

The effect of exposure to parodies of thin-ideal images on women's body image, body shame and mood



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Declaration

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The effect of exposure to parodies of thin-ideal images on women's
body image, body shame and mood

Author: [REDACTED]

Corresponding author email address: [REDACTED]

Present address: The University of Adelaide

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Highlights

- Women viewed thin-ideal celebrity *Instagram* posts, parody images of the same posts, or paired thin-ideal celebrity and parody image posts.
- Viewing parody images either alone or paired with thin-ideal images led to decreased body dissatisfaction, body shame and negative mood than thin-ideal images.
- Women with high thin-ideal internalisation experienced less body dissatisfaction after viewing parody images alone, than the paired parody and thin-ideal images.

Abstract

Social networking sites are abundant with thin-ideal beauty standards for women. As a result, some users are challenging these unrealistic ideals in creative, humorous ways. The aim of the present study was to experimentally investigate the effect of exposure to humorous, parody images on women's body dissatisfaction, body shame and mood. Participants were 173 women aged between 18 and 61 years, who were randomly assigned to view either one of three sets of *Instagram* images: thin-ideal celebrity posts; humorous parody images of the celebrity post paired with the thin-ideal; or the humorous parody post alone. Results indicated that exposure to the parody images alone decreased body dissatisfaction, body shame and negative mood, relative to exposure of thin-ideal images alone. Moreover, exposure to the parody images alone resulted in less body dissatisfaction than exposure to parody images paired with the thin-ideal image. The findings were moderated by trait thin-ideal internalisation, whereby individuals with high thin-ideal internalisation experienced less body dissatisfaction after viewing parody images alone, compared to the paired parody and thin-ideal images. Overall, the findings contribute to existing literature by providing support for the use of humorous parody images for decreasing body dissatisfaction, body shame and negative mood in women.

Introduction

In Western societies, women experience body and weight dissatisfaction as a normative discontent (Swami et al., 2010; Tantleff-Dunn et al., 2011), which has been attributed to a range of sociocultural factors, in particular social influences such as peers and family, along with exposure to the mass media (Thompson & Stice, 2001). A large body of research has demonstrated the detrimental effects of exposure to thin-ideal images of women presented in traditional forms of mass media (i.e., fashion magazines) for body dissatisfaction and disordered eating of young women (see meta-analysis by Grabe et al., 2008). The mass media objectify female bodies through emphasizing thinness and attractiveness as desirable, essential qualities for women, where images depicted are idealised and distorted through processes such as image retouching, which reinforce an ideal that is unachievable for most women (Grabe et al., 2008; Brown & Tiggemann, 2016). Unfortunately, preferences for these unrealistic body ideals and stereotyped beliefs about body size can be formed by girls as young as three years old, and through ongoing exposure to thin-ideals through the media, these views are reinforced into adulthood (Dittmar et al., 2006; Dohnt & Tiggemann, 2006). Many women consequently internalise these thin-ideals, despite the types of body shapes depicted in mass media being impossible to achieve by healthy means for most women (Tiggemann & Polivy, 2010). ‘Thin-ideal internalisation’ thus refers to the extent that an individual “buys into” and agrees with Western-defined standards of thinness and attractiveness (Thompson & Stice, 2001). Consequences for women with high thin-ideal internalisation include increased body dissatisfaction, lowered body self-esteem (Irving, 1990) disordered eating symptomology (Thompson & Stice, 2001), and greater risk of relapse into disordered eating (Bardone-Cone et al., 2010).

Social Media and Body Image

Body image research has consistently identified that, while traditional forms of media are strong predictors of poor body image for young women (Groesz et al., 2002), recent research emphasizes social media as particularly concerning (Holland & Tiggemann, 2016). One reason for this is the large online presence of young women and their reliance on social media, which is so plentiful with thin-idealised images available to view any time, which increases opportunities for detrimental comparisons to be made (Perloff, 2014). The use of social media has become increasingly popular worldwide. In Australia, over 79% of people use social media, with 99% of 18–29-year-olds on social media (Sensis, 2018). Such high use of social media, especially among young adult women, is especially concerning, as research findings show a positive association between social media use and maladaptive body image outcomes (Holland & Tiggemann, 2016). Given the association between body image concerns and depiction of idealized bodies in traditional media, body image research has focussed particularly on image-based social media applications, such as Instagram.

Instagram is a popular social media application that differs from other forms of social media, such as Twitter, Facebook and blogs, as it was specially designed for sharing and viewing photographs and images, as opposed to written content. With over 500 million users daily worldwide, Instagram is currently one of the most popular social networking sites (Statista, 2019). Given the high prevalence of Instagram use world-wide, many young women are vulnerable to the negative effects of thin-ideal imagery exposure (Meier & Gray, 2014). Instagram users generally upload their best photos, particularly photographs of themselves looking their most attractive and thin, namely, their “ideal” selves (Siibak, 2009). Such images can be achieved by users exclusively taking photographs of themselves posing to accentuate thinness and in flattering light to appear more attractive. Many Instagram users also report taking extended time to produce multiple, sometimes hundreds, of photographs,

and only uploading the most attractive images of themselves onto Instagram after editing them (e.g., applying filters) (Siibak, 2009). Research has identified that browsing, posting and viewing thin-ideal images on Instagram prominently impacts poor body image and disordered eating (Cohen et al., 2018; Tiggemann & Anderberg, 2020). For example, Cohen et al. (2017) recently found that following appearance-focused accounts on Instagram, which typically depict examples of thin-ideal body types, was associated with detrimental body image concerns, specifically, thin-ideal internalisation, body surveillance (habitually monitor one's appearance) and drive for thinness. Overall, a plethora of studies have consistently identified maladaptive outcomes related to Instagram use, with experimental research finding that viewing images on Instagram portraying the thin-ideal leads to body dissatisfaction (Brown & Tiggemann, 2016), with increased body image concerns among Instagram users compared to non-Instagram users (Cohen et al., 2017).

Social Comparison Theory

The detrimental impact of exposure to appearance-based imagery on social media has commonly been attributed to the process of social comparison (Brown & Tiggemann, 2016; Vogel et al., 2014). Festinger's (1954) Social comparison theory posits that individuals have an intrinsic drive to evaluate themselves against others to determine their own self-worth, through comparing themselves with others. The detrimental impact of engaging in social comparisons on Instagram can be explained by their direction of comparison. Upward comparisons, which are comparisons with others seen as superior (e.g., more attractive) generally lead to maladaptive consequences (Fardouly et al., 2017). Downward comparisons occur with others perceived as inferior (e.g., less attractive), and lateral comparisons occur with others perceived similarly (e.g., equally attractive); both typically result in more positive outcomes (Fardouly et al., 2017; Wheeler & Miyake, 1992).

