



Does body positivity work for men as it does for women? The impact of idealized body and body positive imagery on body satisfaction, drive for thinness, and drive for muscularity

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ABSTRACT

Exposure to body-positive imagery plays a positive role in women's body image. However, literature has not examined if this is the case for men too. In this study ($N = 207$), we examined the impact of idealized body and body-positive imagery on both men's and women's body satisfaction and body image concerns. Participants were asked to report their positive and negative mood, body satisfaction, drive for thinness, and drive for muscularity before and after being exposed to either control (landscapes and animals), idealized body, or body-positive imagery. Results showed that women were overall more dissatisfied with their bodies and reported a stronger negative mood and a higher drive for thinness than men. Men, instead, reported a higher drive for muscularity. Exposure to idealized body imagery decreased positive mood and body satisfaction in both men and women. In contrast, exposure to body-positive imagery increased body satisfaction and decreased the drive for thinness in both men and women. Drive for muscularity was not affected by the type of imagery. The findings show that idealized body and body-positive imagery have similar effects on men and women and showcase the importance of considering the effects of body-positivity content for both genders.

1. Introduction

Body image has been considered a women's issue for a long time (see Berg et al., 2009; Frederick et al., 2022) with recent data from the UK showing that 62 % of women feel negative about their bodies (Women and Equality Committee, 2020). However, in 2021 in the UK, 35 % of men reported being unhappy with their appearance and 48 % reported body image concerns (Campaign Against Living Miserably, CALM, 2021). National data show that both women and men struggle with body confidence (YouGov, 2020). Appearance-focused social media platforms, like Instagram, contribute to the proliferation of body image issues but are also the space where movements, like the body positivity movement, emerge (see Gelsinger, 2021). The present research aims to examine whether exposure to body-positive images, as a response to societal body ideals, can improve both men's and women's body satisfaction and reduce body image concerns around weight and muscularity.

1.1. Body image and gender differences

Body image refers to how individuals perceive and feel about their bodies. This can be *negative* when body shame, body dissatisfaction, and body concerns are involved or *positive* when bodies are appreciated, respected, and accepted (Tylka & Wood-Barcalow, 2015). Men and women are both concerned with their bodies and appearance, to the point that a negative body image is considered a public health problem (Bornioli et al., 2019; Paxton, 2000; UK Parliament, 2022). Women report being particularly preoccupied with their weight and appearance (Frederick et al., 2020; Swami et al., 2010; Tiggemann, 2004). Women's body ideal has shifted from being merely thin and slender to involving a fit, lean, and muscular body (i.e., toned, with no fat, and athletic; see Bozsik et al., 2018; McComb & Mills, 2022). Therefore, women have internalised that the ideal female body is thin and fit (Calogero et al., 2007; Czepechor-Bernat et al., 2017) and this may contribute to making them very critical and surveillant about their bodies and likely to engage in body comparison and compulsive exercise (Donovan & Uhlmann, 2022; Duarte et al., 2014; Grogan, 2010). Such factors contribute to the

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development of women's weight preoccupation and eating disorders (Donovan et al., 2020; Grogan, 2006; Tiggemann, 2011; Uhlmann et al., 2018).

Men often reported concerns about being lean and having a muscular body (Hoffmann & Warschburger, 2017; Kelly et al., 2015; McCabe & Ricciardelli, 2004; Paulson, 2020; Swami et al., 2021). Men have consistently reported wishing to lose weight to gain more defined muscled bodies (Leit et al., 2002; McCabe & Ricciardelli, 2004; McCreary & Sasse, 2000) and this is probably why men with body image concerns pay attention to ads and celebrities promoting weight loss (Pickett & Brison, 2019). Muscularity is particularly important for men because it is considered an indicator of masculinity (see Grogan & Richards, 2002). Hence, men who conform to traditional masculinity care about being muscular (see Griffiths et al., 2015) and being able to achieve lean and muscular body goals is associated with men's higher body satisfaction and fewer body image concerns (see Arkenau et al., 2020; Gattario & Frisén, 2019). However, such a drive for muscularity can increase the use of anabolic steroids (Wright et al., 2000) and enhance symptoms of disordered eating behaviours (Duggan & McCreary, 2004; Tylka, 2011). Internalization of body ideals in young men is also associated with food and supplement intake (Sicilia et al., 2023) and with compulsive exercise (see Lavender et al., 2017).

Overall, the literature has indicated that both women and men have body image concerns. Muscularity seems to be particularly important to men because of its association with perceived masculinity while thinness is relevant for women, as it is associated with femininity (Murnen & Don, 2012; Murray & Touyz, 2012). It is therefore not surprising that idealized body imagery for men and women focuses on muscularity and thinness, respectively.

