di sorveglianza del corpo, vergogna e ansia sociale

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Summary

Objectives
Objectification theory is a suitable framework for understanding how media pressure is translated into behavioural and emotional risk factors, potentially promoting eating and body-related disturbances among women. A large body of research conducted with American and Australian female samples support the tenets of this theory. The present study extending previous work by investigating the internalization of sociocultural standards of beauty promoted by media as an antecedent of the body objectification process and by examining the theory's applicability in a sample of Italian women.

Methods
A cross-sectional design was used. A sample of 408 young Italian women completed questionnaire measures of internalization of media ideals, disordered eating behaviours, as well as the proposed mediating variables of body surveillance, body shame and social anxiety. Path analysis procedures within the Mplus program were used to determine whether the hypothesized theoretical model provided a good fit to the data. Bias-corrected bootstrapping method was used to estimate the significance of the indirect effects.

Results
The pattern of correlations is consistent with the objectification theory (Table I). Path analysis indicated that internalization of media ideals leads to body surveillance, which in turn leads to body shame and social anxiety, which both strongly predict women's disordered eating behaviours (Fig. 1). Body surveillance mediated the links of internalization to body shame and social anxiety. Social anxiety was an additional mediator of the link between body surveillance and disordered eating behaviours, whereas body shame mediated the links of internalization and body surveillance to disordered eating behaviours (Table II).

Conclusions
The objectification theory provides a useful framework to identify predictors of disordered eating behaviours in women. Practical implications are discussed.

Key words
Shame • Body surveillance • Social anxiety • Internalization of sociocultural standards of beauty • Disordered eating behaviours

Shame, described as a negative evaluation of the self as a whole, is a multifaceted self-conscious emotion, related to a number of psychiatric disorders [1]. However, in disordered eating investigations [2], as well as in clinical settings, "it is preferable to concentrate on those particular aspects of the self that are actually the focus of shame", such as shame about body appearance [1]. Indeed, a large body of research conducted in clinical and non-clinical samples has shown that body shame is a stronger predictor of women's eating disturbances than general shame [2]. There is also strong evidence that women who endorse the norms for body shape portrayed in the media and/or invested in appearance for self-evaluation are more vulnerable to experience body shame [3-5], which is related to eating disorders [1-3 5]. Interestingly, investment on appearance [5] is a cornerstone of the objectification theory [6]. According to this theory, the exposure to media-idealized female bodies influence women to adopt a view of themselves as objects whose value is based on physical appearance [6]. This psychological process is known as "self-objectification" [5] and is described as a form of self-consciousness characterized by body surveillance (i.e. monitoring of the body in terms of how it looks) [5 7], which leads to increased body shame and social anxiety, which both

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predict behavioural eating disorder symptomatology [6]. Regarding social anxiety, it has been demonstrated that women with eating disorders tend to have higher scores on measures of social anxiety compared to those without eating disorders, and fear of negative evaluation by others in social situations is likely to precede the onset of an eating disorder [3 8-10].

Considerable research conducted with American and Australian female samples supports the tenets of the objectification theory [5 11], yet virtually no study to our knowledge has incorporated media effects (i.e. internalization of media ideals) into the objectification model despite the fact that the relationship is implied and particularly relevant for women [3 5 11-13]. Hence, this study aims at filling this gap and to examine the applicability of the theoretical model in Italian women, who also report body concerns and disordered eating behaviours in response to sociocultural pressure [12-17]. It is predicted that internalization of media ideals leads to body surveillance, which in turn leads to body shame and social anxiety, which both contribute to disordered eating behaviours. The significance of the indirect effects was also estimated.

