

Article

Differences in Body Image Preoccupation Following Online Exposure to Fitspiration and Thinspiration Images

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Abstract

Background: An emerging body of literature argues how social media significantly shapes behaviours and perceptions related to body image. **Methods:** The main aims of the present study were two: (1) to examine the influence of online exposure to fitspiration and thinspiration images on body image preoccupation in women and men, and (2) to explore the influence of online exposure to these images on appearance-related pressures and the internalization of esthetic ideals by family, peers and traditional media in women and men. A total of 238 subjects (120 women and 118 men) participated in this study. They completed two questionnaires before and after online exposure to fitspiration and thinspiration images. One questionnaire measured body image preoccupation and another one evaluated sociocultural pressure towards body image. **Results:** The results indicated that exposure to such images negatively affected men's body image preoccupation and positively affected women's body image preoccupation. Both groups reduced their adherence to sociocultural attitudes promoting extreme thinness as a beauty standard. Men exhibited increased perceived media-related appearance pressure; women showed no significant change in this variable. **Conclusions:** This study suggests sex-based results and supports the importance of investigating specifically body image preoccupation to distinguish gender differences related to fitspiration and thinspiration online contents.

Keywords: body image preoccupation; social media; gender differences; fitspiration and thinspiration media content

1. Introduction

The widespread adoption of online platforms such as Instagram, Facebook, and TikTok has become an integral component of the daily lives of billions of people worldwide (Bunker & Kwan, 2024). It is estimated that these platforms captured hours of time from approximately 5.17 billion users in the past year, engaged in scrolling through new posts, sharing photos and thoughts, and interacting with others' content (A. Y. Lee & Hancock, 2024). This phenomenon has profoundly transformed social and personal dynamics, highlighting the pervasive impact of technology in contemporary society (Ardi & Putri, 2020; Laughter et al., 2023). Social platforms not only facilitate communication and social interaction but also serve as powerful tools for behavioural shaping. Individuals' behaviour, cognition, and emotions are influenced by their surrounding environment, including the technology they interact with (Fabio & Suriano, 2023). Through processes of observation and imitation, users can internalize social norms, values, and expectations that are continuously represented in the content shared online (Brady & Crockett, 2024; Zhou et al., 2023).



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Moreover, the use of social media can affect self-identification, body perception and other psychological constructs, such as body image (Hamid et al., 2024; Scully et al., 2023).

1.1. Body Image in Woman and Men

Body image is defined as the subjective perception an individual has of their own body, including assessments of size, shape, weight, and overall physical appearance. A positive body image occurs when an individual has an accurate and accepting view of their body, whereas a negative body image may lead to feelings of dissatisfaction, shame, or discomfort regarding one's physical appearance (Gonzaga et al., 2023). This perception can be shaped by a variety of factors, including cultural, social, and familial influences, as well as personal experiences.

The tripartite influence model (TIM) was originally proposed by Thompson, Heinberg, Altabe, and Tantleff-Dunn to explain the development of body image disturbance and eating pathology. The TIM also provided a robust theoretical framework for understanding the impact of sociocultural influences on body image, identifying three primary sources of appearance-related pressure: media, peers, and family (Thompson et al., 1999). According to this model, media, peers, and family exert appearance-related pressures that promote culturally valued body ideals, such as thinness for women and muscularity for men. These pressures contribute to two central mediating processes: the internalization of appearance ideals and appearance-based social comparison. Internalization refers to the extent to which individuals cognitively adopt societal standards of physical beauty, whereas social comparison involves evaluating one's appearance against that of others (Roberts et al., 2022). These processes, in turn, increase vulnerability to body dissatisfaction, body image preoccupation, and related maladaptive outcomes. Greater exposure to sociocultural pressures, such as idealized and thin body images, can exacerbate body dissatisfaction by increasing the perceived discrepancy between one's actual and ideal physical appearance (Castellanos Silva & Steins, 2023).

