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

Abstract

Although social networking services typically promote the thin beauty ideal for women, they also provide an opportunity for users to challenge this dominant ideal in unique and novel ways. This study aimed to experimentally investigate the influence of exposure to humorous, parody images of thin-ideal celebrity *Instagram* posts on women's body satisfaction and mood compared to exposure to thin-ideal celebrity posts alone. Participants were 102 women aged 18-30 years who were randomly allocated to view either a set of *Instagram* images of thin-ideal celebrity posts or humorous parody images of the same celebrity posts. Results indicated that acute exposure to parody images led to increased body satisfaction and positive mood (happiness) compared to exposure to the thin-ideal celebrity images alone. No group differences were found on levels of trait appearance comparison or social media literacy, and the findings were not moderated by trait levels of thin-ideal internalisation. The findings provide preliminary support for the use of humorous, parody images for improving body satisfaction and positive mood in young women and add to the small but growing body of research highlighting potentially positive effects of social media.

Keywords*:* Social Media; Body image; Mood; Instagram; Parody; Humour

1. Introduction

A substantial body of research has demonstrated that mass media images are a significant contributor to sociocultural beauty ideals and subsequently to women's body dissatisfaction (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Meta-analyses confirm small to moderate effects of exposure to 'thin-ideal' images from fashion magazines and television on women's body dissatisfaction from both correlational and experimental studies (Grabe, Ward, & Hyde, 2008; Levine & Murnen, 2009; Want, 2009). However, in the time since these studies were published, the Internet has become the most commonly used media (Bair, Kelly, Serdar, & Mazzeo, 2012), with social media sites (such as *Facebook* and *Instagram*) being used by 90% of young American women aged 18-29 years (Perrin et al., 2015). As such, it is now important for research to focus on the influence of social media sites on body image concerns. To date, correlational research has reported relationships between general social media usage and poorer body image in young women (Cohen & Blaszczynski, 2015; Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Fardouly & Vartanian, 2015; Mabe, Forney, & Keel, 2014), as well as more specific social media engagement, such as investment in 'selfies' (Cohen, Newton-John, & Slater, 2018; McLean, Paxton, Wertheim, & Masters, 2015; Mills, Musto, Williams, & Tiggemann, 2018), and following 'appearance-focused' accounts on *Instagram* (Cohen, Newton-John, & Slater, 2017). The current study investigates the impact of viewing a particular type of *Instagram* post, parody images of thin-ideal celebrity images, on young women's mood and body satisfaction.

1.1. Social Media and Body Image

Social media (like *Facebook*, *Instagram*, and *Snapchat*) are Internet-based sites that allow users to form a network of 'friends' or 'followers' and view, share, and interact with user-generated content (Perloff, 2014). Compared to the passive consumption of traditional

media forms, individuals actively decide how they participate on social media (e.g., what they post, who they choose to follow). Despite the ostensible benefits of social media users' improved autonomy, it nonetheless appears that these services provide a unique combination of traditional depictions of idealized female bodies, the possibility for high-frequency exposure to images of one's peers, as well as the opportunity to give and receive feedback on user-generated content in the form of 'likes' or 'comments' on posts. These features combine to provide an environment rich in opportunity for appearance-based comparisons and thin-ideal internalisation, processes known to precede body dissatisfaction and disordered eating (Fardouly, Pinkus, & Vartanian, 2017; Tiggemann, 2011). Indeed, a recent systematic review confirmed a relationship between general social media use and body image disturbance and disordered eating (Holland & Tiggemann, 2016). However, of note, most of the studies included in this review were correlational in design and examined general *Facebook* usage (e.g., time spent on *Facebook* or frequency of *Facebook* use). It has been suggested that a more nuanced approach to the consideration of the impact of social media use is necessary, specifically attempts to consider the effect of various elements or features of social media (Slater, Varsani, & Diedrichs, 2017; Smock, Ellison, Lampe, & Wohn, 2011).

A few correlational studies have begun to unpack the impact of particular social media features on women's body image. Meier and Gray (2014) found that engagement in photo-based activities on *Facebook* (e.g., posting and viewing photographs), but not overall time spent on *Facebook*, was related to poorer body image outcomes in American adolescents. Similarly, Australian adolescent girls who regularly shared 'selfies' and who were more invested in, and more likely to manipulate (edit), their selfies were more likely to report poorer body image (McLean et al., 2015). Recently, Cohen et al. (2018) replicated the findings of McLean et al. (2015) in young adult women. Further, Cohen et al. (2017) replicated the findings of Meier and Gray (2014) regarding engagement in photo-based

activities on *Facebook* in young Australian women, and also demonstrated that following appearance-based accounts on *Instagram* (e.g., celebrity accounts like the Kardashians and fitness accounts) was associated with poorer body image.