1.2. Social media, idealized body, and body positivity

The association between the use of social media and body image concerns is similar for both men and women (Saiphoo & Vahedi, 2019). The Tripartite Influence Model (Thompson et al., 1999) suggests that a negative body image is triggered by the internalization of unrealistic body standards. This is associated with the fact that individuals engage in upward appearance comparisons (Groesz et al., 2002; see Festinger, 1954 for social comparison theory). Individuals compare themselves with others who are perceived to be better (see Myers & Crowther, 2009), which makes them feel that they cannot achieve unrealistic body standards, thus inducing body dissatisfaction and body concerns (Fardouly & Vartanian, 2015; Jung et al., 2022). Not only that but exposure to idealized bodies and engagement in body comparison are associated with well-being concerns such as depression and negative mood (see Bessenoff, 2006; Humphreys & Paxton, 2004; Sherlock & Wagstaff, 2019). Both men and women internalize body ideals and engage in body comparisons (Boursier & Gioia, 2022; Tamplin et al., 2018) and appearance-based social media platforms make it very easy for users to engage in such comparisons (see Pedalino & Camerini, 2022).

Appearance-focused social media contribute to the perpetuation of *idealized body imagery* that portrays women as slim and fit and men as lean and muscular. Such images usually portray individuals in a sexualised fashion (e.g., scantily dressed and in sensual poses; see Carrotte et al., 2017; Coltrane & Messineo, 2000; Ghaznavi & Taylor, 2015) and are most of the time posed and edited (e.g., photo enhancing, using beauty filters, retouching body features) to avoid showing any body imperfections and thus, represent unrealistic body representations (Fox & Vendemia, 2016). A consistent body of research has shown that exposure to idealized body imagery harms women and men. Several posts on social media are associated with #fitspiration and #fitspo (>72 million posts on Instagram; see Jerónimo & Carraça, 2022a, 2022b). This suggests that being thin and fit is the goal to achieve for women (Pritchard et al., 2020) which has negative consequences on women's body satisfaction (Ghaznavi & Taylor, 2015; Jerónimo & Carraça, 2022a, 2022b). It has been shown that, among young women (between

18 and 35 years old), using and engaging (e.g., commenting, and liking posts) with Instagram is associated with negative body image (Cohen et al., 2017; Engeln et al., 2020; Sherlock & Wagstaff, 2019). Also, being exposed to idealized body imagery on the platform increases body dissatisfaction, thin-ideal internalization, body surveillance, excessive weight and muscle preoccupation in women (Cohen et al., 2017; Kelley et al., 2010; McComb & Mills, 2021; Robinson et al., 2017; Tiggemann & Zaccardo, 2015; see de Valle et al., 2021 and Huang et al., 2021 for reviews). The pressure that women feel to achieve such unrealistic body ideals promoted by social media may contribute to the development of eating disorders such as anorexia and bulimia (Aparicio-Martinez et al., 2019).

Social media imagery concerning men consistently shows lean and muscular male bodies. For instance, only 6 % of Instagram images have been found to portray men with high body fat (see Gültzow et al., 2020). Young men (between 18 and 35 years old) who are exposed to idealized bodies across social media platforms compare their bodies with peers and models and report less body satisfaction and an increased negative body image (see Daniel & Bridges, 2010; Lorenzen et al., 2004; Rounsefell et al., 2020; Yee et al., 2020), specifically when the body is explicitly shown (e.g., bare-chested images, Tiggemann & Anderberg, 2020). Similarly, #fitspiration posts trigger men to internalize muscular ideals, engage in appearance comparison, and follow diets and excessive exercise routines (Alberga et al., 2018; Fatt et al., 2019). Indeed, men not only focus on their muscularity (Kelley et al., 2010) but also report weight concerns (Pritchard & Cramblitt, 2014), especially when exposed to idealized body imagery (Pritchard & Button, 2023).

Over the last decade, however, a body positivity movement that aims to challenge idealized and unrealistic body portrayals by promoting a more diverse and inclusive body representation (see Rodgers et al., 2022) has emerged and proliferated on social media. *Body-positive imagery* consists of un-edited images of individuals embracing their bodies, individuality, and unique characteristics in terms of body shapes and sizes, body and skin imperfections, body abilities, body hair, and any type of appearance (Cohen, Fardouly, et al., 2019; Gelsinger, 2021). Research has found a positive effect of momentary (Cohen et al., 2021; Cohen, Irwin, et al., 2019; Vandenbosch et al., 2022) and daily (Fioravanti et al., 2021; see also Stevens & Griffiths, 2020) exposure to body-positive imagery on mood, body satisfaction, and body appreciation on young women (18–35 years old; but see Fasoli et al., 2023; Nelson et al., 2022 for results on women ranging from 18 to 76 years old). Body-positive imagery has been criticized because it focuses on appearance and sexualization (Cohen, Fardouly, et al., 2019; Cohen, Irwin, et al., 2019; Vendemia et al., 2021; but see Nelson et al., 2022). However, Di Michele et al. (2023) have shown that body-positive imagery can be beneficial for young women's positive mood and body satisfaction even when such images involve elements of sexualization. It has also been shown that body-positive imagery is perceived by women as a critique of unrealistic body ideals, which decreases the weight concerns in women exposed to such type of imagery (Fasoli et al., 2023). This suggests that body positivity is a good strategy to both challenge body ideals and improve body image, at least in women.

