THE SLIM-THICK IDEAL: ITS IMPACT ON WOMEN'S BODY IMAGE AND EATING, EXERCISE, AND BODY MODIFICATION BEHAVIOURS

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Abstract

Past research has widely focused on the impact of idealized images of unrealistically thin or fit women, referred to as the thin- and fit-ideal, on young women's body image. Recently, a more curvaceous take on the thin-ideal, called the slim-thick-ideal, characterized by a small waist and flat stomach, but large hips, butt, and breasts has gained popularity in mainstream media. Despite an increase in the popularity of this ideal, little is known about the impact of the slim-thick-ideal on women's body image and which women aspire to this ideal. As such, in three studies I sought to investigate who was likely to aspire to the slim-thick-ideal, and its impact on women's body image. Study 1 sought to investigate the comparative impact of the slim-thick-ideal on women's body image, relative to the thin- and fit-ideal, and if physical appearance perfectionism moderated these findings. It was found that exposure to all three body ideals resulted in increased weight and appearance dissatisfaction and lower overall body satisfaction, which was most pronounced for those who saw the slim-thick-ideal, and among those high on physical appearance perfectionism. Study 2 sought to replicate the findings of Study 1, to investigate which body ideal was most preferred among young women, and which personality and behavioural traits were characteristic of women who aspired to each ideal. Study 1 findings were replicated. The slim-thick-ideal was rated as the most attractive and desirable of the three ideals. Those who aspired to the slim-thick-ideal reported greater disordered eating, dietary restraint, physical appearance perfectionism, and body modification behaviours than those who aspired to the thin- or fit-ideal. Study 3 investigated if there was an association between preferred ideal and ethnicity and eating, purging, exercise, and body modification behaviours. Women of colour preferred the slim-thick-ideal most; White women endorsed each ideal in equal proportions. For the most part, there was no association between preferred body ideal and eating, purging,

exercise or body modification behaviours, indicating that those who aspire to the slim-thick-ideal are engaging in the same harmful behaviours as those who aspire to the thin- and fit-ideal. Clinical implications are discussed.

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Body dissatisfaction is a widespread mental health issue, which is disproportionately experienced by young women (Fallon et al., 2014; Neighbors & Sobal, 2007). Upwards of 90% of women report experiencing body dissatisfaction (Runfola et al., 2013), representing what some researchers have referred to as widespread and "normative discontent" that women feel about their bodies (Betz et al., 2017). The high prevalence of body image dissatisfaction is a significant public health issue, given that body dissatisfaction is the most consistent and robust predictor of the development of clinical eating disorders (Neumark-Sztainer et al., 2006; Stice et al., 2011), in addition to being independently associated with other mental health conditions such as body dysmorphic disorder, depression, and suicidality (Bornioli et al., 2021; Choi & Choi, 2016; Phillipou et al., 2019).

Several sociocultural influences are involved in the development of body dissatisfaction among women, but media images are the most powerful and impactful sociocultural transmitter of beauty ideals (Groesz et al., 2002). The sociocultural model of body dissatisfaction theorizes that frequent exposure to images of idealized bodies in the media leads to internalization and social comparison to these ideals, which then results in body dissatisfaction and engagement in disordered eating or purging behaviour in an attempt to achieve one's desired beauty ideal (Frederick et al., 2017). Further, social comparison theory argues that upward comparisons to a perceived superior other result in an apparent negative contrast between oneself and the target of comparison, which leads to dissatisfaction because the difference between the target and oneself becomes salient (Festinger, 1954). Research over several decades has supported both the sociocultural model of body dissatisfaction and social comparison theory; results have shown

that women who are exposed to images of idealized bodies, particularly unrealistically thin female bodies, internalize the thin ideal and strive for an unrealistic standard of beauty, which can result in feelings of shame, body dissatisfaction, and low mood when they cannot achieve the same body type (Tiggemann & Slater, 2013). Further, social comparison has been found to be a mediating process between exposure to idealized images and body dissatisfaction (Brown & Tiggemann, 2016; Rodgers et al., 2015; Hogue & Mills, 2019).

Decades of research have consistently shown that exposure to thin-ideal images (images featuring women with unrealistically thin bodies) in magazines and television results in worsened body image and negative mood among young women (Frederick et al., 2017; Harrison & Cantor, 1997). These effects have also now been demonstrated with social media, which has quickly become the most common way that young women are exposed to images of idealized bodies (McComb & Mills, 2021; Mills et al., 2017). Social media may now be even more influential than traditional media in perpetuating idealized beauty standards because of how often it is used, the potential for social comparison not only with celebrities, but with peers (Mills et al., 2017), and greater accessibility to idealized body types through the use of hashtags and explore functions where users can actively search for images of idealized bodies. The ubiquity of idealized body images on social media platforms like Instagram allows ample opportunity for young women to engage in social comparison to peers, celebrities, and models (Verduyn et al., 2020). Appearance comparisons made on social media have been found to result in greater negative mood and poorer body image than appearance comparisons made in-person or to traditional media (Fardouly et al., 2017). This may be because of the vast amount of time that young people spend on social media, the widespread use of filters and photoshop that can be used to alter images on social media, as well as the fact that images women see on Instagram are

often especially relevant comparison targets, such as same-age peers (Hogue & Mills, 2019). Research has shown that these effects are not experienced equally among all women, and that women with certain personality traits or behavioural features are especially vulnerable to the effects of exposure and comparison to idealized images, such as those who are perfectionistic about appearance, who internalize the thin-ideal, and who have a greater tendency to engage in social comparisons (Dittmar & Howard, 2004; McComb & Mills, 2021; Perloff, 2014).

Until recently, slender, flat-stomach, small-waisted female physiques, commonly referred to as the thin-ideal, have predominated in White-centred mainstream media as the cultural ideal for beauty. Internalization and social comparison to the thin-ideal is associated with body dissatisfaction and self-objectification among women (Fitzsimmons-Craft et al., 2012; Homan, 2010; McComb & Mills, 2021; Vandenbosch & Eggermont, 2012). Research from the past decade has also demonstrated that fit-ideal media content, characterized by female physiques that are toned and athletic, also negatively impact women's mood and body image by increasing body dissatisfaction (Prichard et al., 2018; Robinson et al., 2017). Even more recently a curvier or more full body type, characterized by a small waist and flat stomach but large butt, breasts, and thighs, has become popularized in White-centred mainstream media, especially on social media, by well-known celebrities and beauty influencers such as Kim Kardashian, Kylie Jenner, and Beyonce. Despite the rising popularity of this body type in the media by popular celebrities and beauty influencers, little research has been conducted to examine the impact of this body type, and social comparison to this body type, on women's body image. Thus far, research has primarily focused on the impacts of thin-ideal and fit-ideal imagery on women's body image.

There have been discrepancies in the literature and popular media as to what constitutes a "curvy" body. Some research and popular media have used the term "curvy" to refer to plus-

sized or overweight female physiques, which has been seen in marketing campaigns, such as Dove's Real Beauty campaign (McGuire, 2015; Webb et al., 2019). Other research and media have used the term "curvy-ideal" to refer to fuller body types characterized by a large butt and thighs, but with an average-sized waist and softer/fuller stomach than seen in the thin-ideal (Betz & Ramsey, 2017; Betz et al., 2019). Additionally, there have been mentions of a curvy-slim body type, which is a modified version of the thin-ideal characterized by a narrow waist and flat stomach, but large butt, breasts, and thighs (Ahern et al., 2011; Peters, 2014), which is commonly referred to in popular media as a "slim-thick" body type. The slim-thick body physique portrays an hour-glass figure, and some researchers have defined this body type as having a waist-to-hip ratio of below .70, such as that seen in Kim Kardashian or Beyonce (Hunter et al., 2020). In order to reduce confusion between body types that are plus-sized, average, or curvy-slim that have come from the use of the word "curvy" or "curvy-ideal", I propose that the term "slim-thick-ideal" be used to refer to a modified curvy version of the thin-ideal that is characterized by a slim waist and flat stomach, but large butt and thighs.