Instagram, a social media service solely used for photo and video sharing, has over 1 billion active users, who post over 95 million photos per day (Instagram, June 2018). Almost three quarters of Americans aged 18-24 years old use *Instagram*, and it is the most popular social media service for young women aged 18-29 years (Pew Research Centre, 2018). To date, a handful of experimental studies have examined the effect of exposure to particular types of *Instagram* images on young women's body image, mood, and exercise behaviour. Tiggemann and Zaccardo (2015) showed that brief exposure to 'fitspiration' images on *Instagram* (generally thin and toned women in exercise attire) led to increased negative mood and body dissatisfaction in young women compared to exposure to neutral, *Instagram* travel images, findings that have been replicated with exposure to both celebrity and peer *Instagram* images (Brown & Tiggemann, 2016). Robinson et al. (2017) compared the effect of exposure to three different female physiques in *Instagram* images (thin, athletic, or muscular) on women's body dissatisfaction and exercise behaviour. These authors found that exposure to both the thin-ideal images and the athletic-ideal images led to increased body dissatisfaction, but exposure to the muscular-ideal images did not. Taken together, these studies suggest that exposure to thin and toned images on *Instagram* can have negative effects on women's mood and body image.

Two studies have recently explored whether exposure to particular kinds of *Instagram* content could have *positive* effects on women's body image and mood. In the first, Slater, Varsani, and Diedrichs (2017) examined the impact of exposure to self-compassion quotes on *Instagram* (e.g., "*Cut yourself some slack. You are doing better than you think*", "*Be kind to yourself*") and found that women who viewed these types of quotes showed greater body

satisfaction, body appreciation, self-compassion, and reduced negative mood compared to women who viewed neutral *Instagram* images. Further, viewing self-compassion quotes in amongst fitspiration images led to improved body image and reduced negative mood compared to viewing only fitspiration images. Finally, Cohen, Fardouly, Newton-John, and Slater (2019) considered the impact of 'body positive' ("bopo") *Instagram* content – content that aims to challenge mainstream beauty ideals and encourage acceptance and appreciation of all body types. Brief exposure to body positive content was associated with improvement in body satisfaction, body appreciation, and positive mood compared to exposure to both thin-ideal content and neutral content. Thus, the limited findings to date suggest that there may be particular types of *Instagram* content that can have a positive effect on women's body image and mood.

1.2. Parody Images

A popular public figure on *Instagram* is Celeste Barber, an Australian comedian with over 5.4 million Instagram followers (February 2019). In 2015, Celeste began to parody popular celebrity Instagram posts using the hashtag #CelesteChallengeAccepted. These posts depict Celeste copying celebrity *Instagram* images (e.g., poses, outfits) in a comedic style and are presented alongside the original celebrity post with a humorous caption. An example post features celebrity Kim Kardashian West posing naked in a tree with star emojis covering her nipples and her facial expression looking 'sexily' into the distance. Alongside this image Celeste Barber is almost naked (wearing visible flesh coloured underpants), awkwardly dangling in a tree with large paper plates with the word 'star' written on them covering her breasts, and a somewhat strained, uncomfortable expression on her face. The post is captioned 'When there isn't a star emoji big enough.' Celeste is an average-sized woman, and her posts underscore the absurdity of popular celebrity posts by highlighting the unrealistic and generally unattainable nature of such images. In this way, they might be considered a

form of media literacy, which aims to enhance critical thinking and scepticism about media in an attempt to reduce its persuasive influence (McLean, Wertheim, Masters, & Paxton, 2017).

1.3. Humour and Well-being

While there is no research to date that has examined the impact of humorous stimuli on body image, there is much research demonstrating the broader psychological benefits of humour. Several studies have shown a significant relationship between humour and depression and anxiety in young adults (e.g., Kuiper & McHale, 2009; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003) as well as older adults (e.g., Ganz & Jacobs, 2014). Exposure to humour has also been consistently associated with greater pain tolerance (see Proyer & Wolf, 2017 for a review). Therapeutically, humour has been proposed as a possible technique for improving well-being and physical health (Cernerud & Olsson, 2004) and indeed, humour-based interventions have shown a positive impact on subjective well-being in both brief, one-off interventions (e.g., Ganz & Jacobs, 2014) and in longer, sustained interventions (e.g., Falkenberg, Buchkremer, Bartels, & Wild, 2011).