Numerous studies have demonstrated that both the internalization of body ideals and appearance-based social comparison are significant contributors to body dissatisfaction (Hazzard et al., 2019; Shagar et al., 2019), also highlighting gender-based differences in how physical characteristics are evaluated, which may contribute to disparities in body perception (Barnes et al., 2023). Men are more likely to overestimate their physical attributes relative to women, potentially due to gender stereotypes that promote confidence and assertiveness in men while encouraging modesty in women (Y. L. Lee & Cheng, 2020). Research has found that among women, social comparison is a stronger predictor of body dissatisfaction than internalization of thinness ideals (Javier & Belgrave, 2015). Women's heightened susceptibility to social comparison may stem from the increased societal pressure they face to conform to prevailing beauty standards, a pressure often intensified by frequent exposure to idealized images in the media and culturally embedded gender expectations (Gualdi-Russo et al., 2022). As a result, women are more likely to scrutinize their bodies critically, as their physical appearance is often closely tied to their sense of self-worth and self-esteem (Zaccagni et al., 2020).

Men are more likely to overestimate their physical attributes relative to women, potentially due to gender stereotypes that promote confidence and assertiveness in men while encouraging modesty in women (Gualdi-Russo et al., 2022). Moreover, female beauty ideals tend to be more rigid and uniform compared to male standards, influencing individuals' perceptions and expectations of their own bodies (Zaccagni et al., 2020). Hence, gender differences in negative body image or body dissatisfaction are well-documented in the existing literature, indicating that women and men experience these issues, thin ideals and appearance comparison in distinct ways (He et al., 2020).

1.2. Influence of Fitspiration and Thinspiration Social Media Contents on Body Image

Today, in the digital age, the internalization of the thin ideals and appearance comparison can occur within the context of social media, such as Instagram and Facebook. These social media platforms, with their emphasis on visual content and curated profiles, can expose individuals to idealized and often unattainable body types, prompting them to compare themselves and internalize these standards, also leading to body dissatisfaction. It was found that viewing different desired body types on social media can differently impact an individual's body image in men and women (Arrington, 2021; Fardouly et al., 2015; Limniou et al., 2021).

In the literature, two types of visual content on social media are examined in relation to the development of thin-ideal internalization and appearance comparison: fitspiration and thinspiration images. Fitspiration refers to images that express an idealized and glorified view of fitness by depicting highly trained physiques (Jerónimo & Carraça, 2022). These are usually photos of people in sportswear or images showing before and after transformations from a workout regimen. Thinspiration refers to images depicting individuals with low body mass percentage, which are used as inspiration for weight loss, often with less emphasis on fitness unless it contributes to slimming down (Hogue et al., 2023).

Different studies have examined how the online exposure to these types of images can affect body image, leading to body image dissatisfaction. Mingoia et al. (2017) have identified a positive correlation between increased engagement with thinspiration content and the internalization of thinness as an ideal of beauty among women. Yee et al. (2020) have found that men reported lower levels of dissatisfaction with their body fat and muscularity following exposure to thinspiration images.

Compared to thinspiration, studies on fitspiration content are relatively fewer. A study investigated fitspiration and thinspiration exposure on men's body image using an ecological momentary assessment (EMA). All participants were required to install the InstantSurvey app, which, over a seven-day period, sent six notifications per day at semi-random intervals between 8:00 a.m. and 11:00 p.m., prompting participants to complete brief one-minute assessments (i.e., EMAs). At each EMA, participants were randomly assigned to one of the three images (fitspiration, thinspiration, or neutral). It was found that viewing fitspiration compared to neutral images increased the state of body fat dissatisfaction, whereas viewing thinspiration compared to neutral images reduced both the state of body fat and muscularity dissatisfaction (Yee et al., 2020). This same study was replicated in a female sample, and it was found that online exposure to fitspiration images significantly heightened perceived pressure to achieve an idealized physique (Krug et al., 2020).