Methods

Participants and procedures

Participants were 408 undergraduate women (M_{age} = 20.82; SD = 1.90) from four Italian universities (Milan, Naples, Rome, Pavia) who responded to campus advertisements to participate in an online study. Mean self-reported body mass index (BMI = kg/m²) was 20.97 (SD = 3.34); desired BMI (desired kg/m²) was 19.06 (SD = 1.53). A small number of the undergraduate women reported having been previously diagnosed with or treated for anorexia nervosa (AN) (n = 2; 0.49%), bulimia nervosa (BN) (n = 3; 0.74%), or eating disorder not otherwise specified (EDNOS) (n = 6; 1.47%).

It has been demonstrated that the presentation format of self-report questionnaires (i.e. online vs. paper-and-pencil) does not change the quality of results [18]. In order to ensure there was no duplication, the IP address of every participant was examined [18]; no duplicate data were detected. Participants were informed about the purpose of the study and, after providing their consent, completed the survey instruments, which were counterbalanced to reduce order effects [19].

Measures

Body surveillance and body shame were assessed by the 8-item Body Surveillance and the 8-item Body Shame sub-scales, respectively, of the Italian version of The Objectified Body Consciousness Scale [17].

Internalization of media ideals was assessed by the 9-item General Internalization subscale of the Italian Version of The Sociocultural Attitudes Toward Appearance Scale-3 [12]. *Cognitive and affective aspects of social anxiety* were assessed by the 15-item Italian version of the Interaction Anxiousness Scale [20].

Disordered eating behaviours (DEB) were assessed by two behavioural subscales (Drive for Thinness and Bulimia) of the Italian version of Eating Disorder Inventory-2 (EDI-2) [21], as the remaining 9 subscales of EDI-2 do not assess behavioural symptoms of eating disorders but measure variables correlated with the onset and/or maintenance of eating disturbances [13 22 23]. The 14 items were used in combination to create a composite measure of EDB, as they have been found to reflect a disordered eating factor [22].

A *brief demographic questionnaire* [19] was used to assess weight, desired weight, height, age and eating disorder history (i.e., "Have you ever been diagnosed and/or treated for AN (Yes or No), BN (Yes or No), or EDNOS (Yes or No)?").

Results

An outlier analysis was performed and no case was excluded, as all cases were in the acceptable range (i.e. Mahalanobis distance values). Skewness and kurtosis values for all variables were under the recommended range (Table I), and thus no variable was transformed. There were no missing data, given that the online self-report questionnaires were formatted so that participants could not skip individual items [7 13]. Because preliminary analyses indicated that BMI was not significantly related to variables examined in this article, it was not included as covariate and reported in the analyses described.

Measure means, standard deviations, internal consistency reliability estimates (i.e. Cronbach's alpha coefficients and 95% confidence intervals) and correlations among all variables of interest are shown in Table I. The pattern of correlations is consistent with the objectification model and is in excellent agreement with previous findings [11].

Path analysis procedures contained within the *Mplus* 5.1 program (maximum likelihood estimation) were used to determine whether the hypothesized theoretical model provided a good fit to the data [24]. Total scores on the measures served as the observed variables in the model. Several indices were used to determine the fit of the proposed model. According to Byrne [24], comparative fit index (CFI) and Tucker-Lewis Index (TLI) values ≥ 0.95, standardized root-mean-square residual (SRMR) values ≤ 0.08 and root-mean-square error of approximation (RMSEA) values ≤ 0.06 indicate a good fit for data. We also specified *Mplus* to identify modification indices (MI) above 5.0, as there may be significant paths between variables that were not hypothesized and examined in the model [24].

TABLE I.
Descriptive statistics and correlations among study variables (n = 408). *Statistiche descrittive e correlazioni tra le variabili dello studio (n = 408).*

| Variables	1	2	3	4	5
1. Internalization of Media Ideals					
2. Body Surveillance	0.54*				
3. Body Shame	0.33*	0.48*			
4. Social Anxiety	0.31*	0.59*	0.22†		
5. Disordered Eating Behaviours	0.41*	0.51*	0.58*	0.47*	
M	28.13	38.85	33.17	32.02	31.33
SD	10.61	9.81	10.55	11.10	14.14
Scale Range	9-45	8-56	8-56	15-75	14-84
Alpha (95% CI)	0.90 (0.88-0.92)	0.93 (0.91-0.95)	0.94 (0.92-0.96)	0.89 (0.87-0.91)	0.92 (0.91-0.94)
Skewness	-0.422	0.360	-0.575	0.717	-0.677
Kurtosis	-0.499	-0.466	-0.542	-0.330	-0.389