Although not as widely circulated in White-centred mainstream media as the thin- or fit-ideal, this curvier body has recently gained popularity on social media and among some celebrities, especially among young women. Hashtags such as #curvy, #thicc, #thick, and #slimthick are relatively new, but they are popular tags used on social media to tag photos of female bodies that have curvy hips, and large butts and thighs. The hashtags #thick, #thicc, and #slimthick have 6.2 million, 3.4 million, and 1 million posts on Instagram respectively, and the hashtag #slimthicc has 134 million tags on Tiktok (Fargo, 2021).

The Current Research

Despite its apparent popularity on social media, the literature has yet to experimentally examine the impact of the slim-thick body type on women's body image, which is important given that this body type may be as unrealistic, unattainable, and harmful to women's body image as the thin-ideal. Further, the existing research has yet to examine what types of eating, exercise, and body modification behaviours young women are engaging in to achieve the slim-thick ideal, and whether those behaviours differ from behaviours used to achieve other idealized bodies, such as the thin-ideal and fit-ideal.

Broadly, the aim of the current set of studies was to expand the existing literature on internalization of idealized social media images and women's body image, by investigating the impact of the slim-thick body ideal on young women's body image. In particular, the current research was guided by the following overarching research questions:

R1: What is the impact of social comparison to slim-thick-ideal images on Instagram on young women's body image, relative to social comparison to thin-ideal and fit-ideal imagery?

R2: What personality features make women most vulnerable to potential negative effects of slim-thick-ideal imagery found on Instagram on body image?

R3: Which types of women are most likely to aspire to the slim-thick-ideal, in terms of ethnicity, personality, and behavioural features?

R4: What behaviours are women engaging in, in an attempt to achieve a slim-thick body type, relative to the behaviours engaged in to achieve a thin or fit body type?

R5: Which of the three body ideals (slim-thick, thin, or fit) is most aspired to, and which is perceived to be the most attainable, attractive, and desirable to young women?

This set of research questions is novel and this dissertation is the first set of research studies to specifically investigate the role of the slim-thick body type on young women's body

image and eating, exercise, and body modification behaviours. This research has clinical significance for body image and eating disorder prevention and intervention efforts, which are currently primarily focused on combatting the thin ideal and drive for thinness, and which may be excluding important targets of treatment for women who aspire to a curvier ideal.

Study 1[1]

The Influence of the Thin-Ideal Imagery on Body Image

Thin-ideal imagery of women's bodies is ubiquitous in White-centred mainstream media and is widely advertised across a number of types of media such as television (Jhally & Kilbourne, 2010), magazines (Luff & Gray, 2009), music videos (Wallis, 2011), videos games (Gestos et al., 2018), and social media (Ghaznavi & Taylor, 2015). The pervasiveness of the thin-ideal in the media is concerning as the media is the most powerful and impactful sociocultural transmitter of beauty ideals (Groesz et al., 2002) and the media most often features images of models that are unrealistically thin or attractive. With the rise in popularity of social media, the thin-ideal may be more easily accessible than ever through the use of the explore and hashtag functions that allow users to easily search for thin-ideal imagery. Further, it has become routine for both photographers (Bennett, 2008) and social media users (Mills et al., 2018) to digitally alter photos to clear and lighten skin, to trim fat off body parts, and to elongate body parts or overall body images, thus making the thin ideal even thinner and less attainable for the average person. Past research has shown that exposure and social comparison to thin-ideal imagery on social media is associated with increased body dissatisfaction and worsened mood

[1] This study has been published in the peer-reviewed journal *Body Image* under the following citation: McComb, S.E., & Mills, J.S. (2022). The effect of physical appearance perfectionism and social comparison to thin-, slim-thick-, and fit-ideal Instagram imagery on young women's body image. *Body Image, 40*, 165–175. https://doi.org/10.1016/j.bodyim.2021.12.003

among both adolescent girls (Kleemans et al., 2018) and adult women (Brown & Tiggemann, 2016; McComb & Mills, 2021).

Social comparison and thin-ideal internalization are two processes that have been identified as causal links between the relationship of thin-ideal imagery exposure and resulting negative body image among young women. Past research has found that appearance comparison and thin-ideal internalization results in worsened body dissatisfaction and mood among young women after exposure to thin-ideal imagery (Brown & Tiggemann, 2018; Ditmar & Howard, 2004; McComb & Mills, 2021). However, it has been much less commonly examined in the literature how social comparison to other body ideals outside of the thin-ideal impacts women's body image, which Study 1 aims to investigate.

The Influence of the Fit-Ideal Imagery on Body Image

While the thin-ideal body type for women still predominates White-centred mainstream media, other body-ideals have also started to gain popularity, such as the fit-ideal. The fit-ideal is characterized by a relatively thin, but toned figure, and is differentiated from the muscularity-ideal, which features larger and more prominent arm, leg, or abdominal muscles (Robinson et al., 2017). Research has shown that over time thinness in the beauty-ideal has increased, but so has muscularity. Boszik and colleagues (2018) had female participants rate images of U.S. beauty pageant winners over a 15-year period (from 1999 to 2013) on thinness, muscularity, and attractiveness, and found that while thinness of pageant winners had increased over the years, so had muscularity.

The rise in the popularity of the fit-ideal has been in part due to the social media movement of "fitspiration" (a combination of the words "fitness" and "inspiration"). An Instagram search of the hashtag #fitspiration returns 19.2 million posts, while a search of the

shortened version #fitspo returns 73.4 million posts, demonstrating the wide availability of fit-ideal images on social media. Fitspiration hashtags are purportedly used on social media to provide users with health-related information, fitness and diet tips, and motivation to pursue a fit lifestyle and body (Boepple et al., 2016). However, even though fitspiration images may be posted with the positive intent to promote health, fitness, and empowerment among social media users, past research has demonstrated negative impacts on women's body image from exposure to fit-ideal media. Several studies have found that exposure to fit-ideal imagery is associated with worsened body image and mood among young women (Tiggemann & Zaccardo, 2015), and in some cases fit-ideal imagery was actually found to worsen body image even more so than thin-ideal imagery (Betz & Ramsey, 2017; Robinson et al., 2017).

The Influence of the Slim-Thick or Curvy Imagery on Body Image

While the slim-thick-ideal may just be gaining popularity in white-centred media, it is not new among other ethnic communities, such as Latino and Black communities. In Latino culture, a slender, but curvy figure has been reported as the ideal body type by the majority of women, who internalize the thin-ideal less than European participants, dating back to the early 2000's (Romo et al., 2016; Shaw et al., 2004; Viladrich et al., 2009). One Latino participant in Romo and colleagues' (2016) study stated the following about beauty ideals in the Latino community, *"I guess we grew up with standards that the meaning of pretty and beautiful means skinny, pretty, and a big cleavage and a big butt*", while another stated "*I don't really think that real skinny people are more liked [in Latino culture]. Thicker is better, women that are thicker*." Therefore, there seems to be greater value placed on curvaceous bodies that are characterized by big butts and breasts, but which still have slender waists. Similar findings have been found among African American women, who find the thin-ideal less desirable and internalize the thin-

ideal to a lesser extent than their White counterparts (Fujioka et al., 2009; Rakhkovskaya & Warren 2014). Awad and colleagues conducted focus groups with African American college woman about their body image and body preferences, and majority of participants reported that a curvy/thick/toned body type was most preferable, while thinness was perceived to "be for White women" (Awad et al., 2015). Therefore, the slim-thick ideal may appeal to a greater number of women, across racial and ethnic groups, which could actually make this body ideal more harmful to a greater number of women's body image than the thin-ideal, which some ethnic groups do not aspire to. Further, many celebrities who emulate the slim-thick ideal have had plastic surgery procedures to achieve this body type. For example, news circulated about reality TV star and beauty influencer Kim Kardashian purportedly having butt enhancement surgery. Research shows that when news circulated about Kardashian having butt enhancement surgery, interest in the Google search terms "butt enhancement" and "butt implants" dramatically increased on the internet in the months following news coverage about Kardashian's procedure, who has 226 million followers on Instagram (Tijerina et al., 2019); it is possible that this activity reflects an interest by some of her social media followers about how to obtain similar procedures to achieve a similar look or body figure.