Women engage in social comparison when using Instagram by appraising and

comparing their appearance against the idealised images (sociocultural ideals) presented in the media (Chua & Chang, 2016). In addition, thin and attractive women on Instagram commonly amass more followers due to their stereotypical attractiveness, meaning that images depicting the thin-ideal are plentiful online. Hence, a high prevalence of such images are viewed by impressionable female users, with social comparison likely being more relevant in the context of Instagram and social media, relative to traditional media, due to the speed and simplicity of making multiple comparisons (Tiggemann & Zaccardo, 2015). When women view these idealised photos, they tend to compare themselves to the women who are generally thinner and more attractive, meaning these comparisons are generally more upward in direction. Therefore, most women find themselves falling short of these ideals, resulting in dissatisfaction with appearance (Fardouly et al., 2017). Yet, despite significant research, there is limited knowledge regarding why social comparison negatively impacts on women's body image.

Body Shame

While the impact of exposure to appearance-based imagery on women's body dissatisfaction and mood has amassed vast research interest, there has been limited research attention on another related problem in the context of social media; body shame. Body shame results from the embarrassment that an individual experiences when their physical appearance falls short of internalized, albeit unrealistic and unattainable, beauty ideals (Mustapic et al., 2015). In other words, social comparison theory posits that women can experience body shame when their body falls short of idealised women, and this discrepancy results in feelings of inadequacy about their own bodies (Fredrickson & Roberts, 1997; Markham et al., 2005). Body shame is important to consider as the consequences of increased body shame include disordered eating behaviours and maladaptive 'driven' forms of exercise in an attempt to modify one's body to align with internalised ideals (Fredrickson & Roberts,

1997; Pila et al., 2021). Exposure to idealized imagery in traditional media, such as magazine advertisements, has been found to increase body shame and appearance anxiety, compared to viewing neutral-non-idealised images (Monro & Huon, 2005). Because social media platforms, particularly Instagram, are abundant with images of thin, beautiful women who represent the societal ideal of beauty, when Instagram users realize they cannot live up to these standards themselves, they may plausibly feel shame about their own bodies.

Challenging the Thin-Ideal: Body Positivity and Parody Images

In response to the unrealistic appearance ideals increasingly prevalent in both traditional and social media formats, Instagram has given rise to a new phenomenon, the “body positive movement” (Sastre, 2014). The body positive movement is an online movement that aims to challenge unrealistic beauty ideals, normalize a natural appearance, increase self-acceptance, and decrease dissatisfaction with appearance (Sastre, 2014). In recent years, this movement has gained immense popularity on Instagram with an increase of accounts dedicated to posting body positive content, subsequently increasing research interest in this area. Recent research has explored whether exposure to body positive content on Instagram could have positive outcomes for women’s body image and mood. Cohen, et al. (2017) explored the impact of exposure to body positive content (e.g., images of a larger woman displaying her body with captions about body acceptance) on women’s body image and mood. Results indicated that exposure to body positive content, relative to thin-ideal or neutral content, was associated with increased body satisfaction, body appreciation and positive mood. Thus, curating content that depicts natural bodies or challenges the thin-ideal may help to increase positive outcomes.

One recent example of this approach which may have particular promise for reducing the impact of thin-ideal images is the advent of popular Instagram accounts that parody

unrealistic thin-ideal images posted by celebrities. One of the most widely known of these is Australian comedian and media personality, Celeste Barber, who has approximately 8.1 million followers on Instagram (July, 2021). In 2015, Celeste Barber sparked a popular phenomenon on Instagram, with posts that were captioned #CelesteChallengeAccepted. Celeste would parody idealised Instagram images previously posted by celebrities and models, dressing and posing in an exaggerated comedic style, presented together with the original celebrity Instagram post, accompanied with a comical caption to further exaggerate the unrealistic nature of the original post. Celeste embraces her natural, average sized figure by posting parody images and captions to bring attention to the unattainable nature of celebrity and model images that are highly prevalent on Instagram. Her parody images have been considered as a form of social media literacy by promoting critical evaluation of the media, particularly Instagram images, with the effort to raise awareness of the risks of social media use and its extensive influence (Slater et al., 2019; Riesmeyer et al., 2019). A popular parody post Celeste Barber created features celebrity and model, Emily Ratajkowski, wearing a revealing bikini, posing on a Segway on a beach with a flirtatious smirk, in a manner that accentuates her thin-figure and bottom. Alongside that image, Celeste is wearing a bikini with an animated “sultry” look on her face, posing on a trolley-cart on the beach, her body in a similar arched posed to Emily’s, without tensing her stomach or bottom. The Instagram image was posted with the caption “Minding all the shit while your husband looks for a park”, highlighting the absurd nature of Emily’s original post.

Effects of Humour on Wellbeing

Previous research suggests that humorous content can encourage individuals to change their perspective of a particular phenomenon; for example, images depicting thin and attractive women (Falkenberg et al., 2011). Further, humour-based therapeutic interventions have shown positive effects on improving participants’ wellbeing and overall physical health

(Cernerud & Olsson, 2004). One explanation for the association between viewing parody images and improved body images may be via the association with improved mood. While previous research has established that viewing images depicting the thin-ideal reduces participant happiness (Harper & Tiggemann, 2008), one study has recently explored whether exposure to body positive content presented in a comedic, parody style could have positive effects on women's body image and mood. Slater et al. (2019) examined the impact of viewing Celeste Barber's parody images of thin-ideal Instagram posts by celebrities, on women's body satisfaction and mood, relative to exposure to thin-ideal celebrity Instagram posts alone. It was found that exposure to the parody images resulted in greater body satisfaction and happier mood relative to exposure to the celebrity thin-ideal images alone. Their findings illuminate the potential positive impact of exposure to a specific type of appearance-based Instagram content, humorous parody images. The finding that mood was improved was particularly novel and supports previous findings relating to associations between humour and mood. Strick et al.'s (2009) research concluded that humorous stimuli, that required greater cognitive demand, reduced negative emotions more effectively than stimuli that required less cognitive demand. Thus, it is likely that the addition of the parody post may have required additional cognitive processing than viewing the thin-ideal posts alone, likely reducing the negative effect on mood (Slater et al., 2019). Although Slater et al.'s (2019) findings demonstrated the positive effect of viewing parody images on body satisfaction and mood, relative to viewing the parody image paired with the original celebrity image, it is likely that viewing the parody image alone would produce stronger effects on decreased body dissatisfaction and mood. Additionally, given that previous research establishing adverse effects on body image are more likely when participants have high internalisation ideals (Krawczyk & Thompson, 2015), it is reasonable to expect that women high on thin-ideal internalisation will experience stronger effects (i.e., decreased body

dissatisfaction, body shame and negative mood) when exposed to parody images in isolation, as the absence of the thin-ideal may serve to protect body-related concerns.