There are a number of potential mechanisms through which humour might attenuate negative emotions (see Strick, Holland, Van Baaren, & Van Knippenberg, 2009). Most obviously, negative emotions might be reduced as a result of the positive emotions that accompany the experience of humour. Or, it may be that humour requires one to shift perspective and possibly distance themselves from a negative situation. Alternatively, humour might result in cognitive distraction, which could reduce the potential for experiencing of negative affect. In support of the latter proposal, Strick et al. (2009) found that humorous stimuli that posed greater cognitive demand were more effective in reducing negative emotions than less cognitively demanding stimuli. Extending these proposed mechanisms to the current study, exposure to parody images of thin-ideal celebrity images might plausibly interrupt usual processing (internalisation of the thin ideal), and allow one to

159 shift perspective (appreciate the unrealistic and unattainable nature of thin-ideal images). As
160 suggested above, it may be that the humorous posts act in a comparable way to social media
161 literacy interventions. McLean and colleagues have found that adolescent girls (McLean et
162 al., 2017) and young adult women (Tamplin, McLean, & Paxton, 2018) who received a social
163 media literacy intervention experienced significant improvements in body esteem and
164 disordered eating, and also that high levels of media literacy, particularly high levels of
165 critical thinking, mitigated the negative effects of thin-ideal internalisation on body
166 satisfaction outcomes (McLean, Paxton, & Wertheim, 2016a).

167 **1.4. The Current Study**

168 The overall aim of the current study was to examine the influence of exposure to
169 Celeste Barber's parody images of thin-ideal celebrity *Instagram* posts on women's body
170 satisfaction and mood compared to exposure to the thin-ideal celebrity posts alone.
171 Extrapolating from existing research on humour and social media literacy, we hypothesised
172 that exposure to the parody images (containing a thin-ideal celebrity image alongside the
173 parody of this image) would result in greater body satisfaction, greater body appreciation, and
174 enhanced mood relative to exposure to the thin-ideal celebrity posts alone (Hypothesis 1).
175 Second, given the Celeste Barber posts feature an 'average' sized woman and aim to
176 highlight the unrealistic nature of celebrity social media posts, we also hypothesised that
177 exposure to these images would be associated with lower levels of appearance comparison
178 and increased levels of social media literacy compared to exposure to the celebrity posts
179 alone (Hypothesis 2). Finally, the effect on all outcome measures (body satisfaction, body
180 appreciation, mood, appearance comparison, and social media literacy) was predicted to be
181 moderated by trait levels of thin-ideal internalisation, in that effects would be stronger for
182 women low in internalisation (Hypothesis 3).

183 **2. Method**

2.1. Participants

Participants were 102 women aged 18-30 years old (M = 23.55, SD = 2.33), recruited through social media via convenience sampling. They had a mean body mass index (BMI; kg/m^2) of 22.97 (SD = 3.91). The majority of participants identified as White (n = 95, 93.1%), 5 identified as mixed race (4.9%), and 2 identified as Asian (2.0%). There was no difference in age, $t(98) = -1.31$, $p = .19$, BMI, $t(95) = -0.91$, $p = .37$, ethnicity, $\chi^2(2) = 1.95$, $p = .38$, or trait internalisation of the thin ideal, $t(94) = 0.02$, $p = .98$, for participants randomly assigned to the thin-ideal (n = 48) or parody (n = 54) conditions.

2.2. Procedure

The University of the West of England's ethics committee approved this study. The study was advertised via social media as an online study examining the effects of *Instagram* usage on life satisfaction. Only women, aged 18-30 years old, who used *Instagram* were eligible to take part. Participants completed the study online at a location and time of their choice. After providing informed consent, participants completed a series of demographic questions (age, gender, ethnicity, height and weight [to calculate BMI]), *Instagram* use questions, and pre-exposure state measures of body satisfaction, body appreciation, and mood. Then, participants were randomly assigned to one of the two image conditions (thin-ideal, parody). They viewed 16 images for 15 seconds each. Only one image appeared on the screen at a time. To enhance attendance to the images, participants were required to rate whether each image looked like a typical image that would be found on *Instagram* (1 = *not at all*, 7 = *very much*). After viewing the *Instagram* images, participants completed post-exposure state measures of body satisfaction, body appreciation, and mood, as well as measures of state appearance comparisons, social media literacy, and trait internalisation of the thin ideal. At the end of the study, participants were presented with debrief information.