Body positivity content on social media has mostly featured and targeted women (see Lazuka et al., 2020), although examples of male body positivity exist. For instance, Manual, a UK-based online platform for men's health and well-being with 35 K followers on Instagram, decided to focus on men's body image for the Mental Health Awareness Week in 2019. They created a campaign entitled 'Men of Manual' depicting the diversity of men's bodies and promoting body acceptance in men (Manual, 2019). A correlational study by Stevens and Griffiths (2020) found that participants who were frequently exposed to body positivity posts on Instagram reported higher levels of body satisfaction and positive mood, and this was true for both men and women. Despite this, the impact of body-positive imagery on men has rarely been studied. Research has shown that enhancing self-compassion and self-esteem through writing tasks and sessions challenging the idealized body image

can be effective strategies to promote body satisfaction in young sexual minority men (Brown & Keel, 2015; Grey et al., 2022). Male body positivity imagery could function similarly, as it challenges unrealistic body ideals and promotes body appreciation. Only one experimental study has assessed the role of body-positive imagery on both young (18–29 years old) men and women (Pritchard & Button, 2023). Results indicated that women and men were likely to report feeling worse about their weight and face when exposed to idealized body rather than body-positive imagery. However, no significant effects of the type of imagery were found on overall body satisfaction, assessed before and after the manipulation. Despite being informative, such results are not conclusive. The effects were observed in some but not all body satisfaction measures. Indeed, this effect was not found in the measure that examined an increase or decrease in body satisfaction. Also, the sample was unbalanced in terms of gender, and the study did not focus on body image concerns around weight (drive for thinness) and muscularity (drive for muscularity) that are associated with the internalization of idealized standards, depression, and disordered eating in young men and women (Garner et al., 2014; McCreary & Sasse, 2000; Pritchard & Cramblitt, 2014).

Altogether, the literature indicates the need to further investigate the impact of exposure of different types of social media imagery (idealized vs. body-positive) on both men and women. However, social media does not only involve being passively exposed to images but gives users the possibility to engage with the content. Indeed, while women often just browse through idealized body content, men are likely to like and comment on muscular ideal content (Mayoh & Jones, 2021). Social media engagement, specifically likes and complimentary comments, is associated with body image concerns (Kim, 2021; Rodgers et al., 2020; Rodgers & Melioli, 2016). Likes and comments can be seen as a way to provide ‘feedback’ and can be used as positive social reinforcement (see Thompson & Stice, 2001). Fasoli et al. (2023) have recently shown that women are more likely to like body-positive and humorous parodies than idealized body imagery as a way to reinforce images critiquing unrealistic body standards. Cohen, Fardouly, et al. (2019) also showed an overall higher willingness in women to follow accounts promoting body positivity rather than unrealistic body ideals. Hence, it is important to understand, how men and women engage with the different types of imagery they encounter on Instagram.

1.3. The present research

The present study aimed to examine the positive effects of Instagram body-positive imagery on young women and men.¹ Instagram has a similar number of male and female users (Statista, 2023) but women report using it more frequently (Laor, 2022), being more concerned about receiving likes or comments (Thelwall & Vis, 2017), and being more affected by the idealized body imagery they see on the platform (see Casale et al., 2021). We considered only young adults since this is the age population that uses Instagram the most (Pew Research Center, 2018), the link between social media use and body image concerns is stronger in young women and men (Saiphoo & Vahedi, 2019), and overall younger women report lower body satisfaction than older women (Hockey et al., 2021). Importantly, Instagram imagery usually portrays young individuals to whom users can identify with and identification with target models is important in explaining body image concerns (see Bell & Dittmar, 2011). Moreover, we considered gender identity, namely how a person identifies, as this is a better indicator of how an individual thinks about their body. Indeed, gender expression and gender identification are associated with body ideal internalization and body image (see Henrichs-Beck & Szymanski, 2017; Richburg &

Stewart, 2022). We only focused on men and women because the media has created and perpetuated societal ideals of how these two genders should look. We excluded nonbinary people who may aim for androgynous and non-stereotypical bodies (see Cusack et al., 2022; Galupo et al., 2021). We also refer to what can be considered ‘idealized body standards’ in Western societies.

Based on the literature mentioned above, we tested the positive effects of exposure to body positivity imagery and the potential negative effects of exposure to idealized body imagery (thin and fit for women, and lean and muscular for men) on body concerns.

We predicted that participants exposed to idealized body imagery would report a decrease in positive mood and body satisfaction (Hypothesis 1a), while the exposure to body-positive imagery would lead to an increase in positive mood and body satisfaction (Hypothesis 1b). No differences were expected in the control condition. We also examined whether gender played a role in body satisfaction.

We expected women exposed to idealized body imagery to increase their drive for thinness (Hypothesis 2a), while exposure to body-positive imagery would decrease their drive for thinness (Hypothesis 2b), with no differences expected in the control condition. We explored whether these effects applied to men too.

We predicted that men exposed to idealized body imagery would report an increase in the drive for muscularity (Hypothesis 3a) but report a decrease in the drive for muscularity when exposed to body-positive imagery (Hypothesis 3b). No differences were expected in the control condition. Hence, we explored whether the type of imagery affected women’s drive for muscularity in a similar way as it was expected to do for men.

Finally, we assessed participants’ willingness to engage (i.e., like and comment) with the images and their willingness to follow accounts posting either idealized or body-positive imagery. Since body-positive imagery is often perceived as a critique of unrealistic body ideals (see Fasoli et al., 2023), we predicted that participants would be more likely to like (Hypothesis 4a), comment positively (Hypothesis 4b), and follow (Hypothesis 4c) accounts posting body-positive rather than idealized body images.