The Present Study

The aim of the present study was to experimentally investigate the effect on women's body dissatisfaction, body shame and mood, of viewing celebrity parody Instagram images (posted by Celeste Barber), in comparison with viewing 'thin-ideal' Instagram images of celebrities. Specifically, participants were exposed to a set of Instagram posts depicting either thin-ideal celebrity images, parody images, or thin-ideal images paired with the parody images. The current study represents an extension of Slater et al.'s (2019) study, investigating whether viewing the parody image alone, or in combination with the idealized image, would ameliorate negative effects of viewing idealised imagery on body dissatisfaction, mood and body shame. Body shame was included as an outcome variable to address the gap in the literature of examining the effects of potentially positive social media posts on body shame. Therefore, in relation to the current study, it is plausible to predict that exposure to humorous parody images may interrupt processing mechanisms (e.g., body shame, internalisation of the thin-ideal) and shift individuals' perception by recognizing and agreeing with the unrealistic thin-ideal images. As such, exposure to such parody images would likely have an ameliorating effect on body shame, as viewing humorous parody images, which are also body positive in nature, do not cause Instagram users to feel embarrassed and ashamed of their own bodies as it does not fall short of Celeste, who is an average sized woman whose body does not fit the societal ideal of beauty. From the findings by Slater et al. (2019), it was expected that viewing the parody images alone, relative to the thin-ideal celebrity images alone, would decrease body dissatisfaction, body shame, negative mood and increase positive mood (Hypothesis 1). Further, within the parody conditions, it was expected that exposure to the parody images alone would decrease body dissatisfaction,

body shame, negative mood and increase positive mood, relative to viewing the paired thin-ideal and parody images (Hypothesis 2). Finally, the effect on body dissatisfaction, body shame and mood was expected to moderated by trait levels of thin-ideal internalisation, in that the effects would be stronger for women higher in thin-ideal internalisation (Hypothesis 3).

Method

Design

A 3-group (thin-ideal image, parody image, thin-ideal image plus parody image) between-subjects experimental design was used to investigate the effect of image type on the dependent variables of body dissatisfaction, body shame, and mood after controlling for pre-exposure scores. Thin-ideal internalisation was tested as a potential moderating variable.

Participants

Participants were 173 women aged between 18 and 61 years, ($M = 23.61$, $SD = 7.84$) who had an Instagram account. The majority (69.36%) of participants identified as Caucasian, 22.54% as Asian, 1.16% as African, 2.89% as mixed race, 2.89% as other, 0.58% as Syrian and 0.58% as Persian. Their mean Body Mass Index (BMI) was 23.46 ($SD = 5.34$), which was within the 'normal' weight range (World Health Organisation, 1998). The majority of participants ($N = 94$) were recruited through the University of Adelaide's first year psychology student research participation pool and received course credit for their participation. The remainder of participants ($N = 79$) were recruited through a separate advertisement on Unified (University of Adelaide portal that centralises login to student and staff services) and Facebook and had the opportunity to enter a prize draw to win one of two \$40 Myer vouchers.

Materials

Study Images

Three sets of visual stimuli were constructed for the study, each containing 11 images. The thin-ideal images were sourced from publicly available Instagram accounts of popular celebrities and models, and the parody images were sourced from the publicly available Instagram account of comedian Celeste Barber (@celestebarber). The thin-ideal plus parody set of images comprised the original celebrity/model photograph (thin-ideal), paired with

Celeste Barber's parody recreation of the original celebrity/model photograph. The thin-ideal set of images only included the photograph of the celebrity/model used in Celeste Barber's Instagram post. The parody set of images only included the photograph of Celeste Barber from her Instagram post. All the models were either wearing clothing that revealed their abdomen, arms, and legs (e.g., bikini swimsuits, crop-tops), or were covering their breasts with their arms. The original Instagram caption and hashtags were included in the three sets of stimuli. To create the stimuli, Adobe Photoshop was used to format each image into an Instagram frame, to replicate how these images would appear on the Instagram application.

The Instagram images were piloted with five independent female raters with Instagram accounts, aged 24 years, to ensure that images included in the study were generally perceived as both thin and attractive (thin-ideal images) and humorous (parody images). To select the thin-ideal images, raters viewed and rated the celebrities/models on their physical attractiveness and thinness on a 7-point Likert scale (1 = *not at all*, 7 = *very much*). To select the images for the parody condition, another 7-point scale was used to rate how funny the images were (1 = *not at all funny*, 7 = *extremely funny*). The ratings confirmed that the final 11 thin-ideal images were perceived as both thin ($M = 5.71$, $SD = 0.97$) and attractive ($M = 5.51$, $SD = 0.93$), and the final 11 parody images were perceived as funny ($M = 5.33$, $SD = 0.99$).

Social Networking Site Usage. Participants were asked to rate how often they used Facebook, Instagram, Snapchat, Twitter (*never, rarely, sometimes, often, very often*) and how much time they spend on social networking sites per day (*never—I don't have social media, 0-10 minutes, 10-30 minutes, 30-60 minutes, 1-2 hours, 2+ hours*). Participants were also asked general questions regarding their Instagram use. Specifically, they were asked how much time they spent using Instagram per day (*less than 10 minutes, 10-30 minutes, 30-60 minutes, 1-2 hours, 2+ hours*), how many accounts they followed and were followed by on

Instagram (*0 – 10, 10-50, 50-100, 100–500, 500–1000, 1000–2000, 2000+*) and how often they posted on Instagram (*never, once every 6 months, one every 3 months, once a month, 2-3 times a month, once a week, 2-3 times a week, daily*).

Body Dissatisfaction. State body dissatisfaction was measured by an adaption of Heinberg and Thompson’s (1995) Visual Analogue Scales (VAS), before and after participants viewed the Instagram images. VAS hold the advantage that participants tend to have difficulty recalling responses, making the scales sensitive to change over time. The VAS consisted of a 100mm horizontal line, with the left labelled *none* (0) and the right labelled *very much* (100). Participants indicated how they were feeling “right now” by moving a vertical marker to the desired place on the horizontal line. Two items were used to measure state body dissatisfaction (weight dissatisfaction, appearance dissatisfaction), with responses averaged to produce an overall indicator of state body dissatisfaction, with higher scores indicating greater body dissatisfaction. Heinberg and Thomspson (1995) have demonstrated that the VAS is a reliable and valid measure of body dissatisfaction. In the present sample, internal consistency was acceptable for pre-exposure ($\alpha = .79$) and post-exposure body dissatisfaction ($\alpha = .83$)

Mood. The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) was used to measure participant mood. This measure involved 10 adjectives each for positive affect (e.g., “excited”) and negative affect (e.g., “ashamed”). Participants were asked to indicate how well these adjectives described their mood on a scale of 1 (*very slightly or not at all*) to 5 (*extremely*). Responses were summed and averaged separately for each subscale, with the range of possible scores being between 10 and 50, with higher scores indicating greater positive (PA) or negative affect (NA). This scale has been shown to have high internal reliability for both positive ($\alpha = .90$) and negative affect ($\alpha = .89$) (Simon & Hurst, 2021). Internal consistency remained high in the present sample for pre-exposure PA (α

= .93) and NA ($\alpha = .87$), and post-exposure PA ($\alpha = .94$) and NA ($\alpha = .91$).