2.3. Study Images

Two sets of visual stimuli were created for the study, each containing 16 images. The parody images were sourced from Celeste Barber's *Instagram* account. The thin-ideal images were sourced from celebrities' public *Instagram* accounts. The parody set contained images of Celeste Barber's recreations of celebrity *Instagram* posts, paired with the original photo. The thin-ideal set contained only the images of the celebrities used in Celeste Baber's posts. All female models were front facing with tight-fitting clothing or clothing that revealed arms, legs, and the abdomen (e.g., two-piece swimsuits). Original hashtags, likes, and captions were included in both conditions.

These images were selected from an original sample of 80 images, which were rated by a small panel (n =12) of women (18-30 years old). To select the images for the thin-ideal condition, participants rated the physical attractiveness and the thinness of the models on a 7-point Likert scale (1 = *not at all*, 7 = *very much*). They used another 7-point scale to evaluate how funny they perceived the parody images to be (1 = *not at all funny*, 7 = *extremely funny*). Any image that had an overall mean score less than 4.5 was discarded. This resulted in 16 images per condition, which is similar to the number of images used in previous media exposure research (Groesz, Levine, & Murnen, 2002). In the thin-ideal condition, the final images had a mean perceived attractiveness rating of 5.14 (SD = 0.39) and a mean thinness rating of 5.54 (SD = 0.40). In the parody condition images had a mean funniness rating of 5.07 (SD = 0.36).

2.4. Measures

2.4.1. Instagram usage. Participants were asked general questions about their *Instagram* use. More specifically, how long they spent using *Instagram* per day [*no time* (1)*; < 10 mins* (2); *10-30 mins* (3); *31-60 mins* (4); *1-2 hrs* (5); *> 2 hrs* (6)], how many people they followed and their followers, how often they posted in *Instagram* [*never* (1); *once a month* (2); *2-3 times a month* (3); *once a week* (4); *2-3 times a week* (5); *daily* (6)], what type

of images they posted in *Instagram* (selfies; fashion; food; animals; scenery/places; other people; quotes/memes; possessions; other), and what device they use to interact with *Instagram* (Mobile phone; tablet/iPad; computer/laptop).

2.4.2. State body satisfaction and mood. Similar to previous media exposure studies (Heinberg & Thompson, 1995), visual analogue scales (VAS) were used to measure participants' state body satisfaction and mood. Participants indicated how they were feeling "right now" by moving a vertical marker to the appropriate place on a horizontal line, with end points labelled *not at all* (0) and *extremely* (10). Three items were used to measure state body satisfaction: "satisfied with my weight," "satisfied with my overall appearance," and "satisfied with my body shape." Responses were averaged with higher scores indicating higher body satisfaction. Internal reliability for the combined body satisfaction measure was high (pre-exposure $\alpha = .94$; post-exposure $\alpha = .96$). Four items were used to measure state mood: "anxious," "depressed," "confident," and "happy." When scores were averaged to form a combined measure of negative mood (positive mood items were reverse coded), the internal reliability of that measure was inadequate (pre-exposure $\alpha = .70$; post-exposure $\alpha = .68$). Further, removing a particular item did not improve the internal reliability of the combined score. Therefore, similar to previous media research using VAS (e.g., Prichard & Tiggemann, 2012) each mood item was examined independently in the analyses. Filler statements (e.g., satisfied with my friendships, satisfied with my romantic relationship) were also included to disguise the purpose of the study and reduce the salience of body-related questions.

2.4.3. State body appreciation. Body appreciation was also measured using VAS with end points labelled *not at all* (0) and *extremely* (10). Three items from the Body Appreciation Scale (BAS; Avalos, Tylka, & Wood-Barcalow, 2005) were selected ("Despite my flaws, I accept my body for what it is," "My feelings towards my body are positive for

the most part," and "My self-worth is independent of my body shape or weight." The items were adapted to state measures by asking participants to indicate how they were feeling "right now." Reponses were averaged to form an overall measure of body appreciation. Internal reliability was adequate (pre-exposure $\alpha = .76$; post-exposure $\alpha = .84$). Filler items related to life satisfaction (e.g., "I feel positive about the future for the most part," "In most ways my life is close to my ideal") were also included to disguise the purpose of the study.