2. Method

2.1. Participants

Participants were recruited to participate in an online study among psychology students at a British University (rewarded with 1 lab token) or via social networks. The inclusion criteria involved identifying as either a man or woman and being under 35 years old.²

The initial sample consisted of 295 participants who accessed the study, but only 218 completed it. We excluded those who did not provide consent to data use ($n = 8$), identified as non-binary ($n = 2$), and were older than 35 ($n = 1$). The final sample consisted of 207 participants (113 women, 94 men) who were young ($M_{age} = 21.86$, $SD = 3.51$),³ mostly identified as heterosexual ($n = 169$, 81.6 %) and White ($n = 166$, 80.2 %). The most popular social media network used by participants was Instagram ($n = 200$, 96.6 %) and most of them used social media for >2 h a day ($n = 129$, 62.4 %). No gender difference emerged in the use of Instagram, $\chi^2 = 1.79$, $p = .16$, $V = 0.10$, but women ($M =$

² After being recruited, participants completed a 4-item wellness test assessing their psychological wellbeing at the time of accessing the study. Those indicating being extremely unwell would have been prevented from participating. However, no participants indicated to be in such an extremely poor wellbeing state.

³ We also assessed BMI ($M = 23.64$, $SD = 5.61$; women: $M = 22.31$, $SD = 4.14$, men: $M = 25.19$, $SD = 6.66$). No differences across type of imagery or interactions with gender were found ($F_s < 1.44$, $p_s > 0.24$). Since this was self-reported it needs to be taken with caution.

¹ The study was pre-registered: <https://doi.org/10.17605/OSF.IO/37A9W>. Hypotheses were subdivided to reflect directions of the effects, but the predictions were the same.

4.17, $SD = 1.12$) reported spending more time on social media than men ($M = 3.55$, $SD = 1.20$; $t(205) = 3.82$, $p < .001$, $d = 0.53$). Half of the sample ($n = 116$, 56 %) reported having been previously exposed to images similar to the ones they were exposed to, with women reporting having been exposed to these images more than men (women: 65.5 % vs men: 45 %; $\chi^2 = 9.18$, $p = .01$, $V = 0.21$).

A G*Power sensitivity analysis showed that our final sample allowed us to detect a small to medium effect size equal to 0.10 for an ANOVA with 6 groups and 2 repeated measures and a medium effect size equal to 0.22 for a 3×2 between-participants ANOVA with $\alpha = 0.05$, and power 0.80.

2.2. Procedure

After agreeing to take part in the online study, participants reported their demographic information (i.e., age, gender, sexual orientation, ethnicity, height and weight to calculate their BMI) and indicated which social platform they usually used and how many hours a day they spent on social media ($1 = <30 \text{ min} - 6 = >4 \text{ h}$). Next, participants completed pre-exposure measures of positive and negative moods, body satisfaction, drive for thinness, and drive for muscularity. Items for some of these measures (i.e., drive for thinness and drive for muscularity) were adapted to be state rather than trait measures and were tested in a pilot study (see Supplementary information). Then, they were exposed to 10 images of either men or women, depending on their gender. They were randomly exposed to idealized body, body-positive, or control imagery. For each image, they had to indicate the likelihood they would 'like' the image if it appeared on their Instagram feed and the likelihood that they would positively comment on it. After being exposed to all images, they were asked to indicate whether they followed Instagram users posting similar imagery and whether they would follow such an account. Next, participants completed the same state measures (i.e., positive and negative mood, body satisfaction, drive for thinness, and drive for muscularity) once again. Finally, they were debriefed, thanked, and asked to provide a final consent to data use.

2.3. Stimuli

Images were sourced among royalty-free images or those with Creative Commons copyrights by searching for keywords (e.g., body positive, model). Images referring to campaigns involved captions mentioning the campaign under the post. All the images were included in an Instagram framework with the name of the user masked and with the 'heart' symbol tapped to indicate that the image had received likes from more than one user (the number of likes was not indicated; it read like, e.g., 'harry_tim1 and other' with stereotypically feminine and masculine names balanced across stimuli). In the *control imagery condition*, participants were exposed to 10 images involving landscapes and animals without the presence of any human being. In the other two conditions, participants were exposed to individuals perceived to be young and of the same gender as participants. The images portrayed men and women of different racial backgrounds, with the targets' ethnicity similar across conditions. Each image portrayed an individual whose face and body (either the full body or the upper part of the body) were visible. In the *idealized body imagery condition*, participants saw either thin and fit women wearing a bikini while posing in a sensual way (e.g., arching back, self-touching) or men who were depicted either shirtless or in underwear while flexing abs, showing their muscles, and posing sexy (e.g., self-touching). In the *body-positive imagery condition*, participants saw women and men who were wearing bikinis/swimsuits/underwear or gym clothes that clearly showed their bodies. They varied in terms of body size and shape with visible stretch marks, stomach rolls, scars, and skin conditions. Body-positive images also involved a mix of sexualised (i.e., self-touching, posing sexy) and neutrally posed (e.g., standing, sitting in front of the camera) images. Images in the idealized body and body positivity conditions were also pretested to ensure they

were consistent with the definition of each type of imagery (see Supplementary information – S1).