State Body Shame. Body image shame (i.e., body shame) was measured using an adaptation of The Body Image Shame Scale (BISS; Duarte et al., 2015), a well validated self-report assessment of “body shame”, consisting of 14 items. The original BISS is designed to assess trait body shame. However, as an aim of the present study was to examine how state body shame was impacted by exposure to parody images, the assessment was adapted to reflect a state measure. For example, participants were asked to rate each item with regards to how they feel “right now”, by altering the wording of the items to reflect current feelings and beliefs, for example, “I avoid wearing tight clothes that reveal my body shape was adapted to “I would avoid wearing tight clothes that reveal my body shape”, to reflect a state measure. The BISS measured two dimensions of body shame; 1) body shame relating to external perceptions of criticism and subsequent defence responses (e.g., avoidance of a social situation) for example, “I do not like to exercise in front of others because I am afraid of how they might evaluate me”; 2) internalised negative self-evaluations and their consequent behaviours (e.g., concealment), for example, “I choose clothes that hide parts of my body that I consider ugly or disproportional”. Participants were asked to rate each item on a 5-point scale ($0 = \textit{never}$, $4 = \textit{almost always}$) to indicate the extent to which the items reflected their body-related shame experiences. An overall index of body shame was calculated by averaging scores on the 14 items, with higher scores indicating greater body shame. In the present sample, internal consistency was high for pre-exposure ($\alpha = .94$) and post-exposure body shame ($\alpha = .96$).

Trait Thin-Ideal Internalisation. The Thin/Low Body Fat subscale of the SATAQ-4R (Thompson et al., 2018) was utilised to measure an individual’s personal desire for a thin physique, otherwise known as personal internalisation of the thin-ideal. It consists of five 7-point scales (Schaefer et al., 2015). An example item is “I want my body to look very thin.”

Participants were asked to indicate their agreement or disagreement on the scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. An overall Thin/Low Body Fat subscale index was calculated by averaging scores on the five items, with higher scores indicating greater endorsement of the thin-ideal. The scale has previously been shown to have good internal consistency ($\alpha = .87$) (Thompson et al., 2018). Internal consistency remained acceptable in the present sample ($\alpha = .82$).

Demographic Information. Participants were asked to record their age and ethnicity. They were also asked to provide self-reported height and weight, which were used to calculate Body Mass Index (BMI; weight in kilograms/height in metres²).

Procedure

The University of Adelaide's Human Research Ethics subcommittee in the School of Psychology approved this project prior to data collection. All participants were recruited either via the University of Adelaide first year psychology student pool, or by an advertisement posted on Facebook and Unified, for an online study examining the effects of Instagram use on women. Only women aged 18 and above who had an Instagram account were eligible to take part in the study. Participants completed the study online, using Qualtrics, at the time and location of their choice. Upon commencing the survey, all participants were presented with an information sheet and consent form. Once informed consent was obtained, participants completed a series of questions about their social media use, along with, the pre-exposure state measures of mood, body dissatisfaction and body shame. Participants were then randomly allocated to one of the three image conditions (thin-ideal only, parody only, thin-ideal plus parody). They viewed the 11 images for 20 seconds each, one at a time. To ensure that participants were attentive to the stimuli, they were asked to rate the visual quality (e.g., blurriness) of each image directly after they viewed it on a 5-point scale (1 = *very poor*, 5 = *excellent*). After viewing the Instagram images, participants

completed the post-exposure state measures of state mood, body dissatisfaction and body shame, as well as the Thin/Low Body Fat subscale of the SATAQ-4R. After completing the measures, participants were instructed to complete demographic questions (age, ethnicity, height, and weight) and were given the option to include their email to request study results and to be entered into the prize draw. The contact details of the researchers, The University of Adelaide Counselling Service, and Butterfly Foundation National Helpline were listed upon completion.

Results

There were no variables with missing data and statistical assumptions were met for all analyses reported, including no outliers and normality of data. On average, participants reported spending over two hours on social networking sites per day ($M = 5.08$, $SD = 1.03$), with an average of 30 – 60 minutes of that time being spent on Instagram ($M = 3.10$, $SD = 1.61$). Participants on average reported following 100 – 500 accounts on Instagram ($M = 4.40$, $SD = 1.08$) with an average of 100 – 500 Instagram followers ($M = 4.45$, $SD = 1.19$). Participants posted images on Instagram once every 3 months on average ($M = 3.47$, $SD = 1.56$).

To determine whether there were any significant differences in the demographic variables of age, BMI, and body shame, the experimental conditions (thin-ideal, parody, thin-ideal plus parody) were compared on these variables. The means in Tables 1 and 2 show that mean age, BMI and body shame were similar across the conditions. One-way ANOVAs confirmed that there were no significant differences between conditions in terms of age, $F(2, 170) = 0.81$, $p = .447$, BMI, $F(2, 170) = 0.48$, $p = .619$, or body shame, $F(2, 170) = 0.65$, $p = .521$.

Table 1

Means (SD) for Age and BMI by Condition

	Image Condition		
	Thin-Ideal	Parody	Thin-Ideal plus Parody
Demographic			
Age	23.84 (8.15)	22.61 (7.31)	24.43 (8.07)
BMI	25.25 (5.56)	23.13 (4.10)	24.04 (6.25)

Given that body dissatisfaction is subject to large individual differences (Tiggemann, 1992), a one-way ANOVA was conducted to determine any potential differences in initial body dissatisfaction. As seen in Table 2, the means show that all three conditions reported a similar, moderate level of body dissatisfaction. The analysis confirmed that there was no significant difference between conditions in initial body dissatisfaction, $F(2, 170) = 0.32, p = .729$.