2.4.4. State appearance comparisons. Three items were adapted from the State Appearance Comparison Scale (Tiggemann & McGill, 2004) to measure appearance comparisons made to the women in the study images. Using 7-point Likert-type scales, participants indicated (a) how often they had thought about their appearance when viewing the images (1 = *no thought*, 7 = *a lot of thought*), (b) the extent to which they compared their overall appearance to the people they saw in the images (1 = *no comparisons*, 7 = *a lot of comparisons*), and (c) the extent to which they compared their specific body parts to the people they saw in the images (1 = *no comparisons*, 7 = *a lot of comparisons*). Items were averaged to form an overall score of state appearance comparisons. Internal reliability for the combined measure was high ($\alpha = .95$).

2.4.5. Social media literacy. Three items were selected from the Critical Thinking about Media Messages Scale (Scull, Kupersmidt, Parker, Elmore, & Benson, 2010) to measure social media literacy. Participants were asked to think about visual material that other people post on social media and then respond to each statement ("I think about what the person who posted the image/video wants me to think about him/her," "I think about how true or false the person's presentation of themselves is," "When I see images of thin celebrities I think about whether these images are good for me") on a 5-point Likert scale (1= *never*, 5 = *very often*). Items were averaged, with higher scores indicated greater social media literacy. Internal reliability for the combined measure was adequate ($\alpha = .72$).

2.4.6. Trait internalisation of the thin ideal. Eleven items were used to measure the extent to which participants endorsed Western sociocultural beauty standards depicted in the media. Participants rated nine items from the Internalization-General subscale (e.g., "I compare my body to the bodies of people who are on TV") of the Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3; Thompson, Berg, Roehrig, Guarda, & Heinberg, 2004) on a 5-point Likert scale (1 = *definitely disagree*, 5 = *definitely agree*). Similar to Strubel, Petrie, and Pookulangara (2018), to increase relevance to social media, two additional questions were included ("I do not care if my body looks like the body of people on social media," "I would like my body to look like the body of people on social media"). The 11 items were averaged, with higher scores indicating greater endorsement of the thin ideal. Internal reliability for the combined measure was high (α = .94).

3. Results

3.1. Preliminary Analyses

The pre-and post-exposure depression variable had 19.8% and 17.8% missing data, respectively. Given the large amount of missing data for depression, this variable was not included in further analyses. All remaining variables had less than 8% missing data, with a total of 3.74% missing data across the variables. A Little's MCAR analysis test showed that the remaining data were missing completely at random. Missing data were handled with pairwise deletion. Statistical assumptions were met for all analyses reported below.

3.2. Instagram Use

On average, participants reported spending around 30 minutes to 1 hour on *Instagram* per day (M = 3.98, SD = 1.18). On *Instagram,* participants reported having on average 486.26 (SD = 436.76) followers and followed on average 390.92 (SD = 273.98) accounts. They posted images on *Instagram* 2-4 times a month (M = 3.50, SD = 1.23). For the types of images posted on *Instagram*, 90% of participants reported posting selfies, 61% posted images

of scenery, 51% posted images of other people, 48% posted images of food, 44% posted images of animals, 25% posted quotes or memes, 22% posted images of fashion, 17% posted images of their possessions, and 7% posted 'other' content. For the devices on which participants checked *Instagram*, 99% used their mobile phone, 14% used a tablet or iPad, and 7% used a computer.

3.3. Impact of Study Images on Body Satisfaction, Body Appreciation, and Mood

Repeated measures analyses of variance (ANOVAs) were conducted to examine any condition (thin-ideal, parody) by time (pre-exposure, post-exposure) interactions separately for body satisfaction, body appreciation, and each of the mood items. Results of the repeated measures ANOVAs and mean scores for each condition pre-and post-exposure to the study images are reported in Table 1. There was a significant condition by time interaction for body satisfaction. Post hoc simple effects analyses showed that participants' body satisfaction increased in the parody condition from pre- to post-exposure to the study images, $F(1, 92) = 8.88$, $p = .004$, $d = 0.21$, but there was no change in body satisfaction over time for participants in the thin-ideal condition, $F(1, 92) = 2.66$, $p = .11$, $d = 0.11$. Body satisfaction did not significantly differ between conditions at Time 1 (pre-exposure), $F(1, 92) = 0.04$, $p = .84$, $d = 0.04$, or Time 2 (post-exposure), $F(1, 92) = 1.68$, $p = .20$, $d = 0.27$. There was also a significant condition by time interaction for happiness. Post hoc analyses showed that participants in the thin-ideal condition reported being less happy from pre- to post-exposure to the study images, $F(1, 97) = 6.40$, $p = .01$, $d = 0.26$, but there was no change in happiness over time for participants in the parody condition, $F(1, 97) = 0.31$, $p = .58$, $d = 0.05$. Happiness did not significantly differ between conditions at Time 1 (pre-exposure), $F(1, 97) = 0.82$, $p = .37$, $d = 0.18$, or Time 2 (post-exposure), $F(1, 97) = 0.33$, $p = .57$, $d = 0.12$. There was no significant time by condition interactions for body appreciation, confidence, or anxiety. There were also no main effects of condition or time for any of the outcome