While research on the slim-thick or curvy ideal is limited, some preliminary research has shown the harmfulness of exposure to curvy imagery on women's body image. Betz and Ramsey (2017) and Betz and colleagues (2019) experimentally exposed participants to images and messages of body acceptance (control condition), the thin-ideal, fit-ideal, or a type of curvy-ideal that featured women with a large butt and wide hips, with stomachs that were softer and fuller than in the thin-ideal. Betz and Ramsey (2017) found that relative to the body acceptance condition, the curvy-ideal, fit-ideal, and thin-ideal images resulted in greater body surveillance,

with fit-ideal images being the most harmful in this respect. Similarly, Betz and colleagues (2019) found that relative to a body acceptance condition, those in the curvy-ideal, fit-ideal, and thin-ideal imagery conditions experienced greater body surveillance. However, the curvy-ideal condition caused the greatest amount of body surveillance. They found that each of the body-ideal conditions resulted in increased state comparison, which led to greater body surveillance. Further, exposure to the thin-ideal and curvy-ideal imagery increased state comparison, which led to less body self-esteem. Therefore, preliminary research indicates that exposure and comparison to curvy female bodies characterized by wide hips with large butts and thighs is associated with negative shifts in body image, and that curvy-ideal imagery is just as detrimental, or more detrimental, to body image as thin- and fit-ideal imagery. I expect these effects may be even further exacerbated by exposure and comparison to slim-thick imagery, which features body types with a smaller waist and flat stomach, which are arguably more difficult to attain than the curvy body types featured in the above two studies, and which has been described as more ideal by women in qualitative research (Appleford, 2016).

The Impact of Physical Appearance Perfectionism on Body Image

Past research has shown that not all women are affected equally by body-ideal imagery in the media, and that certain subgroups of women may be more vulnerable to the negative effects of media than others (Ferguson, 2013). Women who are high on perfectionism are one such subgroup that may be more adversely affected by body-ideal media. Perfectionism is characterized by self-evaluation that is unduly dependent on the pursuit of personally demanding and self-imposed standards in at least one domain of life, despite adverse consequences that may transpire from attempting to achieve those standards, such as self-criticism and negative self-evaluation (Shafran et al., 2002). Perfectionism has been reliably associated with greater body

dissatisfaction (Wade & Tiggemann, 2013; Donovan et al., 2014) and social comparison to idealized others in everyday life and on social media (Padoa et al., 2018; Pokrajac-Bulian et al., 2008).

Physical appearance is one domain about which individuals can be perfectionistic (Stoeber & Stoeber, 2009). Yang and Stoeber (2012) conceptualize physical appearance as being composed of two domains—worry about imperfection and hope for perfection. The worry about imperfection domain captures concern that one's appearance will never be good enough and deep dissatisfaction with one's appearance; this domain is similar to the perfectionistic concerns subcomponent of general perfectionism which is concerned about making mistakes or being perceived as a failure (Yang & Stoeber, 2012). The hope for perfectionism domain captures a striving for a perfect appearance and hope that other people admire one's appearance; this domain is similar to the perfectionistic strivings subcomponent of general perfectionism, which is concerned with setting personally demanding standards of perfection for oneself. Physical appearance perfectionism has been associated with many negative body image outcomes, such as disordered eating symptoms, appearance social anxiety, appearance and body shape dissatisfaction, unhealthy weight control behaviours, low appearance self-esteem, high impression management, high appearance management behaviours, and perfectionistic self-presentation (Stoeber &Yang, 2015; Yang & Stoeber, 2012). Research has also shown that those who demonstrated higher physical appearance perfectionism were more adversely impacted by social comparison to thin-ideal Instagram images, and experienced greater weight and appearance dissatisfaction than those who demonstrated low levels of appearance perfectionism (McComb & Mills, 2021). It was determined that this was due in part to the fact that women who are perfectionistic about physical appearance cognitively cope in more negative ways with social

comparisons to thin-ideal imagery, by engaging in processes such as rumination and catastrophizing (McComb & Mills, 2021). However, it has yet to be examined what impact physical appearance perfectionism has on body image following social comparison to other body-ideal imagery, such as fit- or slim-thick-ideal imagery.

The Current Study

The aim of the first study was to extend the literature on women's body image and how it is impacted by the slim-thick ideal. This research differs from past studies, which have examined the curvy-ideal. In past research, images of curvy women have been used that feature a large butt and thighs, but a softer or fuller stomach than seen in the thin-ideal (e.g. Betz & Ramsey, 2017; Betz et al., 2019), which more closely approximates the body type of the average women. Overall, the bodies featured were larger or fuller in most body parts, than what is seen in the thin-ideal. However, this research examined the impact of a curvy body type that had wide hips, a big butt, breasts, and thighs, but a slender waist and flat stomach, which more closely approximately an hour-glass figure, and which is portrayed in the media by popular celebrities and beauty influencers like Kim Kardashian and Kylie Jenner. This is also the body type that women have described as the ideal body in qualitative research (Appleford, 2016), It was also reasoned that this type of body shape more closely approximates the body ideals that are glamourized in White-centred mainstream media, which would be difficult to attain without plastic surgery or strategic exercise that would increase muscle mass on specific body parts. For this reason, it is important to examine what impact comparison to a slim-thick body type has on young women, as it is equally unattainable as the thin-ideal. Further, this research also investigated if the personality trait of physical appearance perfectionism makes women more or

less vulnerable to the effects of the slim-thick ideal. These research questions informed four hypotheses:

H1: It was hypothesized that instruction to engage in social comparison to any of the three body ideals would result in increased weight and appearance dissatisfaction and lowered overall body satisfaction, relative to the control condition.

H2: It was hypothesized that the combined effect of instructed social comparison to the thin and slim-thick ideals would result in greater weight and appearance dissatisfaction and lowered overall body satisfaction, relative to the fit-ideal condition.

H3: It was hypothesized that instructed social comparison to the slim-thick ideal would result in greater weight and appearance dissatisfaction and lowered overall body satisfaction, relative to the thin-ideal condition.

H4: It was hypothesized that those who were high on physical appearance perfectionism (on either domain) would experience worsened body image following instructed comparison to any of the three body-ideals, relative to those who were low on physical appearance perfectionism.

Methods

Participants

Participants were 402 female psychology undergraduate students recruited through a research participant pool at York University in Toronto, Canada. Inclusion criteria included identifying as female and being between the ages of 18–25 years; this age range of women was chosen because women in this age range are the heaviest users of Instagram (Pew Research Center, 2021). Participant ages ranged from 18 to 25 years (M = 19.53, SD = 1.74). The self-reported ethnic distribution of the sample was 24.3 % Caucasian, 26.1 % South-Asian, 12.7 %

Middle Eastern, 12.4 % Black/African-Canadian, 8.7 % East-Asian, 10.0% identified as "Other", 3.7% Hispanic/Latino , 4.2 % Caribbean, 1.0 % Pacific Islander, and .2 % Native.

Measures

State weight and appearance dissatisfaction. To measure state weight and appearance dissatisfaction, the procedure by Tiggemann and McGill (2004) was adapted and two visual analogue scales (VAS) were used to measure state body image before and after viewing the Instagram images (Appendix A). Each scale consisted of a horizontal line with a slider bar, and endpoints that were labelled as 'none' and 'very much'. Participants were asked to report how they feel "right now" in regard to feelings of appearance dissatisfaction and weight dissatisfaction by moving the slider bar to the point on the line that best depicts how they are feeling in that moment. Participants also completed a number of filler VAS items to help distract from the study's aims regarding changes to body image. Scores could range from 0 to 100, with higher scores indicating stronger feelings. Scales of this type are commonly used in experimental research to reliably assess pre- and post- fluctuations in psychological states (Heinberg & Thompson, 1995; McComb & Mills, 2021; Tiggemann & McGill, 2004). Visual analogue scales are advantageous because they can be completed quickly and previous responses are difficult to remember since the line is not numbered, which minimizes recall response bias and improves sensitivity to changes (Frey, 2018).

State body satisfaction. The 6-item Body Image State Scale (BISS; Cash et al., 2002) was used to assess state body satisfaction (see Appendix B). This scale includes evaluations of one's shape, size, weight, physical appearance and attractiveness, in the moment relative to how they usually feel about their body. Items are answered on a 9-point scale, and scores on each item are averaged to reach a total state body satisfaction score. Higher scores represent higher

state body image satisfaction. Internal reliability in the current study was α = .85 at Time 1 and α =.89 at Time 2.