Moreover, a review has confirmed that the online exposure to fitspiration images has a negative effect on individuals' body image, increasing their body dissatisfaction; however, this review has highlighted that most of the studies were conducted in a sample of women and younger participants. Consequently, the results cannot be generalized for gender and age (Jerónimo & Carraça, 2022).

Summarizing the research above, it is apparent that the online exposure to fitspiration and thinspiration on social media increases body image preoccupation, so appearance-related content on social platforms emerges as a critical factor in understanding concerns around body image (Vandenbosch et al., 2022).

However, body image, body dissatisfaction and body image preoccupation are distinct constructs (Askew et al., 2020; Mitchison et al., 2017; Valutis et al., 2009). Body image refers to an individual's internal representation of their body, how they perceive, interpret, and mentally picture their physical appearance. This construct is primarily descriptive and representational, not inherently emotional or evaluative. Body dissatisfaction reflects the

emotional and evaluative response to one's body image, specifically, negative feelings or discontent with appearance (Karazsia et al., 2013). This construct captures how someone feels about their body, but not how frequently or intrusively they think about it (Heider et al., 2018). Body image preoccupation refers to the degree of cognitive salience and persistence of appearance-related thoughts, how often, intrusively and uncontrollably, individuals think about their body. This construct is fundamentally cognitive and process-oriented, emphasizing mental occupation rather than emotional evaluation.

Body image preoccupation was selected as the specific variable for the present study because this study focused on cognitive engagement with appearance, rather than emotional valence alone (Goldfein et al., 2000). Unlike dissatisfaction, which captures negative evaluation, preoccupation reflects the intensity, persistence, and intrusiveness of body-related thoughts. This distinction is critical because individuals may experience high preoccupation without extreme dissatisfaction. In addition, this study prioritized cognitive burden and attentional capture, which dissatisfaction alone cannot adequately represent. Hence, body image preoccupation was chosen as the specific variable for this study because it reflects a central cognitive mechanism underlying body image disturbance, one that operates independently of emotional evaluation and offers greater explanatory power for behavioural and psychological outcomes than body dissatisfaction alone.

1.3. Gaps in the Literature

Given the current state of the literature, there appears to be a pressing need to examine the impact of the online exposure to fitspiration and thinspiration contents on body image preoccupation in both women and men. To date, most studies in this area have predominantly recruited female participants, resulting in a notable gap concerning gender differences. Moreover, research specifically investigating the effects of viewing fitspiration contents on social media remains limited.

To the best of our knowledge, no existing studies have directly explored whether the exposure to fitspiration and thinspiration imagery online contributes to an increase or decrease in body image preoccupation. The majority of past research has primarily addressed body image in relation to other psychological variables, such as mood, body dissatisfaction, and disordered eating behaviours. Hence, body image preoccupation has not been sufficiently explored.

By addressing these gaps, a more nuanced understanding of the complex relationship between online image exposure and body image can be achieved, potentially informing interventions and promoting healthier social media habits.

1.4. The Current Study

The present study focused on the impact of online exposure to fitspiration and thinspiration images, a contemporary and highly salient form of media influence. Social media platforms intensify and personalize appearance-related content, potentially amplifying sociocultural pressures described by the TIM. Fitspiration and thinspiration images often idealize extreme thinness, leanness, and muscularity, making them particularly relevant to the internalization mechanisms proposed by the model. Thus, the TIM offers a coherent explanation of how repeated exposure to such content may increase body image preoccupation in both women and men.

Guided by the TIM, to address the research gaps argued above, the primary aim of the present study was to examine the influence of the online exposure to fitspiration and thinspiration images on body image preoccupation in women and men. Given the TIM, which identifies media, peers, and family as the primary sources of appearance-related pressures and the internalization of the thin and muscled ideals, the secondary aim of this

study was to explore the influence of the online exposure to fitspiration and thinspiration images on appearance-related pressures and the internalization of esthetics ideals by family, peers and traditional media.