The Effects of Image Type on Body Dissatisfaction, Body Shame and Mood

Initial 3 x 2 mixed ANOVAs (repeated measures analyses of variance) were performed separately for all outcome variables (body dissatisfaction, body shame, mood items) separately. Experimental condition (thin-ideal, parody-only, thin-deal plus parody) was entered as the between-subjects variable and time (pre-exposure, post-exposure) was entered as the within-subjects (repeated measures) variable. Results of the analyses and mean scores for pre- and post-exposure to the images for each condition are reported in Table 2. The analyses showed that there was a significant main effect of time for body dissatisfaction, thus body dissatisfaction changed from pre-exposure to post-exposure across all conditions (see Table 2). No significant main effect for condition was shown. There was, however, a significant interaction shown between time and condition for the outcome variable of body dissatisfaction.

For body shame, as can be seen in Table 2, no significant main effect was shown for time or condition. There was, however, a significant interaction for time and condition. With regard to mood, two outcome variables were included to provide a marker of positive and negative mood, or affect. The outcome variable of positive affect showed a main effect of time: positive affect decreased from pre- to post-exposure for all conditions. There was no significant main effect of condition, and no interaction between time and condition for positive affect (see Table 2 for details). Regarding the outcome of negative affect, as shown

in Table 2, there were no significant main effects of time or condition. Additionally, there was no significant interaction between time and condition for negative affect.

Table 2

The Effect of Condition and Time on Participant Body Dissatisfaction, Body Shame and Mood (Positive and Negative Affect)

Measure	Pre-Exposure Mean (SD)	Post-Exposure Mean (SD)	Main Effect of Condition	Main Effect of Time	Condition x Time Interaction
<i>Body Dissatisfaction</i>					
Thin-Ideal	50.12 (27.33)	53.80 (29.58)	$F(2, 170) = 0.12, \eta_p^2 = .001$	$F(1, 170) = 7.34, \eta_p^2 = .041^{**}$	$F(2, 170) = 14.51, \eta_p^2 = .146^{**}$
Parody Only	53.95 (26.80)	45.31 (26.29)			
Thin-Ideal plus Parody	52.67 (25.04)	49.98 (26.69)			
<i>Body Shame</i>					
Thin-Ideal	1.73 (1.04)	1.80 (1.24)	$F(2, 170) = 0.38, \eta_p^2 = .004$	$F(1, 170) = 2.09, \eta_p^2 = .012$	$F(2, 170) = 4.96, \eta_p^2 = .055^{**}$
Parody Only	1.84 (0.87)	1.68 (1.00)			
Thin-Ideal plus Parody	1.93 (0.88)	1.88 (1.04)			
<i>Positive Affect</i>					
Thin-Ideal	24.91 (8.35)	21.28 (9.15)	$F(2, 170) = 1.11, \eta_p^2 = .013$	$F(1, 170) = 34.72, \eta_p^2 = .170^{**}$	$F(2, 170) = 1.65, \eta_p^2 = .019$
Parody Only	26.34 (9.06)	24.47 (11.25)			
Thin-Ideal plus Parody	24.68 (7.86)	22.55 (9.29)			
<i>Negative Affect</i>					
Thin-Ideal	17.98 (7.21)	18.55 (8.49)	$F(2, 170) = 1.71, \eta_p^2 = .020$	$F(1, 170) = 0.77, \eta_p^2 = .004$	$F(2, 170) = 2.58, \eta_p^2 = .029$
Parody Only	18.00 (7.11)	16.61 (7.71)			
Thin-Ideal plus Parody	15.98 (5.18)	15.86 (7.04)			

^a SD = standard deviation

* $p < .05$. ** $p < .001$.

In order to test the specific hypotheses, a series of ANCOVAs with two planned comparisons were conducted using the LMatrix subcommand on SPSS. Each outcome measure was tested separately as the dependent variable (body dissatisfaction, body shame, positive affect and negative affect). The independent variable was condition (image type: thin-ideal, parody only, thin-ideal plus parody). The relevant pre-exposure measure was entered as a covariate to control for pre-existing individual differences separately for body dissatisfaction, body shame, positive affect and negative affect, respectively. In order to determine whether post-exposure body dissatisfaction, body shame and mood differed significantly, the first planned comparison compared the thin-ideal condition against the

parody only condition [contrast: -1 0 +1]. The second planned comparison compared the parody only condition against the thin-ideal plus parody condition [contrast: 0 -1 +1).

The first set of planned comparisons showed that participants who viewed parody images alone experienced significantly less body dissatisfaction than participants who viewed thin-ideal images, $F(1, 169) = 28.13, p < .001$, with a large effect size ($\eta_p^2 = 0.143$). Those who viewed parody images alone also experienced significantly less body shame, $F(1, 169) = 28.13, p < .001, \eta_p^2 = 0.63$, and negative affect, $F(1, 169) = 5.01, p = .027, \eta_p^2 = 0.029$, relative to participants who viewed thin-ideal images. There was no significant difference in positive affect between participants who viewed parody images and thin-ideal images, $F(1, 169) = 2.96, p = .086, \eta_p^2 = 0.017$. Hypothesis 1 was thus partially supported, with exposure to the parody images alone decreasing body dissatisfaction, body shame and negative affect, relative to the thin-ideal images alone.

The second set of planned comparisons showed that participants who viewed parody images alone experienced significantly less body dissatisfaction than participants who viewed thin-ideal plus parody images, $F(1, 169) = 6.56, p = .011$, with a small to moderate effect ($\eta_p^2 = 0.037$). There were no significant differences between participants who viewed only parody images, than those who viewed thin-ideal plus parody images, for the outcomes of body shame, $F(1, 169) = 1.89, p = .171, \eta_p^2 = 0.011$, positive affect, $F(1, 169) = 0.09, p = .770, \eta_p^2 = 0.001$, or negative affect, $F(1, 169) = 1.65, p = .201, \eta_p^2 = 0.010$. Thus, Hypothesis 2 was partially supported, with exposure to the parody images alone resulting in reduced body dissatisfaction, relative to the thin-ideal plus parody images.

The Moderating Role of Thin-ideal Internalisation

To determine whether thin-ideal internalisation moderated the effect of image condition on the outcome variables (body dissatisfaction, body shame, positive affect, negative affect), a series of hierarchical multiple regression analyses were performed.

Dummy coding was used, given that the independent variable of condition (image type) had three levels. Two dummy variables were computed (Thin-ideal vs Parody Only: -1, 0, 1 and Parody Only vs Thin-ideal plus Parody: 0, -1, 1). The potential moderator (thin-ideal internalisation; SATAQ-4R) was centred by subtracting the mean from each score, as recommended by Aiken and West (1991). Product terms were also created to represent the interactions between conditions and thin-ideal internalisation. Pre-exposure scores were controlled for in Step 1 of the analyses. The two dummy variables for condition comparison (independent variables) and SATAQ-4R (moderator) were entered as predictors in Step 2 (main effects), and the product terms (interactions between condition and moderator) in Step 3. Evidence of moderation is shown when the product terms explain significant additional variance over and above the main effects. Separate regression analyses were performed for each of the four outcome variables. These analyses showed that no significant interactions between thin-ideal internalisation and image type were shown for the outcomes of body shame, positive affect and negative affect. Therefore, thin-ideal internalisation did not moderate the effect of image type on body shame or mood.