Physical appearance perfectionism. The Physical Appearance Perfectionism Scale (PAPS; Yang & Stoeber, 2012) was used to measure trait physical appearance perfectionism (see Appendix C). The PAPS is composed of two subscales: worry about imperfection (7 items, e.g., "I worry that my appearance is not good enough.") and hope for perfection (5 items; e.g., "I hope that I look attractive."). Participants respond to each item on a five- point scale from 1-*strongly disagree* to 5-*strongly agree,* with higher scores indicating greater perfectionism. Internal reliability for the worry about imperfection subscale was α =.89, and α =.82 for the hope for perfectionism subscale.

State appearance comparison. As a manipulation check to ensure participants in the experimental conditions were actually engaging in comparison to the models featured, they were asked to complete a measure of state appearance comparison. The 3-item, State Appearance Comparison Scale (Tiggemann & McGill, 2004) was used to measure the amount of appearance comparison participants engaged in when viewing the Instagram images (see Appendix D). Using a 7-point scale participants were asked to indicate how much they thought about their appearance when viewing the Instagram images (1= *no thought about appearance*, 7= *a lot of thought*), how much they compared their overall appearance to the Instagram models' (1= *no comparison*, 7 = *a lot of comparis*on), and how much they compared specific body parts to the Instagram models' (1= *no comparison*, 7 = *a lot of comparis*on). A total score is calculated by averaging the sum of the items to the three questions. Higher scores indicate greater appearance comparison. Internal reliability in the current sample was excellent (α =. 93).

Materials

Participants in the experimental conditions were asked to view 13 images of an Instagram influencer or model who had either a thin-ideal, slim-thick-ideal, or fit-ideal body type (see Appendices E-G). All images were sourced from public Instagram accounts of highly attractive young women. Each of the selected women had less than 60,000 followers on Instagram, in order to: 1) decrease the likelihood that participants would already be familiar with or habituated to the models prior to the experiment, 2) to avoid the effects of celebrity worship (Brown & Tiggemann, 2016), and 3) to avoid the effects of parasocial relationships (Young et al., 2012) on body image. Past research has found that high celebrity worship worsened body dissatisfaction after exposure to thin ideal celebrity images, relative to those low on celebrity worship (Brown & Tiggemann, 2016), while body satisfaction was greater when women were exposed to a favourite celebrity with whom they had a parasocial relationship (Young et al., 2012). Therefore, both celebrity worship and parasocial relationships with celebrities are confounding factors that can influence body image after exposure to celebrity images. To avoid these potential confounds participants were exposed to Instagram influencers that were likely to be unknown to them, so that all affects could be attributed to the experimental manipulation of social comparison to one of the three body ideals.

Instagram models were selected by seven members of the experimenter's research lab, based on attractiveness and how closely they approximated each body. An initial pool of 32 images for each model were piloted to the raters, and the 13 images that were rated the highest (from 0-100) on attractiveness and approximation to the beauty ideal were selected for inclusion in the study. See Table 1 for the overall mean attractiveness and representativeness of the relevant beauty ideal for the images used in each condition. A multivariate analysis of variance (MANOVA) was conducted to identify if there were any significant differences between any of

the conditions' images on both attractiveness or representativeness of the relevant body-ideal. Condition was entered as the fixed factor and attractiveness and representativeness were entered as the dependent variables. Using Pillai's trace, results indicated that there was no significant effect of condition on attractiveness or representativeness, V = .30, F (1.56, 36) = 1.56, p = .205, indicating that the models featured in each condition were rated to be of relatively equal attractiveness and representativeness of their ideal in each condition.

Images of the women included full body shots and close-ups of the model's face. No other people were pictured in the photos with the target models. The women were pictured wearing tight and revealing clothing, in order to make obvious their body shape. The thin-ideal model had slender arms, legs, and waist, and a small butt. The fit-ideal model had a muscular and toned physique, characterized by toned arms, the presence of abs, and a toned butt. Images used for the slim-thick condition differed from images used in other studies that reported to examine the curvy-ideal. The slim-thick-ideal model used had slender arms and waist, and a flat stomach, similar to what is seen in the thin-ideal, but had large breasts, thighs, and butt. The images chosen in all conditions were of Caucasian women, as this was thought to be most representative of the White-centred mainstream beauty ideal circulated in the media according to past research (Yan & Bissell, 2014), and this is the race most commonly portrayed in thin ideal media (Daniels, 2009). While we expected to recruit an ethnically diverse sample, as participants were recruited from a multicultural city, research has shown that women from ethnic minorities still experience increases in body dissatisfaction when exposed to media images of thin-ideal Caucasian images (Thomas & Kleyman, 2020), and therefore we reasoned all participants, regardless of race, would still find the images of Caucasian women a threatening beauty ideal.

Participants in the control condition were asked to view 13 images sourced from attractive home décor and furniture pages (see Appendix H). These images were chosen because they were thought to reflect non-body related content that female users would be likely view on Instagram. All the selected images in both the control and experimental conditions were copied and pasted into a private Instagram profile created for the study so that each image was displayed within the Instagram context, but did not have any "likes" or comments from other users beneath it, so as not to confound the results of the study.

Procedure

Ethics approval was granted by the university's Human Participants Review Committee. Eligible participants could sign up for the study through an online experiment management system. The study was advertised as a study about personality and evaluating the effectiveness of advertisements on Instagram. As part of a cover story to distract from the true purpose of the study, participants were told that the study was a marketing study that was interested in examining the effectiveness of advertisements on Instagram. Upon signing up, participants gave their informed consent online (see Appendix I) and all participants completed baseline measures of state body image. Participants were then randomly assigned to one of the four experimental conditions. Participants were exposed to each of the 13 images for 15 seconds each before the next image was automatically presented. Those in the body-ideal conditions were told the researchers were interested in knowing whether the Instagram models featured were an accurate depiction of the average women, who would be the target buyer for the clothing advertised. Those in the body-ideal conditions were then asked to complete a body comparison task, where they compared various parts of their body to the model's body parts. Participants were instructed to rate if their thighs, arms, butt, waist, hips, biceps, breasts, legs, and stomach were much

smaller, smaller, about the same size, larger, or much larger than the corresponding body parts of the model. They were also asked to indicate if their face and overall physical appearance was much more attractive, slightly more attractive, about the same level of attractiveness, less attractive, or much less attractive than the Instagram model's. Forced comparison of this type has been used in previous studies that have investigated the impact of comparison to body-ideal imagery on body image (Mills et al., 2002; McComb & Mills, 2021; Tiggemann & Polivy, 2010). To also help to maintain the cover story, participants asked to rate the "advertisements" on visual attractiveness, creativity, and effectiveness at promoting the clothing advertised.

A forced comparison task was included in the current study for several reasons. First, to ensure that participants were actively engaging with the photos, rather than passively viewing them. Second, to control for what kind of psychological processes participants were engaging in when viewing the Instagram images. Past research has shown that when exposed to media images some women engage in social comparison, which most often results in negative body image, while other women engage in fantasy thinking, which can result in positive effects to body image and mood (Mills et al., 2002; Tiggemann et al., 2009). To ensure those in the control condition were engaging with the images, they were asked to rate the home décor advertisements on a number of aspects (e.g., visual attractiveness, creativity, effectiveness at promoting the furniture).

After exposure to the Instagram images all participants completed post-exposure measures of state body image. Those in the experimental conditions also completed a measure of state appearance comparison as a manipulation check. All participants then completed questionnaires on physical appearance perfectionism and demographics (see Appendix J). Participants were then debriefed and compensated one course credit.

Data Analysis

All statistical analyses were conducted using SPSS 27. In order to determine whether there were significant group differences on body dissatisfaction, ANCOVAs with three orthogonal planned comparisons were performed using the Lmatrix subcommand. For each ANCOVA, pre-exposure body image scores were entered as the covariate to control for individual differences. The first orthogonal planned comparison compared the control condition to the body ideal experimental conditions [contrast: +3 -1 -1 -1]. The second orthogonal planned comparison compared the combined thin-ideal and slim-thick-ideal group against the fit-ideal group [contrast: 0 +1 +1 -2]. The third orthogonal planned comparison compared the slim-thick-ideal and thin-ideal groups [contrast: 0 +1 -1 0]. An a priori power analysis indicated that a total sample size of 179 participants would be adequate to achieve a power estimate of .80, a medium effect size (.25), using alpha .05 (Faul et al., 2007), which we achieved.