Recognizing that social media has become a major source of appearance pressure in the digital age, in addition to the original sources proposed in the tripartite influence model, this study also measured the amount of time participants spent using social media, such as Instagram.

The TIM directly guided the selection of the study variables. Online exposure to fitspiration and thinspiration images was conceptualized as a specific manifestation of social media influence. Body image preoccupation was identified as a primary outcome variable consistent with the model's emphasis on body-related concerns. Furthermore, appearance-related pressures and the internalization of esthetic ideals from family, peers, and traditional media were included as theoretically grounded variables, reflecting the tripartite sources of influence outlined in the model.

Based on the literature explored above and the TIM, it was hypothesized that: (1) viewing online fitspiration and thinspiration images would affect body image preoccupation in both women and men, comparing this construct before and after online exposure to these types of images, and (2) in both groups, viewing online fitspiration and thinspiration images would affect both perceived appearance-related pressures by family, peers and traditional media and the internalization of thin and muscled ideals related to these sources of social influence. Due to the limited amount of the previous literature specifically focused on body image preoccupation, and due to the fact that most studies were conducted in a sample of women, specific hypotheses taking gender into account were not made.

2. Materials and Methods

2.1. Participants

Participants were recruited through social media, online advertisement and flyers placed in universities and social venues. Interested subjects were informed to contact the study by phone or e-mail to complete a screening to determine their eligibility. The screening involved a 50 min clinical interview conducted by a psychologist in a room of an Italian University. During the screening, participants were asked demographic and psychiatric questions to gather information about their health condition and socioeconomic status, and they compiled two self-report questionnaires, respectively, to assess Internet use disorder and to measure the amount of time participants spent using Facebook and Instagram, and the frequency of posting and type of their posts. Inclusion/exclusion criteria were defined as follows.

Inclusion criteria: no history of neurological disorders or head trauma, no history of a psychological or psychiatric disorder or illness, no history of intellectual or neurological disabilities, no Internet Addiction Disorder, or Eating Behaviour Disorder, Italian nationality, and 18–30 years of age. Exclusion criteria: current psychopharmacological treatments, professional sports athletes, and working in art and entertainment areas.

The initial sample was composed of two hundred and forty-four subjects (124 females and 120 males). In the screening phase, the Instagram and Social Media Usage Questionnaire and the Internet Disorder Scale were employed to determine level of social media usage and Internet addiction of this sample. Based on the results of these two questionnaires, 6 subjects (4 females and 2 males) were excluded from this study because they had a high score in the Internet Disorder Scale.

The final sample comprised 120 women and 118 men with a mean age of 23.51 years ($SD = 5.75$). All participants had an Instagram account. Regarding time spent on social media platforms, 45% of participants reported spending between 31 and 60 min on Insta-

gram per day, while 55% reported spending more than 60 min per day. Table 1 shows the demographics of the participants.

Table 1. Characteristics of the sample.

Variables	Values
Gender	
Females, n	120
Males, n	118
The Italian Internet Disorder Scale, M (SD)	41.07 (3.11)
Highest educational level	
High school, n	15
Bachelor's degree, n	223
Employment	
Unemployed, n	17
Employee, n	266

2.2. Measurements

Instagram and social media usage. Participants were asked to indicate whether they had an Instagram account and their average daily usage (no time; <10 min; 10–30 min; 31–60 min; >60 min), the number of accounts they followed, the frequency of posting (never; less than once a month; once a month; 2–3 times a month; once a week; 2–3 times a week; every day), and the type of posts (selfies; photos taken by others of themselves with or without friends; food; objects; landscapes; animals; other people—e.g., family, friends, celebrities; memes/quotes; other). Participants were also asked whether they used other social networks (Facebook and TikTok) and to indicate how much time they spent online using it.