Table 3 presents a summary of the regression analysis for the outcome of body dissatisfaction. Step 1 of the analysis indicated that pre-exposure body dissatisfaction explained a large proportion (77%) of variance in post-exposure body dissatisfaction. Step 2 of the analysis explained additional significant 4% of variance in body dissatisfaction, $F_{Change}(3, 168) = 12.95, p < .001$. Specifically, SATAQ-4R, $b = 3.46, p = .018$, indicated that high levels of thin-ideal internalisation is associated with higher body dissatisfaction. Step 3 was also significant, $F_{Change}(2, 166) = 9.33, p < .001$, with the interaction term between Parody Only vs. Thin-ideal plus Parody and SATAQ-4R also reaching significance, $b = -6.60, p = .004$. The interaction term between Parody Only vs. Thin-ideal did not reach significance.

Table 3

Hierarchical Regression Analysis of Internalisation of the Thin-Ideal (SATAQ-4R) as a Moderator of Body Dissatisfaction

Model	Predictor	b^a	SE	R^2	ΔR^2	ΔF
1.	Pre Body Dissatisfaction	.902**	.037	.77	-	583.02**
2.	Parody only vs Thin-Ideal (PvT)	-7.60**	2.16	.82	.04	12.95**
	Parody only vs Thin-Ideal plus Parody (PvTP)	-12.44**	2.13			
	SATAQ-4R (SATAQ)	3.46*	1.45			
3.	PvT x S	3.63	2.09	.83	.02	9.33**
	PvTP x S	-6.60*	2.27			

^a b values were obtained in the final step of the regression analysis.

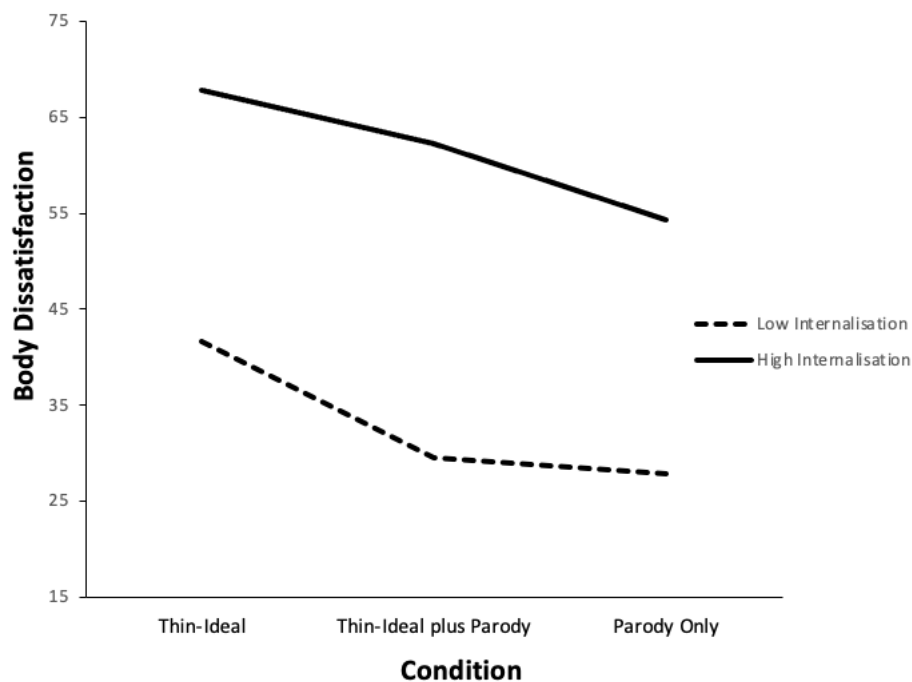
* $p < .05$. ** $p < .01$.

To determine the nature of the effect, a moderation analysis was performed using the Preacher and Hayes PROCESS macro for SPSS (Hayes, 2013). The analysis was conducted using Model 1 of PROCESS, with dummy variable, Parody only vs Thin-Ideal plus Parody (PvTP), entered as the predictor, and thin-ideal internalisation entered as the moderator. Pre-exposure body dissatisfaction scores was entered as the covariate. The analysis confirmed that the association between the image conditions and body dissatisfaction was moderated by thin-ideal internalisation. Specifically, participants with higher levels of thin-ideal internalisation experienced greater body dissatisfaction after viewing the thin-ideal plus parody images, relative to viewing the parody images alone ($b = -7.13$, $SE = 1.66$, $p =$

< .001, 95% CI [-10.40, -3.86]). In contrast, participants with low levels of thin-ideal internalisation experienced similar levels of body dissatisfaction when exposed to both conditions containing a parody image (alone or paired with a thin-ideal image) ($b = 2.12$, $SE = 1.75$, $p = .228$, 95% CI [-1.34, 5.58]). The differential effects of image type for the outcome of body dissatisfaction, according to level of thin-ideal internalisation, is depicted in Figure 1. For ease of interpretation, a median split was used to denote low and high values of thin-ideal internalisation.

Figure 1

The Effect of Image Type on Body Dissatisfaction, Moderated by Thin-Ideal Internalisation



As participants with high thin-ideal internalisation were found to experience less body dissatisfaction when exposed to parody images alone, relative to images containing the thin-ideal, Hypothesis 3 was partially supported.

Discussion

The current study aimed to investigate the effect on women's body dissatisfaction, body shame and mood, of viewing parody images either alone, paired with the thin-ideal image, or the thin-ideal image alone. The present study replicated and extended that of Slater et al. (2019), who found that exposure to parody images paired with a thin-ideal image increased body satisfaction and happiness in young women, relative to exposure to the thin-ideal image alone. Given the importance of the experience of body shame for maladaptive outcomes in women, the present study also included body shame as an outcome. An additional condition of parody image alone (without the thin-ideal), was also included, to enable investigations into their effects on women's outcomes alone.

Previous experimental research has consistently demonstrated the detrimental impact of viewing thin-idealised imagery on women's body dissatisfaction (e.g., Brown & Tiggemann, 2016; Tiggemann & Barbato, 2018). Consistent with this, our findings also demonstrated that women exposed to thin-ideal images alone also experienced a significant increase in body dissatisfaction, adding to the growing body of experimental research demonstrating the detrimental impact of viewing idealised imagery (Tiggemann et al., 2018). Similar to the findings of Slater et al. (2019), the current study also demonstrated the positive impact that viewing humorous parody images, that use an average sized female body, can have on women's body image, body shame and mood.