To test whether either of the physical appearance perfectionism subscales moderated the effect of condition on post- exposure body image scores, moderation analyses were conducted using the PROCESS SPSS macro version 3.5 (Hayes, 2017). Model 1was tested, which includes one outcome variable, one predictor, and one moderator. Experimental condition was used as the multicategorical predictor variable, physical appearance perfectionism worry about imperfection or hope for perfection scores as the moderator, post-exposure weight dissatisfaction, appearance dissatisfaction, or BISS scores as the outcome variable. As recommended by Aiken and West (1991) physical appearance comparison scores were centered around the mean to reduce multi-collinearity. Significant interactions were followed up with simple slopes analysis. The simple slopes analyses tested whether experimental condition had an effect on post-exposure body

image outcomes at low (16th percentile), medium (50th percentile), and high (86th percentile) levels of physical appearance perfectionism.

Results

Preliminary Analyses

Preliminary analyses were conducted prior to running any analyses to ensure that all assumptions had been met. Inspection of histograms, skewness, and kurtosis suggested that all the variables were normally distributed. There were no statistically significant outliers (±3 SD) among the predictor, moderator, or outcome variables.

A series of one-way ANOVAs showed that the experimental conditions did not significantly differ in regard to baseline weight dissatisfaction, F (3, 398) = .03, p= .993, appearance dissatisfaction, F (3, 398) = .80, p= .494, BISS scores, F (3, 398) = .06, p= .983, worry about imperfection, F (3, 398) = .50, p= .680, hope for perfectionism, F (3, 398) = .57, p= .633, or on age, F (3, 398) = .34, p= .800. Those in the experimental conditions also did not significantly differ on engagement in social comparison to the Instagram images, F (2, 298) = 1.53, p= .218, therefore we can be confident that participants in the three experimental conditions that saw body-ideal imagery engaged in similar levels of appearance comparison to the models featured, and any differences in post-exposure body image scores among the three body-ideal conditions are due to the type of body-ideal featured, and not varying levels of social comparison. See Table 2 for a summary of means and standard deviations for each study variable.

Effect of Condition on Body Image

The ANCOVAs showed that there were statistically significant differences between the conditions on post-exposure state weight dissatisfaction, F (3, 397) = 7.77, p<.001, η^2_p = .06,

appearance dissatisfaction, F (3, 397) = 7.33, p<.001, η^2_p = .05, and body satisfaction, F (3, 397) = 10.11, p<.001, η^2_p = .07. The first planned contrasts showed that the combined experimental conditions experienced significantly more post-exposure weight dissatisfaction (difference =28.89), F (1, 397) = 15.87, p<.001, η^2_p = .04, more post-exposure appearance dissatisfaction (difference =24.75), F (1, 397) = 11.51, p<.001, η^2_p = .03, and less post-exposure state body satisfaction (difference = 1.42), F (1, 397) = 19.20, p<.001, η^2_p = .05, than the control condition. The second planned contrasts showed that the combined slim-thick-ideal and thin-ideal conditions did not experience significantly different levels of post-exposure weight dissatisfaction, F (1, 397) = 1.01, p=.315, η^2_p < .00, appearance dissatisfaction, F (1, 397) = .04, p=.835, η^2_p < .00, or body satisfaction, F (1, 397) = 2.75, p=.098, η^2_p < .00, compared to the fit-ideal condition. However, the third contrast showed that those in the slim-thick-ideal condition experienced significantly more post-exposure state weight dissatisfaction (difference = 7.52), F (1, 397) = 6.37, p = .012, η^2_p = .02, more post-exposure state appearance dissatisfaction (difference = 9.66), F (1, 397) = 10.42, p = .001, η^2_p = .03, and less post-exposure state body satisfaction (difference = 3.83), F (1, 397) = 8.27, p = .004, η^2_p = .02, than those in the thin-ideal condition.

The Role of Physical Appearance Perfectionism as a Moderator

Worry about imperfection. As shown in Table 3, it was tested whether levels of worry about imperfection in regard to physical appearance moderated the effect of experimental condition on post-exposure state weight dissatisfaction, appearance dissatisfaction, and body satisfaction. Main effects of condition on post-exposure weight dissatisfaction, appearance dissatisfaction, and body satisfaction were observed, whereby being in the slim-thick and fit conditions predicted greater post-exposure weight and appearance dissatisfaction, and less body

satisfaction than the control condition. There was also a main effect of worry about imperfection for all three outcome variables, whereby worry about imperfection positively predicted greater weight and appearance dissatisfaction and less body satisfaction. There were no significant interactions between condition and worry about imperfection on weight dissatisfaction or body satisfaction. However, there was a significant interaction between condition and worry about imperfection on appearance dissatisfaction. At low levels of worry about imperfection, there were no significant differences between conditions on appearance dissatisfaction. However, at moderate and high levels of worry about imperfection the slim-thick condition experienced more appearance dissatisfaction than the control, thin, or fit conditions (see Figure 1). In other words, those who demonstrated moderate-high levels of worry about imperfection about their appearance were more negatively impacted on appearance dissatisfaction by the slim-thick-ideal imagery than any other type of imagery.

Hope for perfection. As shown in Table 3, it was tested whether levels of hope for perfection in regard to physical appearance moderated the effect of experimental condition on post-exposure state weight dissatisfaction, appearance dissatisfaction, and body satisfaction. Main effects of condition on post-exposure weight dissatisfaction, appearance dissatisfaction, and body satisfaction were observed, whereby being in the slim-thick and fit conditions predicted greater post-exposure weight and appearance dissatisfaction, and less body satisfaction. There was no main effect of hope for perfection on any of three outcome variables, however there was a significant interaction between condition and hope for perfection on weight dissatisfaction, appearance dissatisfaction, and body satisfaction. For all three outcome variables, at low levels of hope for perfection, there were no significant differences between conditions on weight dissatisfaction, appearance dissatisfaction, or body satisfaction. However, at moderate and high

levels of hope for perfection the slim-thick condition experienced more weight dissatisfaction and appearance dissatisfaction, and lower body satisfaction, than the control, thin, and fit conditions (see Figures 2-4). In other words, those who demonstrated moderate-high levels of hope for perfection about their appearance were more negatively impacted on weight dissatisfaction, appearance dissatisfaction, and body satisfaction by the slim-thick-ideal imagery than any other type of imagery.

Discussion

The purpose of the current study was to determine the effect of social comparison to slim-thick-ideal imagery on young women's body image, relative to comparison to thin-ideal and fit-ideal imagery or a control condition. This was the first study to experimentally expose participants to slim-thick imagery on social media and measure its impact on body image, which is an important extension of the body image literature on body ideals. Second, it was investigated whether certain women were more vulnerable to the effects of body ideal imagery than others, by examining if physical appearance perfectionism moderated the relationship between social comparison to slim-thick-, thin-, or fit-ideal imagery on body image.

Several key findings emerged from the current study. First, results demonstrated that comparison to slim-thick-, thin-, and fit-ideal imagery resulted in increased weight and appearance dissatisfaction, and lower overall body satisfaction, compared to the product control condition. This is consistent with research demonstrating the negative effects of thin-ideal, fit-ideal, and curvy-ideal imagery on body image (Brown & Tiggemann, 2016; McComb & Mills, 2021; Tiggemann & Zaccardo, 2015; Betz & Ramsney, 2017). Further, those who compared themselves to slim-thick-ideal imagery experienced significantly more weight and appearance dissatisfaction, and less body satisfaction, than those who compared themselves to thin-ideal

imagery. There were no significant differences between the combined slim-thick- and thin-ideal imagery and fit-ideal imagery. These findings are in line with past research that has demonstrated that exposure to curvy-ideal imagery is associated with a greater extent of negative changes to body image than exposure to thin-ideal imagery (Betz et al., 2019). There are several campaigns that have attempted to broaden the definition of female beauty and introduce a greater variety of body shapes in their advertising to promote positive body image and acceptance of all body types (e.g., Dove's Real Beauty Campaign, Aerie's Real Campaign). However, results from the current study show that the slim-thick-ideal is not a positive alternative to the thin- or fit-ideal in terms of promoting more positive body image, despite featuring heavier models with larger butts and thighs. In fact, the slim-thick-ideal was most harmful to women's appearance, weight, and overall body satisfaction, and may still represent an ideal of beauty that women find threatening and personally unattainable. The slim-thick-ideal may be an especially dangerous beauty ideal to promote as it has been identified as the most desirable body shape by women across multiple cultures, including those that do not typically aspire to the thin-ideal (Awad et al., 2015; Romo et al., 2016).