2.4. Measures

2.4.1. Positive and negative mood

We assessed mood on a Visual Analogue Scale (VAS; Heinberg & Thompson, 1995) before and after the exposure to the stimuli. Participants indicated how happy and confident (*positive mood*; Pre: $\alpha = 0.78$, post: $\alpha = 0.77$) and how depressed and anxious (*negative mood*; Pre: $\alpha = 0.73$, post: $\alpha = 0.76$) they were at that moment on a scale from 0 (*not at all*) to 100 (*very much*). An index averaging all ratings was calculated for both positive and negative mood. Hence, the higher the score the more positive/negative the mood was, respectively.

2.4.2. Body satisfaction

Three items (i.e., Please indicate the extent to which you are satisfied with your body/your shape and size/your appearance) were used to assess general body satisfaction on a Visual Analogue Scale from 0 (*Not at all*) to 100 (*Very much*) (VAS; Heinberg & Thompson, 1995). Reliability pre ($\alpha = 0.89$) and post ($\alpha = 0.92$) exposure for this scale was good. We averaged the ratings to create a pre- and post-exposure score of body satisfaction. The higher the score, the higher the body satisfaction at that moment.

2.4.3. Drive for thinness

We assessed the drive for thinness by adapting 7 items of the subscale of the Eating Disorder Inventory III (Garner, 2004). Items measured participants' extreme desire to be thin, concerns with dieting, preoccupation with weight, and an intense fear of gaining weight at the moment (e.g., "Right now, I am preoccupied with the desire to be thinner"). Answers were provided on a scale from 1 (*Not at all*) to 5 (*Very much*). The reliability of this scale pre- ($\alpha = 0.80$) and post-exposure ($\alpha = 0.83$) was good. Ratings were averaged so that higher scores corresponded to a higher drive for thinness at that exact moment.

2.4.4. Drive for muscularity

We adapted 15 items of the drive for muscularity scale (McCreary, 2007; McCreary & Sasse, 2000; McCreary et al., 2004) and tailored them to assess participants' desire to be more muscular and their desire to be fit at that specific moment (e.g., "Right now, I wish that I were more muscular"). Answers were provided on a scale from 1 (*Not at all*) to 5 (*Very much*). The scale was reliable at both pre- ($\alpha = 0.92$) and post-exposure ($\alpha = 0.93$) levels. Ratings were averaged so that the higher the score, the higher the drive for muscularity at that moment.

2.4.5. Likes, comments, and following intentions

Participants were asked to indicate the likelihood they would 'like' the image if this were to appear on their Instagram feed ($\alpha = 0.96$) as well the likelihood they would leave a positive comment (e.g., compliment; $\alpha = 0.98$) for each of the 10 images. Answers were provided on a scale ranging from 1 (*Extremely unlikely*) to 5 (*Extremely likely*). Ratings were averaged so that the higher the score, the higher the likelihood of liking the post.

After viewing all the images, participants answered a single item assessing the likelihood that they would follow an Instagram account that posted similar pictures by answering on a scale from 1 (*Not at all Likely*) to 5 (*Extremely Likely*).

3. Results

A 2 (Time: pre- vs. post-exposure) \times 3 (Type of imagery: control vs. idealized body vs. body positive) \times 2 (gender: man vs woman) mixed ANOVA with the first factor as a within-participants and the other factors as a between-participants was performed on state variables assessed before and after exposure to imagery (i.e., positive and negative mood,

body satisfaction, drive for thinness, and drive for muscularity).⁴ Before conducting such analyses, we checked whether differences across types of imagery conditions emerged on pre-exposure level measures and demographics. No differences were found on pre-exposure assessments ($F_s < 0.99$, $p_s > 0.37$) or demographics (age, BMI, time spent on social media: $F_s < 0.26$, $p_s > 0.77$, and gender, sexual orientation, ethnicity, and Instagram use: $H_s < 4.15$, $p_s > 0.12$).

A 3 (Type of imagery: control vs. idealized body vs. body positive) \times 2 (gender: man vs. woman) ANOVA with both factors as between-participants was conducted on the other variables (likes, comments, engagement). Means and standard deviations concerning gender differences are reported in Table 1 while those differences across the type of imagery are reported in Table 2 (see Supplementary materials, Table 3S, for means across gender and type of imagery).

3.1. Positive and negative mood

A significant effect of gender, $F(1, 201) = 12.46$, $p = .001$, $\eta_p^2 = 0.06$, showed that women reported an overall lower positive mood than men (see Table 1). Moreover, we found a significant interaction between Time and Type of imagery, $F(2, 201) = 4.92$, $p = .008$, $\eta_p^2 = 0.05$. Pairwise comparisons (Bonferroni correction) showed that participants' positive mood decreased after being exposed to idealized body imagery ($p = .006$), but remain the same in the body positive imagery condition ($p = .41$), and control condition ($p = .23$; see Table 2). No other main effects or interactions were significant ($F_s < 1.44$, $p_s > 0.24$). Hence, Hypothesis 1a, but not Hypothesis 1b, was confirmed.