Internet Disorder Scale. The Italian Internet Disorder Scale–Short Form (IDS9-SF) (Soraci et al., 2020) is a self-report questionnaire that evaluates Internet use disorder based on the nine criteria for Internet Gaming Disorder (IGD) stated in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). This scale consists of 9 items that assess various aspects of Internet use behaviour, including salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. Responses to the items are provided on a five-point Likert scale, ranging from 1 (never) to 5 (very often). An example item is: “Do you have difficulty in attempting to control, reduce, and/or cease your Internet use?”. Higher scores indicate a greater degree of Internet use disorder. The internal consistency analysis of the instrument demonstrated good reliability, highlighted by a Cronbach's alpha coefficient (0.89).

Body Shape Questionnaire. Body image preoccupation was assessed using the Italian version of the Body Shape Questionnaire (BSQ-14) (Matera et al., 2013). It comprises 14 items, each rated on a 6-point Likert scale, ranging from 1 (never) to 6 (always). Participants were asked to reflect on their concerns about their physical appearance during the two weeks preceding the questionnaire's completion. The questions of the BSQ-14 encompass a range of feelings, including states of distress and the impulse to alter body shape through dieting, as exemplified by statements such as “I have been so worried about my shape that I have felt the need to diet.” Additionally, statements like “I am ashamed of my body” capture emotional responses to body image concerns. The internal consistency analysis of the BSQ-14 demonstrated robust reliability ($\alpha = 0.93$), confirming its suitability for assessing body dissatisfaction among the study participants.

Sociocultural Attitudes Towards Appearance Questionnaire. The Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4) (Schaefer et al., 2015) represents a reliable and widely used tool for analyzing the impact of sociocultural influences on body image. The questionnaire was validated for the Italian population by Stefanile et al. (2019) and comprises 22 items distributed across five subscales. Three of these subscales assess the perception of thinness pressure, considering the influence of media, peers, and family, while the remaining two subscales examine internalization, focusing on perceptions of a thin or fat-free body and a muscular or athletic body. Each item is rated on a five-point Likert scale, ranging from 5 = strongly agree to 1 = strongly disagree. Higher scores on these subscales indicate greater susceptibility of sociocultural influences on physical appearance. The internal consistency analysis of the instrument demonstrated good reliability, highlighted by a Cronbach's alpha (α) value of 0.89.

2.3. Experimental Stimuli

A set of fitspiration and thinspiration images, validated by Krug et al. (2020), was used in this study. The fitspiration images were 15 (8 females and 7 males) included images of muscled full bodies wearing exercise attire or muscled bodies with casual clothes. The thinspiration images were also 15 (8 females and 7 males) included images of excessively thin full bodies or bodies with minimal muscle mass. The set of images included three different ethnicities (5 each from Caucasian, Asian, and African American ethnicities), allowing us to represent different sociodemographic backgrounds.

2.4. Study Design

This study used an experimental pre-test, post-test design. In the pre-test phase, participants completed the BSQ-14 and the SATAQ-4 in random order. In the experimental phase, participants were presented digitally with both fitspiration and thinspiration images (Figure 1). In the post-test phase, they again completed the same questionnaires of the pre-test phase in random order.

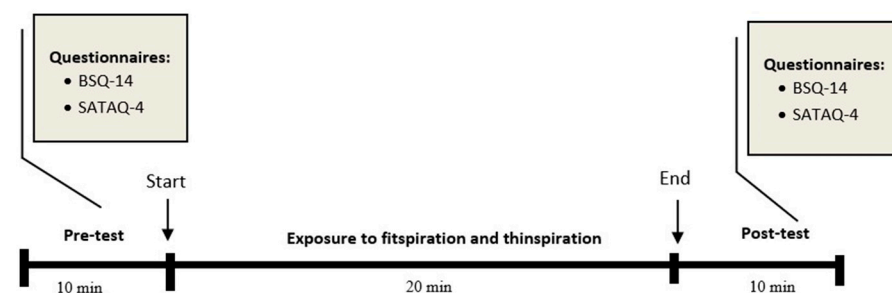


Figure 1. Study design.