Second, findings demonstrated that not all women are impacted by thin-, fit-, and slim-thick-ideal imagery in the same way. Findings demonstrated that women who scored moderate-high on the worry about imperfection domain of physical appearance perfection experienced greater appearance dissatisfaction when they compared themselves to the slim-thick-ideal than to the thin-ideal or fit-ideal imagery, and relative to the control condition. Similarly, women who demonstrated moderate-high scores on the hope for perfection domain of physical appearance perfectionism were more likely to experience appearance dissatisfaction and weight dissatisfaction and lower body satisfaction when they compared to themselves to the slim-thick-

ideal than to thin-ideal or fit-ideal imagery and relative to the control condition. These findings demonstrate that the slim-thick ideal is especially harmful to body image for women who strive to have a perfect appearance and worry and ruminate about having an imperfect appearance. In particular, these findings suggest the slim-thick-ideal is a beauty ideal that women may find difficult to attain, but aspire to. The slim-thick-ideal has been noted by women to be more difficult to attain than the thin- or fit-ideal with just exercise and diet alone, and many reported that cosmetic surgery would be needed to achieve the slim-thick-ideal (Appleford, 2016). The challenges of achieving the slim-thick-ideal seems to be especially difficult for women who strive to have a perfect appearance and worry about the consequences of not meeting their beauty ideal, which is reflected in their increased levels of body dissatisfaction after comparison to this ideal. Findings were in line with other research that found physical appearance perfectionism is associated with a host of trait body image concerns (Stoeber & Yang, 2015; Yang & Stoeber, 2012), and research which has found that physical appearance perfectionism is associated with greater state body image concerns following comparison to the thin-ideal (McComb & Mills, 2021). Findings extend the literature to show that physical appearance perfectionism also impacts state body image following comparison to slim-thick-ideal imagery.

In sum, Study 1 demonstrated that experimentally-induced appearance comparisons to slim-thick-, thin-, and fit-ideal images on Instagram resulted in increased state weight and appearance dissatisfaction, and lower state body satisfaction, in a sample of young women. Women who compared themselves to slim-thick imagery experienced more weight and appearance dissatisfaction, and less body satisfaction, than those who compared themselves to thin-ideal imagery. Young women who are highly perfectionistic about their appearance are relatively more vulnerable to appearance and weight dissatisfaction and low body satisfaction

after comparing themselves to slim-thick-ideal imagery than to thin- or fit-ideal imagery. There were three objectives of Study 2 to further this preliminary research on exposure to the slim-thick ideal and body image. Study 2 was designed to 1) see if the findings of Study 1 could be replicated, 2) examine which of the three body ideals women most aspired to and if beauty ideals have shifted away from the thin-ideal, and 3) examine which women most aspired to the slim-thick ideal in terms of personality and behavioural features.

Study 2[2]

Research confirms that in recent years the body type to which many women aspire has shifted away from the traditional thin-ideal toward being fit and toned (i.e., the fit-ideal). In one study, when asked to rate the attractiveness of images of beauty pageant winners that were manipulated to be ultra thin or thin but noticeably muscular, female participants reported finding the thin-muscular images to be more attractive than the thin images (Boszik et al., 2018). In another study, when asked to rate their liking of images of fit, thin, or curvy (plus-sized) models, young women reported liking the images of fit models best (Betz & Ramsey, 2017). Research has also demonstrated that exposure to fit-ideal media images can be even more detrimental to women's body image than thin-ideal media (Betz & Ramsey, 2017; Robinson et al., 2017), which suggests that women ascribe to the fit-ideal and feel bad about their own bodies not approximating that body type. Researchers hypothesized that the fit-ideal may be more harmful to women's body image than the thin-ideal because the fit-ideal implies that if women invest enough time and effort into exercising and eating healthily, they too can achieve a fit physique, which is not necessarily true. Therefore, the fit-ideal may oversell its attainability, and make

[2] This study is currently under peer-review at the journal *Body Image* and has been approved pending revisions.

women feel badly about their bodies when they cannot achieve this same physique, which is marketed as attainable to any women who invests the time and effort into a healthy lifestyle.

The slim-thick-ideal is commonly featured on social media and hashtags such as #thick, #thicc, and #slimthick, which have a positive connotation, are used to tag images of women who emulate the slim-thick-ideal. Currently, the tags #thick and #slimthick have 6.6 million and 1 million tags on Instagram respectively, and #slimthick has 134 million tags on Tiktok (Fargo, 2021), demonstrating the abundance and availability of images of the slim-thick-ideal on social media. Despite the prevalence of this body type on social media, little research has investigated the impact of slim-thick media on women's body image, and whether this is a beauty ideal to which women aspire. Findings from Study 1 indicated that social comparison to slim-thick images on Instagram resulted in increases in weight and appearance dissatisfaction and lower overall body satisfaction over time. These findings may suggest that young women are now increasingly aspiring to a more hourglass shaped body type and experience body dissatisfaction when they feel their body does not emulate that ideal. Past qualitative research that has interviewed young women about their attitudes towards the thin-ideal supports the idea that the majority of young women aspire to a more curvaceous body type than the thin-ideal. When asked to describe their ideal body, nearly all women agreed that while the ideal body is thin, having curves was also important, particularly large breasts, a round butt, and curvaceous hips in accompaniment to a slim waist, which they termed "curvy-thin" (Ahern et al., 2011). Further, participants reported that they found ultra-thin models to be unattractive, masculine, and physically ill looking, demonstrating a rejection for the thin-ideal and a preference for a curvaceous ideal (Ahern et al., 2011).

However, past research has shown that not all women are affected equally by media images of idealized bodies (Perloff, 2014), and some traits put women more at risk of media internalization and body dissatisfaction (Donovan et al., 2020; McComb & Mills, 2021; Vartanian & Dey, 2013). Therefore, it stands to be reasoned that certain eating, personality, and body image characteristics that have been reliably associated with internalization of media ideals and body dissatisfaction may differentiate women who aspire to the thin-ideal versus the fit- or slim-thick-ideal, such as disordered eating, dietary restraint, body image and body modification, and physical appearance perfectionism.

Past research has consistently shown strong relationships between both thin- and fit-ideal internalization and disordered eating and body dissatisfaction (Donovan et al., 2020). It has yet to be investigated how internalization of the slim-thick-ideal is related to disordered eating behaviours, and whether engagement in those behaviours is similar among those who aspire to the thin- or fit-ideal, as past research has shown that thin-ideal internalization has been more strongly associated with disordered eating behaviours and body dissatisfaction than fit-ideal internalization (Donovan et al., 2020; Wagner et al., 2020). Physical appearance perfectionism (Stoeber & Yang, 2015; Yang et al., 2017) and body image investment (Argyrides & Kkeli, 2014) have also both been associated with internalization of media ideals, body dissatisfaction, and disordered eating, however it has yet to be examined if women who aspire to the thin-, slim-thick, or fit-ideal reliably differ on these personality traits. Each of these traits and behavious are important areas of study as they could be potential targets of treatment for eating disorders and poor body image, as well as areas to target in public health campaigns.

The Current Study

The purpose of the current study was to further investigate the impact of the slim-thick-ideal on young women's body. In particular, it was investigated whether the findings of Study 1, which found that exposure to the slim-thick-ideal resulted in poorer body image among young women, could be replicated in a different sample. Similar to the findings of Study 1, it was hypothesized that young women would experience decreases in overall body satisfaction relative to baseline, after exposure to the slim-thick-, thin-, and fit-ideal images. The current study also aimed to investigate whether there has been a shift in cultural beauty ideals by determining which of the three body ideals (slim-thick, thin, or fit) women found most attractive, desirable, and attainable, and which they most aspired to personally. Based on past qualitative research that documented negative attitudes towards the to the thin-ideal and more positive attitudes towards curvaceous and fit body ideals (Ahern et al., 2011), it was hypothesized that the slim-thick- and fit-ideals would be preferred to a greater extent than the thin-ideal among a sample of young adult women. Further, the current study assessed whether there are behavioural differences among women who most aspired to the slim-thick-ideal versus the fit- or thin-ideal, particularly among variables that have been reliably associated with poor body image in the past. It was also assessed if women who aspired to the slim-thick-ideal differed from those who aspired to the thin- or fit-ideal on the personality trait of physical appearance perfectionism. No hypotheses were made for the above research question, as these analyses were exploratory and similar research of this kind has yet to be examined in the current literature. This is an important addition to the research literature that will help to establish whether there are differences between women who aspire to the slim-thick-ideal versus other ideals in terms of personality and behaviours, which could point to important targets in body image and eating disorders treatment.