* $p < 0.001$; † $p < 0.05$

The results of model were mixed: the CFI (0.98) and SRMR (0.05) supported its fit, whereas the TLI (0.94) and RMSEA (0.08) did not. All model paths were significant and this model accounted for 48% of the variance in EDB. One MI exceeded 5.0 (i.e. the path from internalization to body shame was 9.55); thus, we included this path and reanalyzed our model. All fit statistics indicated an excellent fit to the data (CFI = 1.00, TLI = 1.00, SRMR = 0.01, RMSEA = 0.00), and all model paths were significant ($p < 0.05$). The revised (final) model accounted for 50.3% of the variance in women's EDB, which is considered sizeable for path analysis[24]. The path coefficients are presented in Figure 1.

Consistent with tenets of the objectification model, we planned to examine body shame and social anxiety as mediators of the link between body surveillance and EDB, and body shame as an additional mediator of the link between internalization and EDS, as well as surveillance as a mediator of the links between social anxiety, body shame and internalization. If at least one path of
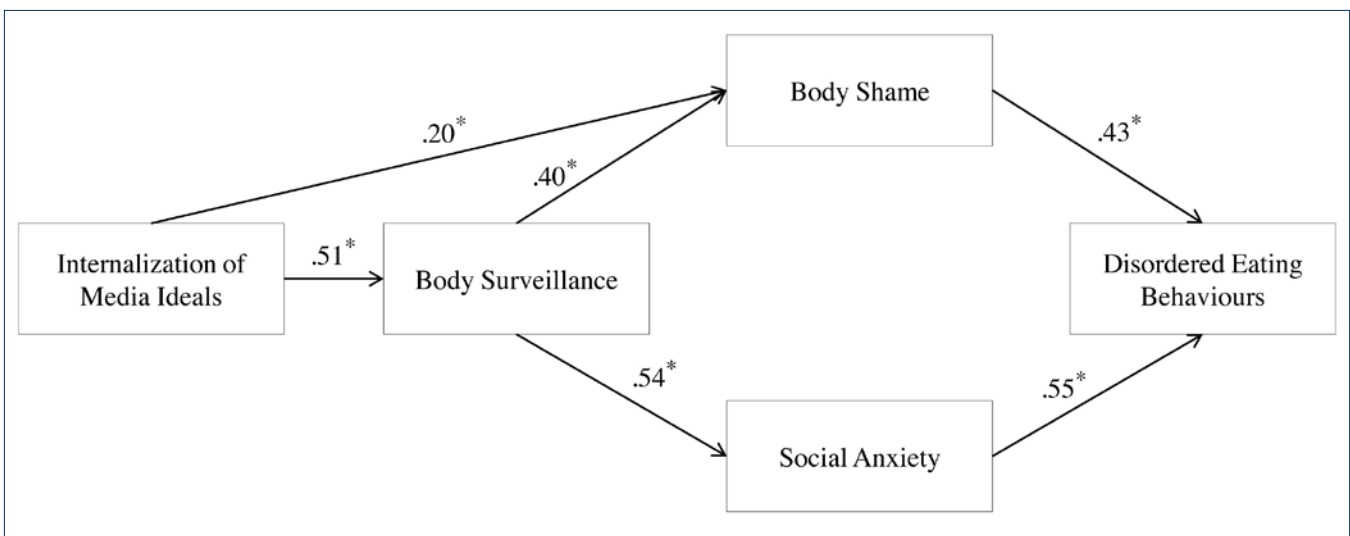
FIGURE 1.
Path coefficients for the final model. *Coefficienti di percorso del modello finale esaminato.*