2.5. Procedure

Participants were tested, on a predetermined day, in a quiet room of a university in the centre of Italy. They participants were required to have a smartphone to comply digitally with the BSQ-14 and the SATAQ-4, both before and after the experimental phase.

In the experimental phase, participants were provided with two separate links on their smartphones, each presenting a different set of images. Based on their self-identified gender, they clicked either the link for males or the link for females. Males were shown 7 “fitspiration” and 7 “thinspiration” images of male bodies, presented in random order. Similarly, females were shown 8 “fitspiration” and 8 “thinspiration” images of female bodies, presented in random order.

After the experimental phase, participants were given the opportunity to take a short break (10 min) to mitigate any potential effects of fatigue or tiredness; moreover,

participants gave their smartphones to the examiner to avoid smartphone usage during the break. During the break, participants could only drink water or use the toilets.

After the break, participants received their smartphone and digitally completed the same questionnaires utilized in the pre-test phase to evaluate the potential influence of online exposure to fitspiration and thinspiration images on the stated characteristics, such as body image preoccupation and sociocultural attitudes towards body image.

2.6. Statistical Analysis

Statistical analysis was performed using SPSS 24.0 software for Windows. The descriptive statistics of the dependent variables were tabulated and examined. The alpha level was set to 0.05 for all statistical tests. In the case of significant effects, the effect size of the test was reported. For ANOVA, partial eta-squared (η^2) was used. The Greenhouse–Geisser adjustment for nonsphericity was applied to probability values for repeated measures. Data were analyzed by separated repeated measures analysis of variance (ANOVA) followed by post hoc comparisons for each phase and parameter.

With reference to the parameters of this study (body image preoccupation, interiorization of thin and muscled ideals, and appearance-related pressures by family, peers and traditional media), separated repeated ANOVA measures were carried out with a between-subjects variable and a within-subjects variable: 2 (groups: women vs. men) X 2 (phases: pre-test and post-test).

3. Results

Table 2 shows the means (M) and standard deviations (SD) for body image preoccupation, interiorization of thin and muscled ideals, and appearance-related pressures by family, peers and traditional media in the groups.

Table 2. Means (M) and standard deviations (SD) for body image preoccupation and sociocultural attitudes towards image in men and women.

Variables	Men M (SD)	Women M (SD)
Body image		
Pre-test	33.27 (7.09)	30.70 (8.20)
Post-test	34.89 (7.65)	28.63 (7.47)
Sociocultural attitudes towards image		
Pre-test	11.90 (4.58)	14.23 (5.54)
Post-test	10.13 (5.17)	12.68 (5.79)

3.1. Body Image Preoccupation

With reference to body image preoccupation, the variable group showed significant statistically effects, $F(1, 236) = 44.580$, $p < 0.0001$, and $\eta^2 = 0.16$. This result indicated significant differences between the groups. More in depth, women and men showed a different trend: the body image preoccupation of women decreased after the online exposure to fitspiration and thinspiration images, whereas it increased in men. Post hoc comparisons confirmed this result for women, $t(119) = 2.008$ and $p = 0.05$, but it was not significant for men, $t(117) = 1.545$ and $p = 0.125$.

3.2. Interiorization of Thin and Muscled Ideals

With reference to the internalization of the thin ideals, the variable groups showed significant statistically effects, $F(1, 236) = 24.036$, $p < 0.0001$, and $\eta^2 = 0.09$. This result indicated that the online exposure to fitspiration and thinspiration images led to a reduc-

tion in thin-ideal internalization in both groups, with women exhibiting a significantly greater decrease than men. Post hoc comparisons confirmed these results, respectively, $t(119) = 2.062, p < 0.04$; $t(117) = 3.593, p < 0.0001$.