The same analysis performed on negative mood yielded only a significant main effect of gender, $F(1, 201) = 4.02$, $p = .046$, $\eta_p^2 = 0.02$, and of Time, $F(1, 201) = 4.61$, $p = .03$, $\eta_p^2 = 0.02$. Women reported a lower negative mood than men (see Table 1), and there was an overall decrease in mood over time ($M_{pre} = 28.48$, $SD = 21.03$ vs. $M_{post} = 27.08$, $SD = 20.80$). No other significant main effect or interaction was found ($F_s < 1.56$, $p_s > 0.22$).

3.2. Body satisfaction

A significant main effect of gender, $F(1, 201) = 16.64$, $p < .001$, $\eta_p^2 = 0.08$, showed that women were less satisfied with their bodies than men (see Table 1). Moreover, the interaction between time and type of imagery was significant, $F(2, 201) = 8.52$, $p < .001$, $\eta_p^2 = 0.08$. Pairwise comparisons (Bonferroni correction) showed that, while body satisfaction decreased when participants were exposed to idealized body imagery ($p = .001$), it increased when exposed to body positive imagery ($p = .049$). No difference occurred in the control condition ($p = .34$; see Table 2). No other significant main effects or interactions emerged ($F_s < 1.68$, $p_s > 0.19$). The results supported both Hypothesis 1a and 1b.

Table 1
Effects of gender on variables.

Variable	Women	Men
Positive mood	56.05 (18.84)	66.44 (18.97)
Negative mood	30.34 (21.31)	24.70 (18.98)
Body satisfaction	50.18 (23.23)	62.95 (20.88)
Drive for thinness	2.54 (0.88)	2.08 (0.79)
Drive for muscularity	1.88 (0.72)	2.76 (0.79)
Likes	3.38 (0.94)	2.49 (1.10)
Comment	1.82 (1.00)	1.89 (1.06)
Following	2.63 (1.15)	2.22 (1.16)

⁴ For analyses looking at the difference between conditions following Tiggemann and Barbato's (2018) procedure, see Supplementary materials (S4).

Table 2
Effects of type of imagery on variables.

Variable	Time	Control	Idealized body	Body positivity
Positive mood	Pre	61.38 (19.43)	62.29 (18.01)	60.85 (22.48)
	Post	62.84 (19.21)	58.48 (20.58)	61.98 (21.24)
Negative mood	Pre	27.25 (20.32)	31.45 (22.22)	26.88 (20.53)
	Post	25.16 (21.39)	30.80 (20.92)	25.43 (19.86)
Body satisfaction	Pre	54.60 (23.44)	58.82 (20.87)	54.94 (23.44)
	Post	55.52 (25.69)	55.07 (22.95)	57.02 (23.43)
Drive for thinness	Pre	2.46 (0.85)	2.34 (0.84)	2.33 (0.87)
	Post	2.35 (0.93)	2.37 (0.99)	2.14 (0.85)
Drive for muscularity	Pre	2.32 (0.89)	2.30 (0.87)	2.35 (0.81)
	Post	2.24 (0.98)	2.26 (0.93)	2.20 (0.85)
Likes	–	3.67 (0.77)	2.87 (0.97)	3.57 (0.90)
Comment	–	1.72 (1.00)	1.69 (1.03)	2.14 (1.06)
Following	–	2.63 (1.13)	2.15 (1.16)	2.54 (1.18)

3.3. Drive for thinness

A significant main effect of gender, $F(1, 201) = 15.50$, $p < .001$, $\eta_p^2 = 0.07$, indicated that women reported a stronger drive for thinness than men (see Table 1). Moreover, a significant main effect of Time, $F(1, 201) = 9.37$, $p = .002$, $\eta_p^2 = 0.04$, was qualified by an interaction with Type of imagery, $F(2, 201) = 5.38$, $p = .005$, $\eta_p^2 = 0.05$. Pairwise comparisons (Bonferroni correction) showed no differences in the drive for thinness when participants were exposed to the idealized body ($p = .48$) but a decrease of the drive for thinness when they were exposed to body positive imagery ($p < .001$). Unexpectedly, participants in the control imagery condition showed a decreased drive for thinness too ($p = .03$; see Table 2). No other significant main effects or interactions emerged ($F_s < 1.88$, $p_s > 0.17$). The results did not support Hypothesis 2a, but supported Hypothesis 2b and showed the effect to be valid for both women and men.

3.4. Drive for muscularity

A significant main effect of gender, $F(1, 201) = 69.55$, $p < .001$, $\eta_p^2 = 0.26$, showed that men reported higher drive for muscularity than women (see Table 1). Moreover, we found a significant main effect of Time, $F(1, 201) = 15.38$, $p < .001$, $\eta_p^2 = 0.07$, indicating an overall decrease in the drive for muscularity after being exposed to the images ($M_{pre} = 2.32$, $SD = 0.85$ vs. $M_{post} = 2.23$, $SD = 0.92$). No other significant main effects or interactions emerged ($F_s < 3.46$, $p_s > 0.06$). The findings did not support Hypothesis 3a and 3b since the type of imagery did not elicit a change in the drive for muscularity in participants.