measures. Thus, Hypothesis 1 was partially confirmed, with exposure to the parody images resulting in greater body satisfaction relative to exposure to the thin-ideal images, and exposure to the thin-ideal images resulting in reduced mood (happiness) relative to the parody images.

3.4. Impact of Study Images on Appearance Comparisons and Social Media Literacy

Separate independent samples *t*-tests were conducted to test for differences in state appearance comparisons and social media literacy post-exposure to the study images for participants in each condition. There was no significant difference in state appearance comparisons following exposure to the thin-ideal images ($M = 3.74$, $SD = 1.92$) or parody images ($M = 3.65$, $SD = 1.78$), $t(99) = -0.23$, $p = .82$, $d = 0.05$. Similarly, there was no significant difference in social media literacy following exposure to the thin-ideal images ($M = 2.82$, $SD = 0.92$) or parody images ($M = 3.12$, $SD = 0.99$), $t(99) = 1.61$, $p = .11$, $d = 0.31$. Thus, Hypothesis 2 was not confirmed.

3.5. Moderation by Thin-Ideal Internalisation

Moderation analyses were calculated using the PROCESS macro for SPSS (Hayes, 2013) to test whether thin-ideal internalisation moderated the effect of study condition on any of the outcome measures (body satisfaction, body appreciation, mood, state appearance comparisons, social media literacy). Each outcome measure was tested separately, and the relevant pre-exposure measure was added as a covariate for the body satisfaction, body appreciation, and mood analyses. There were no significant interactions between the study conditions and thin-ideal internalisation for any of the outcome measures ($ps > .07$). Thus, thin-ideal internalisation did not moderate the effect of the study conditions on any outcome measure, and Hypothesis 3 was not confirmed.

4. Discussion

The present study aimed to examine the effect of brief exposure to parody images of thin-ideal celebrity *Instagram* posts on women's body image, mood, appearance comparisons and social media literacy compared to exposure to thin-ideal posts alone. In support of Hypothesis 1, it was found that exposure to the parody images resulted in greater body satisfaction and happiness compared to exposure to the celebrity thin-ideal images alone. There were no group differences on appearance comparisons or social media literacy, and the findings were not shown to be moderated by trait thin-ideal internalisation. To our knowledge, this is the first study to examine the effect of exposure to humorous, parody images on women's body image and mood.

While some previous studies have highlighted the negative impact of exposure to *Instagram* fitspiration images (Tiggemann & Zaccardo, 2015), and to thin-ideal celebrity and peer *Instagram* images (Brown & Tiggemann, 2016), the current study highlights the potential *positive* impact of exposure to a particular form of *Instagram* content – humorous parody images. Celeste Barber's #CelesteChallengeAccepted posts are a unique way of underscoring the absurdity of many celebrity social media posts, from the generally unattainable bodies, to the often ludicrous and unrealistic poses. It is possible that the parody images provided a "relief" effect from exposure to thin-ideal celebrity images. Similar to effects observed in previous studies of 'average-sized' models (Diedrichs & Lee, 2011; Dittmar & Howard, 2004a, 2004b; Halliwell & Dittmar, 2004; Halliwell, Dittmar, & Howe, 2005), exposure to Celeste's 'average' sized body may have resulted in greater body satisfaction because participants may have judged her body to be more similar to their own. Thus, participants in the parody condition may have had the opportunity to make upward comparisons (i.e., judging someone to be more attractive) to the celebrity image as well as lateral (i.e., judging someone to be the same as you) or downward (i.e., judging someone to be less attractive than you) comparisons during exposure to the parody image. Having the

ability to make lateral and downward comparisons to the parody image may have overridden the effect of making upward comparisons to the thin-ideal image.