TABLE II.
Mediation: examination of indirect effects, bias-corrected 95% confidence intervals (95% CI). *Stime degli effetti indiretti, intervalli di confidenza al 95% (correzione della distorsione).*

Indirect path	Indirect effect	95% CI	Direct path significant?	Full or partial mediation
IMI → BSV → BSH	0.19*	0.097 to 0.450	Yes	Partial
IMI → BSH → DEB	0.07*	0.023 to 0.142	No	Full
IMI → BSV → SA	0.24*	0.143 to 0.445	No	Full
BSV → BSH → DEB	0.17*	0.048 to 0.300	No	Full
BSV → SA → DEB	0.23*	0.157 to 0.355	No	Full

IMI: Internalization of Media Ideals; BSV: Body Surveillance; BSH: Body Shame; SA: Social Anxiety; DEB: Disordered Eating Behaviours.
* p < 0.05

a hypothesized indirect effect was not significant, then it precludes mediation [24]. We used bias-corrected bootstrapping method with 1000 random samples to estimate the significance of the indirect effects [24]. This method involves generating confidence intervals (CI) around the indirect effects through a process of random re-sampling with replacement and offers a more powerful and rigorous approach to traditional mediation tests [24]. All indirect effects examined were significant (i.e. the 95% CI do not include zero [24]). The standardized indirect effect, bias-corrected 95% CI, as well as whether it represents full or partial mediation (i.e. determined by whether there was a significant direct path in the model [24]) are shown in Table II.

Discussion

Literature evidence highlights that sociocultural pressure to be thin is central to the development of negative feelings about the body, which are recognised as the most robust risk factor for clinical and subclinical eating disorders [1-4 17 25]. The objectification theory [6] offers a more complex account of the process involved in women's behavioural and emotional responses to their desire to meet Western cultural ideals of physical appearance [5]. The purpose of this study was to extend previous work by incorporating internalization of media ideals into the objectification model and by examining the theory's applicability in Italy, in which young women are not "immune" from eating and body-related disturbances in response to sociocultural pressure [12-17].

Consistent with objectification theory [6] and our hypothesis, the endorsement and acceptance of appearance media ideals lead women to become hyperaware of how their body looks and to evaluate themselves in terms of physical appearance [5], which in turn leads to body shame (i.e. the emotion that can result from measuring oneself against a cultural standard and perceiving oneself as fail-

ing to meet that standard [13 17 23]) and social anxiety; both strongly predict disordered eating behaviours in women [6]. The indirect influence of body surveillance on EDB is in accord with previous findings [11]. The results also suggest that women who are more anxious in the interpersonal arenas are also more likely to engage in disordered eating behaviours and deserve further study given the role that interpersonal factors are believed to play in maintaining some forms of disordered eating behaviours [3 8-10 13].

Some limitations of the present study should be acknowledged. Although we employed only self-report measures with established psychometric proprieties and used several strategies to detect erroneous data, the findings of this study are susceptible to possible reporting bias. Thus, replication with other methods of data collection (such as semi-structured interviews) would be beneficial. The cross-sectional data cannot determine causality and longitudinal studies are needed to provide empirical test of the relations specified in the model. The sample consisted of college-aged Italian women and limits the generalizability of the results. Future research should ascertain whether these findings can be replicated among other groups of females (e.g. adolescent girls or older women). It needs also to address the predictive ability of the objectification theory for diagnosable eating disorders.

In terms of practical implications, prevention programmes (e.g. dissonance-based educational approach) as well as the use of cognitive-behavioural and other integrated treatments (e.g. virtual reality) which aim at decreasing the central importance of appearance and the active pursuit of the thin-ideal, are essential to reduce eating and body-related disturbances [3 5 15 25 26].

In conclusion, the objectification theory provides a useful framework for understanding how sociocultural, behavioural and emotional variables work together to predict disordered eating behaviours in women.

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