Methods

Study Design

The current study used a within-subjects experimental design to investigate the impact of slim-thick-, thin-, and fit-ideal imagery on young women's body image. The within-subjects variable was image type (thin-ideal, fit-ideal, and slim-thick images in counterbalanced order) and the outcome variable was state body satisfaction, which was completed at baseline and once after exposure to each of the three body ideal images for a total of four times.

Participants

Participants were 123 female psychology undergraduate students recruited through a research participant pool at York University in Toronto, Canada. Inclusion criteria included identifying as female and being between the ages of 18–25 years; this age range of women was chosen because women in this age range are the heaviest users of Instagram (Pew Research Center, 2021). Participant ages ranged from 18 to 25 years (M = 20.23, SD = 1.68). The self-reported ethnic distribution of the sample was 30.1% South-Asian, 17.1 % Caucasian, 17.1% Black/African-Canadian, 13.8% East Asian, 8.9 % Middle Eastern, 7.3% identified as "Other", 4.1% Hispanic/Latino , and 1.6% West Asian.

Measures

State body satisfaction. The 6-item Body Image State Scale (BISS; Cash et al., 2002) was used to assess state body satisfaction. This scale includes evaluations of one's shape, size, weight, physical appearance and attractiveness, in the moment relative to how they usually feel about their body. Items are answered on a 9-point scale, and scores on each item are averaged to reach a total state body satisfaction score. Higher scores represent higher state body image satisfaction. Internal reliability in the current study was α = .84 at baseline and α = .89 for each of the three subsequent administrations.

Disordered eating. The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994; see Appendix K) is a self-report questionnaire, composed of four subscales called restraint (α= .87), eating concern (α= .83), weight concern (α= .87), and shape concerns (α= .91), that consist of 28 items (e.g. "*On how many of the past 28 days have you had a definite fear that you might gain weight?*") that assess eating disorder symptoms over the last 28 days. A global score (α= .89) that represents global disordered eating symptoms can also be calculated, which averages scores across each of the four subscales. Participants are asked to respond to each item on a scale of 0 (*no days*) to 6 (*every day*). Higher scores represent greater eating disorder symptoms. Scores above 2.3 suggest notable disordered eating symptoms among women (Mond et al., 2004).

Restrained eating. In addition to the Restraint subscale of the EDE-Q, the 10-item Revised Restraint Scale (RSS; Polivy et al., 1988; see Appendix L) was also used to measure restrained eating or the extent to which individuals are concerned about their shape and weight, and efforts to control their weight and shape by dieting. More specifically, the RRS measures fluctuating attempts to inhibit dietary intake through dieting and subsequent disinhibited eating when efforts at dietary restraint fail. The ten items on this scale assess weight fluctuation (e.g., "In a typical week, how much does your weight fluctuate?"), attitudes towards eating (e.g., "Do you eat sensibly in front of others and splurge alone?"), and attitudes towards dieting (e.g., "How often are you dieting?"). Scores range from 0 to 40. Higher scores on the RRS indicate greater thoughts about dieting, proneness to overeating, and weight fluctuations. Cronbach's alpha in the current study was α = .85. The RRS was included in addition to the Restraint subscale of the EDE-Q because the RRS measures a different pattern of restrained eating, which is not only

characterized by periods of successfully limiting the amount of food one eats, but also periods of disinhibited eating.

Appearance schemas inventory. The 20-item Appearance Schemas Inventory-Revised (ASI-R; Cash et al., 2009; see Appendix M) was used to measure body image investment. The ASI-R is composed of two subscales, and a total score can also be calculated. The self-evaluative salience subscale measures the extent to which individuals define or measure themselves and their self-worth by their physical appearance, while the motivational salience subscale measures the extent to which one attends to their appearance and engages in appearance-management behaviors. Cronbach's alpha for the total score in the current study was α= .85, α= .83 for the self-evaluative salience subscale, and α= .84 for the motivational salience subscale.

Thin ideal internalization. The 9-item General Internalization subscale of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-3; Thompson, et al., 2004; see Appendix N) was used to measure internalization of the thin-ideal. Participants were asked to respond to each item (e.g. *I would like my body to look like the people who are on TV*) using a 5-point scale ranging from 1 = *strongly disagree* to 5= *strongly agree*. Higher scores indicate greater thin ideal internalization (α= .97).

Physical appearance perfectionism. The Physical Appearance Perfectionism Scale (PAPS; Yang & Stoeber, 2012) was used to measure trait physical appearance perfectionism. The PAPS is composed of two subscales: worry about imperfection (7 items, e.g., "I worry that my appearance is not good enough.") and hope for perfection (5 items; e.g., "I hope that I look attractive."). Participants respond to each item on a five- point scale from 1-*strongly disagree* to 5-*strongly agree*, with higher scores indicating greater perfectionism. Internal reliability for the

worry about imperfection subscale was α =.85, and α =.85 for the hope for perfectionism subscale.

Materials

Participants were asked to view 13 images each of an Instagram influencer or model who had a thin-ideal, slim-thick-ideal, or fit-ideal body type. These were the same images that were used in Study 1. For a detailed description of the images that were used, how they were selected, and example images, refer to the Materials section of Study 1 and Appendices E-G .

In a subsequent part of the study, all participants were also exposed to a single image depicting a slim-thick-ideal body, thin-ideal body, and fit-ideal body. All images were sourced from public Instagram accounts of highly attractive young women. Images of each body ideal included a full body shot of the model from the neck down; faces were cropped out so that just the body shape was emphasized. No other people were pictured in the photos with the target models. The models were pictured wearing a bikini or a sports bra and small shorts, in order to make obvious their body shape (see Appendix O).

Procedure

Ethics approval was granted by the university's Human Participants Review Committee. Eligible participants could sign up for the study through an online experiment management system. The study was advertised as a study about personality and evaluating the effectiveness of promoted clothing advertisements on Instagram. As part of a cover story to distract from the true purpose of the study, participants were told that the study was a marketing study that was interested in examining the effectiveness of advertisements on Instagram and the attractiveness, desirability, and attainability of the models' bodies that were featured. Upon signing up,

participants gave their informed consent online (see Appendix P) and all participants completed baseline measures of state body satisfaction. Participants then took part in a within-subjects experiment. To prevent order effects, participants were then exposed to images of a slim-thick-, thin-, or fit-ideal model in counterbalanced order; participants viewed the images in one of six possible orders. Participants were exposed to each image for exactly 15 seconds each before the next image was automatically presented on screen. To help maintain the cover story and distract from the true purpose of the study, participants were asked to rate the "advertisements" on visual attractiveness, creativity, and effectiveness at promoting the clothing advertised, and to also rate the attractiveness, desirability, and attainability of the models' bodies that were featured after exposure to each of the body ideals. During this time, participants also completed post-exposure measures of state body satisfaction after they viewed each of the different body types (once at baseline and then once after each body ideal for a total of 4 times).

Following the experiment, all participants were shown three images on the screen which were placed side by side featuring a slim-thick-, thin-, or fit-ideal body and asked to indicate which of the three body ideals they most aspired to, thought was most attractive, desirable, and attainable. Participants were then broken into three groups based on what body ideal they most aspired to. To assess whether there were personality or behavioural differences among those who aspired to the slim-thick-ideal versus the thin- and fit-ideal all participants then completed questionnaires on physical appearance perfectionism, attempts at dieting, thin ideal internalization, disordered eating behaviours, body modification, and demographics. Participants were then debriefed and compensated one course credit.