The current findings also add to the body of research on the effect of humour and psychological well-being more generally. Whilst the results regarding the effect of humorous images on body satisfaction are novel, the findings regarding humour and positive mood are somewhat in line with previous research (Falkenberg et al., 2011; Martin, 2001), and the suggestion that humour can encourage individuals to change their perspective of a phenomenon (Gelkopf & Kreitler, 1996). Here, like previous research, viewing thin-ideal images reduced participants' happiness (e.g., Harper & Tiggemann, 2008), but the addition of the parody images appeared to ameliorate this negative effect. The parody posts may have required greater cognitive processing than the thin-ideal posts, possibly reducing the potential for negative affect. Further research is needed, however, to understand the potential mechanisms at work (e.g., disruption of thin-ideal internalisation or appearance comparison processes, cognitive distraction), and to explore whether humour might be usefully employed as a strategy for sustained improvements in body image and well-being.

We postulated that the parody posts might serve to remind the viewer of the unrealistic and contrived nature of thin-ideal celebrity posts on *Instagram*, and as such possibly reduce their relevance as a source of appearance comparison. However, the present findings did not show any group differences on measures of appearance comparisons nor on social media literacy (i.e., critical thinking about content on social media). The lack of difference on appearance comparison may have been due to the fact that the parody images were presented alongside the original thin-ideal celebrity images (necessary to make the parody images 'work'), and thus upward appearance comparisons to the celebrity may still have been occurring. These findings are consistent with those examining the effects of disclaimer labels attached to idealised media images (Bury, Tiggemann, & Slater, 2016;

Frederick, Sandhu, Scott, & Akbari, 2016; Tiggemann & Brown, 2018). Those studies consistently find that being informed about the unrealistic and edited nature of thin-ideal images does not change the amount of appearance comparisons made to the images nor does it decrease women's perceptions of how realistic thin-ideal images are. These findings suggest that social comparison processes may be automatic in nature (Bocage-Barthélémy et al., 2018), and that it may be difficult to change a person's perception of how real idealised images are in a brief period of time. Alternatively, as discussed above, the absence of group differences in appearance comparison may be due to participants in the experimental condition making *both* upward comparisons (to the celebrity) and lateral or downward comparisons (to Celeste Barber). Future research could examine the direction of appearance comparisons (not just the frequency of comparisons) to better understand the current findings.

The lack of significant group difference on social media literacy was a somewhat surprising finding given our conjecture that the parody posts would heighten media literacy. It is possible that the parody images, while influencing mood and body satisfaction, were not explicit enough or the quantity was not sufficient to influence social media literacy attitudes. Alternatively, it is plausible that the measurement of social media literacy in the current study was not sufficiently nuanced to detect changes. A measure of 'realism scepticism' may be more appropriate, as this assesses the extent to which media images are perceived as realistic portrayals of social reality (McLean, Paxton, & Wertheim, 2016b). In addition, a more specific social media literacy measure (that requires participants to think about their responses to the specific experimental images, rather than social media images in general) may be necessary to detect changes in social media literacy. Future research is necessary to understand whether exposure to such images is capable of influencing critical thinking about media.

4.1. Practical Implications

The findings do suggest a practical avenue (exposure to humour and parody social media content) that might help to assuage the known negative effects of social media on women's body satisfaction and mood (Holland & Tiggemann, 2016). It is noteworthy that the findings were not moderated by thin-ideal internalisation. That is, exposure to the parody posts increased women's body satisfaction regardless of their level of thin-ideal internalisation, suggesting that parody posts could be beneficial for all women. Alongside the findings of Slater, Varsani, and Diedrichs (2017), and Cohen et al. (2019), the current findings help to inform possible constructive suggestions for social media use in terms of future prevention and intervention efforts. Given it is not likely to be practical, feasible, or appealing to encourage young people to reduce their social media usage, or to stop following particular types of accounts, the encouragement of the inclusion of humorous, body positive, and self-compassionate content into women's social media feeds offers a promising, concrete suggestion. *Instagram* accounts like that of Celeste Barber, and 'body positive' influencers such as 'BodyPosiPanda' have very large online followings (4.5 million and 1 million, respectively), and have general appeal. However, these accounts may not be followed by individuals who could potentially benefit the most from their content, such as those high in body dissatisfaction. Creative strategies are likely needed to encourage young people to follow a diverse range of social media content, and to consume content that enhances positive body image and mood. School-based social media literacy programmes for adolescents have shown initial promising results (McLean et al., 2017), and this is likely the ideal forum to challenge young people to think critically about the content of the social media that they choose to consume.