With reference to the internalization of muscled ideals, the variable groups showed significant statistically effects, $F(1, 236) = 5.657, p < 0.01$, and $\eta^2 = 0.02$. This means that there were significant group differences. Also, there was a significant interaction among groups $\times$ phases: $F(1, 236) = 16.497, p < 0.0001$, and $\eta^2 = 0.06$. This interaction means that groups showed different trends: the internalization of muscled ideals decreased in the men after online exposure, whereas it increased in women. Post hoc comparisons confirmed these results, respectively, $t(119) = 2.076, p < 0.04$; $t(117) = 3.812, p < 0.0001$.

3.3. Appearance-Related Pressures by Family, Peers and Traditional Media

With reference to appearance-related pressures by family, the variable groups showed significant statistically effects, $F(1, 236) = 16.040, p < 0.0001$, and $\eta^2 = 0.06$. This result indicated that the online exposure to fitspiration and thinspiration images led to a reduction in perceived family related appearance in both groups, with women exhibiting a significantly greater decrease than men. Post hoc comparisons confirmed this result for women, $t(119) = 2.097$ and $p < 0.038$, but it was not significant for men, $t(117) = 1.343$ and $p = 0.182$.

With reference to appearance-related pressures by peers, the variable “groups” showed no significant statistically effects, $F(1, 236) = 0.129, p < 0.72$, $\eta^2 = 0.001$. This result suggests that the online exposure to fitspiration and thinspiration contents had no influence on perceived peer-related appearance pressure between the pre-test and post-test phases in both groups.

With reference to appearance-related pressures by traditional media, the variable groups showed significant statistically effects, $F(1, 236) = 18.365, p < 0.0001$, and $\eta^2 = 0.07$. This result suggests that women and men exhibited different trends following online exposure to fitspiration and thinspiration images. Men reported increased perceived media-related appearance pressure from pre-test to post-test, whereas women showed no significant change across the two phases. Post hoc comparisons confirmed this result for women, $t(119) = 0.020$ and $p = 0.984$, but it was not significant for men, $t(117) = 0.621$ and $p = 0.536$.

4. Discussion

The main aims of the present study were two: (1) to examine the influence of online exposure to fitspiration and thinspiration images on body image preoccupation in women and men, and (2) to explore the influence of online exposure to these types of images on appearance-related pressures and the internalization of esthetic ideals by family, peers and traditional media in a group of women and men.

As regards the first aim of this study, we found that the body image preoccupation of women decreased after the online exposure to fitspiration and thinspiration images, whereas it increased in men. Post hoc comparisons confirmed this result for women but did not confirm it for men; this may be due to the differences between the pre- and post-test measures in the male group being too small to remain statistically significant after adjustments for multiple comparisons.

However, it is challenging to interpret these findings in comparison with previous results, as the majority of past research has primarily examined body image and body dissatisfaction in relation to the online exposure to fitspiration and thinspiration images, whereas body image preoccupation has not been sufficiently investigated, as stated in the introduction of this paper. Thus, the present study introduces a novel perspective to the literature on gender differences in body image, suggesting a reverse trend when

body image preoccupation is specifically evaluated. In the literature, it is documented that females generally have a higher level of body dissatisfaction than males (He et al., 2020; Prichard et al., 2020; Yee et al., 2020); instead, this study shows that men exhibit greater body image preoccupation than women following online exposure to fitspiration and thinspiration images. However, caution is needed to interpret this finding, because it is just not clearly stated.

This sex-based result may be since we specifically measured body image preoccupation before and after online exposure to fitspiration and thinspiration images. Hence, the present study suggests specifically investigating body image preoccupation to observe and reveal gender differences related to fitspiration and thinspiration online content.