Further, findings also demonstrated the significant additional benefit of viewing parody images alone for decreasing body dissatisfaction, over viewing the parody image paired with the thin-ideal image. Comparable to Slater et al.'s (2019) study and previous studies examining the impact of exposure to "average" sized women (e.g., Cohen et al., 2017; Cohen et al., 2019; Diedrichs & Lee, 2011) viewing an average sized woman's body (that of Celeste Barber), posed in a comedic way, may have contributed to participants feeling less

dissatisfied and ashamed of their own bodies, according to social comparison theory (Festinger, 1954). That is, participants may have considered Celeste's body to be similar or less attractive than what they value, suggesting lateral or downward comparisons, respectively (Slater et al., 2019). Appearance comparisons or their directions were not analysed here. However, as measures of appearance comparison were obtained during data collection (as part of a wider research project), it is recommended that their potential mediating effect is analysed to possibly shed light on this effect.

The additional benefit of viewing the parody image alone rather than attached to the thin-ideal was unique to body dissatisfaction, with no significant difference in body shame or negative mood for participants exposed to the parody only condition vs parody paired with thin-ideal condition. Thus, it is likely that the observed effects on negative mood and body shame derived from viewing the parody image component of the thin-ideal plus parody post. This notion is consistent with recent findings, that viewing "realistic" Instagram photos of women adopting a natural pose (e.g., visible stomach rolls) in isolation, added no benefit above viewing the "realistic" image paired with the idealised "Instagram" version of the same photograph (e.g., strategically posed to appear thin and attractive; Tiggemann & Anderberg, 2020).

A somewhat surprising finding in the present study was that exposure to parody images in isolation, compared to when paired with thin-ideal celebrity version, was found to further reduce only body dissatisfaction after exposure, but not body shame or negative mood. One possible explanation may be that the degree of thin-ideal internalisation is a mechanism behind such effects. The present study aimed to investigate the moderating role of thin-ideal internalisation on the associations between image type and body dissatisfaction, body shame and mood. Our findings indicated that high levels of thin-ideal internalisation is associated with higher body dissatisfaction, supporting previous research (Clark &

Tiggemann, 2008; Dittmar & Howard, 2004). As predicted, thin-ideal internalisation was a moderator, where women with high thin-ideal internalisation experienced significantly less body dissatisfaction after viewing parody images alone, in comparison to the paired parody and thin-ideal images. Interestingly, our finding was inconsistent with Slater et al. (2019) who found no moderation by thin-ideal internalisation. However, the inclusion of the third “parody only” condition meant that effects could be examined in relation to the parody image itself, which was not possible in the Slater et al. (2019) study. Contrary to predictions, thin-ideal internalisation did not moderate the effects of image type on body shame or mood.

Findings from the present study complement existing literature on the effect of viewing idealised imagery on body dissatisfaction more broadly, whereby adverse effects are more likely experienced by women with high internalisation of beauty and appearance ideals (Krawczyk & Thompson, 2015). Hence, for women who highly internalise the thin-ideal, the addition of the humorous parody image may not be powerful enough to overcome the detrimental impact of viewing a thin, idealised woman (Bissel & Zhou, 2004). For these women, viewing a parody image alone appears to be more beneficial for decreasing body dissatisfaction than when the parody image is paired with the thin-ideal, as the thin-ideal likely remains the salient aspect of the Instagram post (Tiggemann & Barbato, 2018). This proposition is also supported by our finding that women low on thin-ideal internalisation experienced similar levels of reduced body dissatisfaction after exposure to the parody image in either condition, which suggests that for these women, the presence of a thin-ideal image within a parody post is not salient or powerful enough to negatively impact body dissatisfaction. As higher thin-ideal internalisation can foster body dissatisfaction, and eating disorder symptomology (Thompson & Stice, 2001), future investigations into potential interventions that combat internalisation of the thin-ideal are warranted.

Our findings, like previous research (Harper & Tiggemann, 2008; Slater et al., 2019) suggested that exposure to thin-ideal imagery reduced positive mood. However, such findings were in contradiction to Slater et al.'s (2019) findings and our predictions, as there were no group differences on positive mood, instead participants experienced reduced positive mood after viewing Instagram posts in any condition. This was surprising, particularly given Slater et al.'s (2019) finding that the addition of the parody image appeared to ameliorate the negative effect of exposure to thin-ideal images on participants happiness (i.e., positive mood). However, it is important to note that unlike Slater et al., (2019) who utilised three VAS to measure the mood variables of happy, confident, and anxious, the present study utilised the PANAS (Watson et al., 1988). The PANAS (Watson et al., 1988) allowed the inclusion of broader aspects of both positive and negative mood, as mood is not limited to experiences of happiness, confidence, and anxiety. Therefore, the present study examined broader aspects of mood and affect, unlike Slater et al. (2019), plausibly resulting in different mood outcomes. Alternatively, the reduction in positive mood post exposure is consistent with previous findings demonstrating passive social media use (e.g., not actively engaging with content) can be problematic and is associated with depressive symptomology (i.e., reduction in positive mood) (Escobar-Viera et al., 2018). Regardless, further research is required to understand the reduction in positive mood after exposure to Instagram type images, including humorous parody images.

The findings of the present study highlight that Instagram, when curated appropriately by the user, can be associated with some benefits for body image; specifically, viewing parody images can be beneficial for reducing body dissatisfaction, body shame and negative mood in women. As our findings additionally suggested that women high on thin-ideal internalisation experienced less body dissatisfaction when viewing parody images alone, compared to when attached to an image portraying the thin-ideal, advocating that women

high on internalisation should curate their Instagram feeds to only include humorous parody images would be an ideal, albeit potentially unrealistic feat. Furthermore, recommending women to reduce their time engaging with social media accounts promoting thin-ideal beauty standards is also not likely to be an alluring or practical suggestion. Instead, a more feasible and realistic suggestion may be to encourage women to curate their social media feeds by following accounts (e.g., @celestebarber) and hashtags (e.g., #celestechallengeaccepted) that post only humorous body positive imagery, to assist with reducing dissatisfaction and shame about their bodies. To increase the prevalence of parody images online, social media users could also be encouraged to post parody images that challenge unrealistic ideals. However, while encouraging users to post parody images themselves, care should be taken to ensure that posts do not emulate “skinny shaming”, whereby a person with a thinner body shape (emulating the thin-ideal) is critiqued for their appearance in an insulting manner (Lumsden & Morgan, 2017). This is important to consider when posting parody images, as if the images were interpreted as a form of appearance-based teasing, this may also have detrimental effects on women’s body image and self-worth (Menzel et al., 2010). Given that adolescent girls are particularly susceptible to the detrimental effects of social media (Tiggemann & Miller, 2010) greater prevention efforts are warranted. Ideally, incorporating social media literacy programs that promote adolescents to be more selective in the content that they choose to engage with, in educational systems offer a practical avenue, and have shown some success (McLean et al., 2017; Zuair & Sopory, 2020). Moreover, since parody images themselves can be considered a form of social media literacy (Slater et al., 2019), introducing parody-images in these programs offer a practical suggestion.