4.2. Limitations and Future Directions

As with all research, the findings of the present study should be considered in light of possible limitations. Like the majority of experimental studies in this area, the participants

were young primarily White women, thus limiting the generalisability of the findings to other groups of women. Second, the study was conducted online, which when compared to laboratory-based experiments potentially limits the ability to ensure participants adequately attend to the images. However, like other studies that have used a similar approach (e.g., Tiggemann & Zaccardo, 2015), the participants were required to answer a question about each image to increase the likelihood that they attended to the image. Third, consistent with other research (Slater et al., 2017; Tiggemann & Zaccardo, 2015), the experimental exposure was short in duration (3 mins) and the images were consumed passively, with no opportunity to 'interact' as per more naturalistic *Instagram* usage (e.g., 'like' and comment on photos). Ideally, future research will investigate the impact of exposure to social media content utilising more realistic and naturalistic approaches. Fourth, only one parody account was examined in the current study and more research is needed to examine whether these findings generalise to other parody accounts and content. Finally, there was no neutral condition in the current study which has been utilised in some previous research (e.g., Slater et al., 2017; Tiggemann & Zaccardo, 2015), and so the present findings cannot inform whether parody images increase body satisfaction and positive mood over and above exposure to neutral images. Future research might also expand upon these initial findings with experimental designs that aim to further disentangle the impact of the parody images (e.g., to understand the comparative influence of the 'average' size body and the 'parody' element). Research that examines whether comparison direction and/or cognitive demand are mechanisms that help explain the effects observed in the current study will also be beneficial.

4.3. Conclusions

Despite these limitations, the findings of the current study provide preliminary evidence that parody images of thin-ideal celebrity *Instagram* posts may provide a novel and useful approach for increasing body satisfaction and positive mood in young women. As

such, the findings extend previous research examining the broader effects of new media, and more specifically, add to the small but growing body of research highlighting potentially positive effects of social media use. Young women might usefully be encouraged to follow humorous content on social media designed to explicitly challenge the traditional narrow beauty ideals in an attempt to improve mood and body satisfaction.

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Table 1.

The Impact of Condition and Time on Participants' Body Satisfaction, Body Appreciation, and Mood

Measure	Pre-Exposure Mean (*SD*)	Post-Exposure Mean (*SD*)	Main Effect of Condition	Main Effect of Time	Condition × Time Interaction
Body Satisfaction			$F(1, 92) = 0.34$, $\eta_p^2 = .004$	$F(1, 92) = 0.72$, $\eta_p^2 = .01$	$F(1, 92) = 10.42$, $\eta_p^2 = .10$**
Thin Ideal	5.01 (2.69)	4.70 (2.77)			
Parody	4.90 (2.35)	5.42 (2.57)			
Body Appreciation			$F(1, 89) = 0.01$, $\eta_p^2 < .001$	$F(1, 89) = 0.07$, $\eta_p^2 = .001$	$F(1, 89) = 2.36$, $\eta_p^2 = .03$
Thin Ideal	5.57 (2.62)	5.31 (2.75)			
Parody	5.29 (2.04)	5.47 (2.31)			
Happy			$F(1, 97) = 0.03$, $\eta_p^2 < .001$	$F(1, 97) = 2.24$, $\eta_p^2 = .02$	$F(1, 97) = 5.03$, $\eta_p^2 = .05$*
Thin Ideal	7.20 (2.08)	6.64 (2.19)			
Parody	6.80 (2.30)	6.91 (2.31)			
Confident			$F(1, 96) = 0.02$, $\eta_p^2 < .001$	$F(1, 96) = 1.02$, $\eta_p^2 = .01$	$F(1, 96) = 1.02$, $\eta_p^2 = .01$
Thin Ideal	5.57 (2.48)	5.26 (2.56)			
Parody	5.48 (2.36)	5.48 (2.38)			
Anxious			$F(1, 92) = 0.38$, $\eta_p^2 = .004$	$F(1, 92) = 1.14$, $\eta_p^2 = .01$	$F(1, 92) = 2.24$, $\eta_p^2 = .02$
Thin Ideal	4.87 (2.97)	4.96 (3.07)			
Parody	4.84 (2.48)	4.31 (2.87)			

Note. **$p < .01$, *$p < .05$