As regards the second aim of the present study, we found that, following online exposure to fitspiration and thinspiration images, both men and women showed a decreased adherence to sociocultural attitudes promoting extreme thinness as a beauty ideal. This result is in line with previous studies (Blowers et al., 2003; Yee et al., 2020), which highlighted the role of online contents in internalizing thinness as the ideal body type and how they influence its affirmation. We also found that the internalization of the muscled ideals decreased in the men after online exposure to fitspiration and thinspiration images, whereas it increased in women. This result could be explained by the fact that males generally have a higher level of body appreciation than females (Jerónimo & Carraça, 2022).

As regards appearance-related pressures by family, peers and traditional media, we found that online exposure to fitspiration and thinspiration images led to a reduction in perceived family related appearance in both groups. We also found no significant group differences in appearance-related pressures by peers. Interestingly, we found that men reported increased perceived media-related appearance pressure from pre-test to post-test, whereas women showed no significant change across the two phases. This result is consistent with predictions of the TIM and data in the literature (Cataldo et al., 2021; Thompson et al., 1999), indicating that men who viewed muscular media stimuli showed higher body dissatisfaction than women.

In line with the TIM's assumptions, the findings of this study confirmed that appearance-based pressures from parents and media contribute to body image preoccupation in different levels (increase or decrease) among women and men. Our findings did not confirm appearance-based pressures from peers both in women and men. Probably, the pressure from peers has a greater influence in adolescents and not in young adults, which were the sample of this study (Jarman et al., 2021). With reference to the mechanisms of the TIM, our findings demonstrated that online exposure to fitspiration and thinspiration images contributed to the internalization of appearance ideals in women and men, but only the internalization of the muscled ideals showed an increase.

The present study implies some methodological considerations, unlike the study by Krug et al. (2020), which employed different measurement tools in the pre- and post-test phases; the present study used the same instruments before and after image exposure (i.e., in pre- and post- test phases). This approach minimized the risk of confounding variables, enabled a direct assessment of the effects of image exposure, and facilitated comparison with the baseline.

However, the present study has some limitations related to methodology. The absence of a control group exposed to neutral images prevents a clear comparison between the effects of fitspiration/thinspiration images and non-influential images. This study only measured the immediate influence of image exposure, without considering whether this influence persists in the long term. Future studies could replicate this study, inserting a follow-up phase, or could conduct longitudinal studies to examine the long-term influence of exposure to fitspiration and thinspiration images on body image preoccupation. More-

over, future studies could include a control group exposed to neutral images to enhance the internal validity of the study or also administer neutral images to all groups. It is also important to further explore the use of diversified measurement tools, such as physiological or behavioural assessments, to reduce subjective bias and gain a more comprehensive understanding of the effects of images on participants. Finally, future research should examine the influence of moderating factors, such as initial self-esteem or critical thinking ability, to determine how these factors may affect vulnerability to the negative effects of fitspiration and thinspiration images.

This study has some practical implications for behavioural and mental health, since it reinforces the importance of promoting media literacy and encouraging critical reflection on social media content to mitigate negative influences on body image and to promote individual well-being in both sexes. Educators and practitioners should explicitly include men in media literacy and media education interventions about body image in online contents. They should avoid framing body image as a “women’s issue” and use gender-inclusive language. Also, they should promote the discussion of male body image concerns in educational and clinical settings, using male examples and testimonials where appropriate.

5. Conclusions

In conclusion, the findings of this study indicate that the online exposure to fitspiration and thinspiration images affects body image preoccupation, with a particularly negative influence on men and a positive influence on women. This gender difference was also found in perceived media-related appearance; the results indicate that men show an increased pressure from pre-test to post-test, whereas women displayed no significant change across the two phases. This study also indicates that both women and men have reduced their adherence to sociocultural attitudes that promote extreme thinness as a beauty standard, suggesting a shift in social perceptions of the esthetic ideal towards to muscled ideals; in particular, women exhibit a greater internalization of muscled ideals than men after the online exposure to fitspiration and thinspiration images. These findings suggest sex-based results and support the importance of specifically investigating body image preoccupation to distinguish specific gender differences related to fitspiration and thinspiration online contents.

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