3.5. Likes

We found a significant main effect of the type of imagery, $F(2, 201) = 18.44$, $p < .001$, $\eta_p^2 = 0.15$, and a significant main effect of gender, $F(1, 201) = 44.09$, $p < .001$, $\eta_p^2 = 0.18$ (see Table 1). These effects were qualified by a significant interaction, $F(2, 201) = 3.17$, $p = .04$, $\eta_p^2 = 0.03$. Pairwise comparisons (Bonferroni correction) indicated that women were more likely to like body positive ($M = 3.57$, $SD = 0.90$) and control imagery ($M = 3.67$, $SD = 0.77$) than idealized body imagery ($M = 2.87$, $SD = 0.97$), $p_s < 0.005$. No differences emerged between body positive and control imagery ($p = 1.00$). Men, instead, were more likely to like control imagery ($M = 3.18$, $SD = 0.96$) than both idealized body ($M = 2.03$, $SD = 1.11$; $p < .001$) and body-positive imagery ($M = 2.28$, $SD = 0.90$; $p = .001$), with no difference between the last two types of imagery ($p = .86$). Hypothesis 4a was only partially confirmed as the

predicted effect emerged for women only.

3.6. Comments

Results yielded no significant main effect of gender, $F(2, 201) = 0.22$, $p = .64$, $\eta_p^2 = 0.001$, but a significant main effect of type of imagery, $F(2, 201) = 3.89$, $p = .02$, $\eta_p^2 = 0.04$, indicating that participants were more likely to comment on body positive than on the idealized body imagery ($p = .04$). No differences emerged between the control imagery and the other conditions ($ps > 0.07$; see Table 2). The interaction between type of imagery and gender was not significant, $F(2, 201) = 2.12$, $p = .12$, $\eta_p^2 = 0.02$. Hypothesis 4b was therefore confirmed.

3.7. Following intentions

A significant main effect of gender, $F(1, 201) = 6.20$, $p = .01$, $\eta_p^2 = 0.03$, showed that women were more likely to follow the accounts than men (see Table 1). A significant main effect of the type of imagery, $F(2, 201) = 3.25$, $p = .04$, $\eta_p^2 = 0.03$, indicated that participants were more likely to follow an account posting landscapes and animals than idealized body images ($p = .049$). No differences emerged between body positive and other types of imagery ($ps > 0.17$; see Table 2). No significant interaction was found, $F(2, 201) = 0.66$, $p = .52$, $\eta_p^2 = 0.006$. The results do not support Hypothesis 4c.

4. Discussion

This research shows that, overall, women were more dissatisfied with their bodies, and reported a stronger negative mood and a higher drive for thinness than men. However, men reported a higher drive for muscularity. These findings confirm the literature suggesting that women experience stronger body dissatisfaction than men but also suggest that the type of body concern they experience depends on their gender (see Edwards et al., 2014; Karazsia et al., 2017). Indeed, concerns about thinness and muscularity depend on individuals' gender roles and conformity (Blashill, 2011; Griffiths et al., 2015; Murnen & Smolak, 1997) and gendered body ideals (Forbes et al., 2001; Furnham et al., 2002).

Importantly, the type of imagery participants were exposed to played a key role in their body image. Exposure to idealized body imagery decreased the positive mood and body satisfaction in both men and women. In contrast, body-positive imagery increased body satisfaction and decreased the drive for thinness in both men and women. These findings contribute to body image literature in different ways. First, they confirm previous work (de Valle et al., 2021) indicating that idealized body imagery can be detrimental to both men's and women's body satisfaction and showing that the perpetuation of such types of images in social media is not only an issue for women. Second, we extended research on body positivity. We found that exposure to body-positive imagery increased body satisfaction in women but also men. Extending the work by Fasoli et al. (2023), we confirmed here that body-positive imagery can decrease weight concerns. This result is in line with Pritchard & Button (2023) who demonstrated that both men and women felt less bad about their weight when exposed to body-positive rather than idealized body imagery. The internalization of body ideals and social media influence have an impact on both men's and women's drive for thinness (Fernandez & Pritchard, 2012; Pritchard & Cramblitt, 2014) and, hence, being exposed to imagery promoting body diversity, and potentially criticizing unrealistic body ideals (see Fasoli et al., 2023), can reduce not only women but also men's concerns for weight.

Unexpectedly, we found that participants in the control condition, namely when exposed to images portraying landscapes and animals, reported a decreased drive for thinness. This effect is difficult to explain. It is possible that seeing positive images (e.g., nice landscapes and animals) may have distracted participants from thinking about their weight and this reduced their weight concerns. This result can be interpreted in

line with research showing that exposure to natural environments promotes changes in positive body image (Swami et al., 2018) and exposure to scenery decreases negative body image (see Anixiadis et al., 2019) because of their calming effects. Future studies may need to use a more neutral control condition, for instance, images of neutral inanimate objects (see Homan et al., 2012). Also, men reported a general decrease in the drive for muscularity after being exposed to any type of imagery, thus disconfirming our hypotheses. The exposure to body-positive imagery did not play a positive role in how men felt about their muscularity. A possibility is that body positivity is perceived as being about plus-size bodies more than any other body characteristics (see Cohen, 2016; Cwynar-Horta, 2016), and hence acts as a tool to make individuals critically reflect on their weight more than on other body aspects. This would explain the effects of body-positive imagery on the drive for thinness but not the drive for muscularity. However, similarly to another study (Michaels et al., 2013), the drive for muscularity did not increase when men were exposed to idealized body imagery. Research has shown that not all men are similarly affected by idealized male imagery. The amount of attention to body parts (e.g., abs) men give to idealized bodies influences their body image (Nikkelen et al., 2012) and body satisfaction moderates the attention men give to others' muscular bodies (Cho & Lee, 2013). It is possible that we did not observe any effect on men drive for muscularity because we did not take into account individual differences explaining their reactions toward idealized muscular bodies (see Blond, 2008).