A number of limitations were present in the current study, which need to be taken into account when interpreting study findings. First, the sample consisted primarily of young Caucasian undergraduate university students; therefore, the findings may not generalise to

other groups of women. Second, images from only one parody Instagram account were utilised in the study. Therefore, further research is required to ascertain whether findings generalise to other parody images. As the Instagram account that the images were taken from (Celeste Barber) is highly popular (over 8 million followers), it also increases the likelihood that participants had already been exposed to the parody content, and therefore potentially already primed to perceive Celeste as amusing. Ideally, future research could examine the effects of parody images from lesser-known figures. Additionally, the present study only examined the effect of parody images, whereas Celeste Barber and other parody accounts (e.g., @_emilife) also post parody videos mocking the unrealistic nature of videos containing celebrity thin-ideals. Future research could consider the impact of viewing parody videos on women's body image, shame and mood, as video-based imagery may have differential effects. This could be important to consider given that Instagram videos have been shown to have almost 50% more engagement than images (Michalski, 2019). Fourth, although including the visual quality question task during the image exposure was a methodological strength, and in keeping with previous body image research (e.g., Brown & Tiggemann, 2016), rating the quality of images does not emulate the way in which Instagram users engage with content. Future research could consider employing an engagement method unique to Instagram, such as asking participants to *like*, save or comment on each post to increase ecological validity, and decrease problematic effects of passive social media use (Escobar-Viera et al., 2018). Finally, the present study examined the imminent responses to acute exposure (less than three minutes) to the Instagram images. Due to the vastly growing popularity of the body positive movement (Sastre, 2014), women are likely exposed to more parody images on Instagram. Since the women in our sample reported spending between thirty and sixty minutes on Instagram every-day, future research could investigate the effects of extended exposure to parody images.

Conclusions

Despite the above limitations, the findings of the present study parallel those of previous literature which demonstrated that exposure to idealised Instagram imagery leads to increased body dissatisfaction (e.g., Tiggemann & Barbato, 2018). Similar to previous experimental research, exposure to parody images paired with the thin-ideal showed promising effects for protecting women's body image and wellbeing by decreasing body dissatisfaction, body shame and negative mood. Importantly, the present study provided additional evidence that Instagram posts of parody images alone may offer an additional benefit of decreasing body dissatisfaction, thus enriching preliminary evidence that parody Instagram posts offer an innovative and promising avenue for practical solutions to improve body image in women. It was found that women with high thin-ideal internalisation experienced less body dissatisfaction when exposed parody only Instagram posts, relative to women exposed to paired thin-ideal and parody posts, suggesting that parody posts in isolation offer more benefit than when presented with the thin-ideal for women who highly internalise thin appearance ideals. Taken together, the findings show that viewing parody Instagram posts provide an immediate benefit by reducing body dissatisfaction, body shame and negative mood, although further research is warranted to examine their longer-term impact on woman. Encouraging women to curate their Instagram feeds to include more parody content may be an avenue to improve overall body image and wellbeing.

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Author Contributions

VV was responsible for study design, data collection, statistical analysis, interpretation and manuscript drafts; AT supervised the project, contributed to study design, verified the

statistical methods, assisted with data interpretation and critically reviewed manuscript drafts. MH supervised the project, contributed to study design, verified statistical methods, assisted with data interpretation, and drafted the final manuscript.

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Conflict of Interest

The authors have no conflict to disclose.

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Appendix

GUIDE FOR AUTHORS

Types of Papers

The journal publishes

1. Full-length articles of the following types: **Original research articles** (studies that do not fit one of the other types listed below) **Systematic reviews / meta-analyses** (please follow PRISMA checklist: <http://www.prisma-statement.org/>) **Methodological / protocol articles** (articles that explicate an innovative research study design in which data are currently being collected) **Unexpected / null results articles** (articles grounded in extant theory that have a sound methodological design and adequate statistical power and are analyzed appropriately, but primary hypotheses were not supported) **Scale development / adaptation articles** (multi-study/sample articles that investigate the psychometric properties of a newly developed or existing scale relevant to body image; scale translations and applications to different samples are welcome) **Replication studies** (consistent with Open Science initiatives, we encourage articles that replicate--or fail to replicate--existing body image research) **Theoretical review articles** (typically invited; however, if you have an idea, propose it to the Editor-in-Chief)

Please choose the article type that is the best fit for your article (we realize that some articles may fit into more than one type).

While full-length articles have no explicit limits in terms of numbers of words, tables/figures, and references, an article's length must be justified by its empirical strength and the significance of its contribution to the literature.

2. Shorter communications of the following types: **Brief research reports** (articles with a more defined and/or limited focus than original research articles) **Ideas worth researching** (articles that propose a novel idea for advancing research on body image) **Methodological innovations** (articles that discuss the application of a novel statistical approach to the study of body image)

Guidelines for short communications are \leq 3000 words from Introduction through Discussion and \leq 30 references. There are no limits on tables and figures

3. Themed special issues **Theoretical special issue** (a collection of review articles from experts in the body image field that focus on a relevant body image topic) **Empirical special issue** (a collection of empirical articles that offer novel insights into a relevant body image topic) **Data set special issue** (a collection of empirical articles that emerge from the same, large data set; each article within the issue must be incremental and overlapping data between articles must be minimal)

We especially encourage special issues that bridge body image theory and research with other disciplines and social science constructs.
Please contact Editor-in-Chief to propose your idea for a special issue.

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Of note, the recommendation to avoid string citations does not apply to: Statements that include more than one finding. For example, "Over the past 10 years, researchers in a number of countries have begun to explore the relationship between positive body image and psychological well-being" needs multiple citations because authors are referring to researchers and countries (both plural). However, reference to all work that has explored this relationship is probably not needed.

As another example, "research shows that body dissatisfaction is correlated with disordered eating, anxiety, and depression" may include multiple citations, with different citations supporting different aspects of this statement. Systematic reviews and meta-analyses whereby the citations are linked to relevant themes/data that are included in the analysis.

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Formats

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