The results on engagement with the imagery were interesting. In line with previous work (Fasoli et al., 2023), we found that women were more likely to like body-positive than idealized body imagery. Interestingly, men were reluctant to like any type of imagery portraying other men and preferred images involving landscapes and animals. This may be interpreted as an overall concern of men to show appreciation for other men's bodies or to be seen as interested in anything related to appearance. Being concerned with their appearance and the desire to check how other men look can be associated with a threat to their masculinity (see Hunt et al., 2013). Also, appreciating other men's bodies is often seen as an indicator of same-sex attraction that puts men at risk of being miscategorized as gay and elicits discomfort in them (see precarious manhood Borinca et al., 2021; Vandello & Bosson, 2013). Importantly, both men and women were more likely to comment positively on body-positive rather than idealized body imagery, showing that participants appreciated these posts. This, however, did not translate into a higher likelihood of following accounts posting body-positive images. Instead, women were more likely than men to follow any accounts, confirming previous studies showing women being more engaged in social media (Thelwall & Vis, 2017).

4.1. Limitations and future directions

The study presents some limitations. First, our sample involved mostly White young participants from Western societies as they were recruited in the UK. Since body ideals differ across cultures and contexts (Swami, 2015; Swami et al., 2010) and ethnicity (Altabe, 1998; Ricciardelli et al., 2007), future studies should replicate the findings with more diverse samples and conduct cross-cultural comparisons. Age should also be considered. Recent work showed that body positivity has positive effects on women of different ages (see Fasoli et al., 2023) but other work has shown that the impact of social media on body image is weaker in older individuals (see Saiphoo & Vahedi, 2019) suggesting that age may moderate the effects of imagery. Second, underlying mechanisms need to be examined. Idealized body imagery usually triggers upward body comparisons and the internalization of body ideals in both men and women (see Cahill & Mussap, 2007). Recently, Di Michele et al. (2023) found that women engage in downward body comparison when exposed to body-positive imagery suggesting that they felt better about themselves in comparison to women's bodies portraying diversity and non-idealized bodies. This being the case, it is possible

that body comparison still plays a role in body satisfaction and future studies need to assess this. Future studies may also want to examine alternative types of imagery. Humorous parody imagery elicits an increase in body satisfaction similar to body-positive imagery (see Fasoli et al., 2023; Slater et al., 2019) but this has not been investigated for men yet. Testing whether a variety of Instagram posts can increase body satisfaction is essential to understanding how individuals react to different images. Third, we only examined state changes in body image. We adapted the drive for thinness and drive for muscularity measures to be 'state' measures since, to our knowledge, no state measures on such concerns existed. This proved to be successful as it allowed us to detect some momentary changes in weight preoccupation, but future work should refine or consider alternative state measures for those constructs as well as ways to test how long-lasting the effects are. Moreover, we focused on examining the impact of imagery on the 'negative' side of body image. It would be important to expand this by assessing the effects of body-positive imagery on body appreciation and diverse conceptualization of beauty (see Cohen, Irwin, et al., 2019; Williamson & Karazsia, 2018; Paraskeva et al., 2017). Finally, we need to consider that the type of interaction individuals has with images on social media is different from the 'forced' exposure they had in our study. What individuals see in their Instagram feed depends on the accounts they follow and the posts they like and this may not only consist of a specific type of imagery. Since men and women use and engage with Instagram differently (Laor, 2022), they will likely be exposed to different content. Moreover, Instagram posts do not merely involve images, but they are often associated with captions or come along with comments other users have made. Research has shown that body-positive content varies in its form (e.g., imagery, caption, disclaimers, slogan, comments) and some posts seem to be more effective than others in promoting body-positive image (Rodgers et al., 2021). Hence, future studies should test the impact of a variety of stimuli.

5. Conclusion

This study provides evidence that we need to consider social media imagery when men's body image is concerned. We showed that while exposure to idealized body imagery increases a negative body image, exposure to body-positive imagery in Instagram can be beneficial for both men and women. Indeed, viewing portrayals of men's and women's body diversity that promote inclusion had a positive impact on individuals' overall body satisfaction and reduced weight concerns.

Ethics

This study has received a favourable opinion from the University of Surrey Ethics Committee (FHMS 20-21 049, amendment 4).

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CRediT authorship contribution statement

Fabio Fasoli: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing, Supervision. **Despoina Constantinou:** Conceptualization, Methodology, Writing – review & editing.

Declaration of competing interest

The authors declare no conflict of interests.

Data availability

Data are available on OSF: <https://doi.org/10.17605/OSF>.

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Appendix A. Supplementary data

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