Data Analysis

All statistical analyses were conducted using SPSS 27. A repeated measures ANOVA tested for changes in state body satisfaction after viewing each of the different body ideal images. Image type was entered as the within-subjects variable with four levels: baseline body satisfaction scores and body satisfaction scores after viewing the slim-thick-ideal, thin-ideal, and fit-ideal images. Significant *F*-tests were followed up with within-subjects contrasts that compared each of the post-exposure body satisfaction scores to the baseline body satisfaction scores.

A series of one-way ANOVAs were also conducted to determine whether there were any behavioural differences or differences in physical appearance perfectionism among those who most aspired to the slim-thick-ideal, relative to those who aspired to the thin-ideal or fit-ideal. The independent variable was body-ideal preference (a category to which participants were assigned to based on which body type they indicated that they most aspired to), and the dependent variables were trait measures of disordered eating, restrained eating, thin-ideal internalization, body modification, and physical appearance perfectionism. Significant *F*-tests were followed up with Bonferroni post-hoc analyses to determine significant between-group differences. An a priori power analysis indicated that a total sample size of 111 participants would be adequate to achieve a power estimate of 0.80, a medium effect size (0.25), using alpha.05 (Faul et al., 2007), which was achieved.

Results

Preliminary Analyses

Preliminary analyses were conducted prior to running any analyses to ensure that all statistical assumptions had been met. Inspection of histograms, skewness, and kurtosis suggested

that all the variables were normally distributed. There were no statistically significant outliers (±3 SD) among any of the variables.

Effect of Image Type on Body Image

Means and standard deviations scores for body satisfaction after exposure to each type of body ideal can be found in Table 4. The repeated-measures ANOVA indicated that there were statistically significant differences in body satisfaction, F (3, 366) = 5.43, p= .001, η^2_p = .043, which were dependent on the type of body-ideal images viewed. More specifically, within-subjects contrasts determined that viewing slim-thick imagery, F (1, 122) = 7.50, p= .007, η^2_p = .058, and fit-ideal imagery, F (1, 122) = 15.43, p< .001, η^2_p = .112, resulted in decreases in body satisfaction, as compared to baseline, which represented medium effects. Those who viewed thin-ideal imagery did not experience statistically significant differences in body satisfaction after image exposure, relative to baseline scores.

Ratings of Each Body Ideal

Results indicated that 38.2% of participants most aspired to the fit-ideal, 34.1% most aspired to the slim-thick ideal, and 27.6% most aspired to the thin-ideal (see Figure 5). Results indicated that the majority of participants (66.7%) also thought that the fit-ideal was the most attainable of the three body ideals. However, the majority of participants reported that they perceived the slim-thick ideal to be the most desirable (55%) and attractive (53%) of the three body ideals.

Personality and Characteristics of Participants Who Aspire to Each Ideal

Means and standard deviations for each of the personality and behavioural characteristics by group can be found in Table 5.

Disordered eating characteristics. Results indicated that there were statistically significant differences between the three groups on EDE-Q global scores, F (2, 120) = 7.49, p = .001, η^2 = .11, the EDE-Q restraint subscale, F (2, 120) = 6.91, p = .001, η^2 = .10, the EDE-Q eating concerns subscale, F (2, 120) = 4.90 p = .009, η^2 = .08, the EDE-Q shape concerns subscale, F (2, 120) = 5.74, p = .004, η^2 = .09, and the EDE-Q weight concerns subscale, F (2, 120) = 6.15, p = .003, η^2 = .09. These results all represented medium effects. More specifically, Bonferroni post hoc analyses revealed that there were significant differences in global disordered eating scores between those who most aspired to the fit-ideal and those who aspired to either the slim-thick- or thin-ideal. Results demonstrated that those who aspired to the slim-thick- (mean difference of 24.05, p= .001) or thin-ideal (mean difference of 17.01, p = .041) reported greater disordered eating than those who aspired to the fit-ideal. Additionally, those who most aspired to the slim-thick-ideal reported engaging in greater restrictive eating practices (mean difference of 6.08, p= .001), had greater concern about eating (mean difference of 3.73, p = .009), greater concern about shape (mean difference of 8.88, p = .005), and greater concern about weight (mean difference of 6.18, p = .002) than those who aspired to the fit-ideal. There were no statistically significant differences on disordered eating between those who aspired to the thin- versus the slim-thick-ideal and between those who aspired to the thin-ideal versus fit-ideal.

Dieting attempts . Results indicated that there were statistically significant differences between the three groups on attempts to diet, F (2, 120) = 5.98, p = .003, η^2 = .09, which represented a medium effect. More specifically, Bonferroni post hoc analyses revealed that those who most aspired to the slim-thick-ideal reported higher scores on the RRS than those who aspired to the fit-ideal (mean difference of 4.86, p = .002). There were no statistically significant

differences on RRS scores between those who aspired to the thin-ideal versus the slim-thick-ideal and between those who aspired to thin-ideal versus the fit-ideal.

Thin-ideal internalization. Results indicated that there were statistically significant differences between the three groups on thin-ideal internalization, F (2, 120) = 3.32, p = .039, η^2 = .05, which represented a small-medium effect. More specifically, Bonferroni post hoc analyses revealed that those who most aspired to the slim-thick- ideal reported greater thin-ideal internalization than those who aspired to the fit-ideal (mean difference of 5.43, p = .039). There were no statistically significant differences on thin-ideal internalization between those who aspired to the thin-ideal versus the slim-thick-ideal and between those who aspired to thin-ideal versus the fit-ideal.

Body image investment. Results indicated that there were statistically significant differences between the three groups on ASI total scores, F (2, 120) = 5.33, p = .006, η^2 = .08, the ASI self-evaluative salience subscale, F (2, 120) = 5.64, p = .005, η^2 = .09, and the ASI motivational salience subscale, F (2, 120) = 3.130 p = .047, η^2 = .05. These all represented medium effects. More specifically, Bonferroni post hoc analyses revealed that those who most aspired to the slim-thick- ideal reported greater overall body image investment and importance of appearance (mean difference of 7.91, p = .006), defined themselves and their self-worth to in terms of appearance to a greater extent (mean difference of 5.08, p = .005), and engaged in greater appearance management behaviours (mean difference of 2.83, p = .049) than those who aspired to the fit-ideal. There were no statistically significant differences on body image investment variables between those who aspired to the thin-ideal versus the slim-thick-ideal and between those who aspired to thin-ideal versus the fit-ideal.

Physical appearance perfectionism. Results indicated that there were no statistically significant differences between the three groups on the worry about imperfection subscale of the PAPS, F (2, 120) = 2.46, p = .090, but that there were statistically significant differences between the three groups on the hope for perfection subscale, F (2, 120) = 4.84, p = .009, η^2 = .08, which represented a medium effect. More specifically, Bonferroni post hoc analyses revealed that those who most aspired to the slim-thick- ideal reported greater hope for perfection in regard to appearance than those who aspired to the fit-ideal (mean difference of 2.74, p = .007). There were no statistically significant differences on hope for physical appearance perfection between those who aspired to the thin-ideal versus the slim-thick-ideal and between those who aspired to thin-ideal versus the fit-ideal.

Discussion

The purpose of the current study was threefold. First, Study 2 aimed to investigate if the findings of Study 1 could be replicated, which found that exposure to slim-thick-ideal images resulted in poorer body image over time. Second, Study 2 intended to examine which of the three body ideals (slim-thick-ideal, thin-ideal, or fit-ideal) young women most aspired to, and which they thought was the most attainable, desirable, and attractive, which would provide information about whether beauty ideals have shifted from primarily internalizing the thin-ideal. Finally, Study 2 aimed to investigate if there were any behavioural differences or differences in physical appearance perfectionism among women who aspired to the slim-thick-ideal, thin-ideal, or fit-ideal, to provide information about which young women are most vulnerable to the effects of each ideal. This was the second study to investigate the impact of the slim-thick-ideal on women's body image, and the first study to investigate behavioural differences and differences in physical appearance perfectionism among women who aspire to different body ideals. This

research is an important addition to the literature as it serves to identify important targets for change in body image and eating disorders interventions. There were no directional hypotheses because this area of research is new.

Several key findings emerged from the current study. First, results demonstrated that exposure to slim-thick- and fit-ideal images resulted in subsequent decreased body satisfaction, which was not observed for exposure to thin-ideal images. This is in line with the results of Study 1, which found that social comparison to slim-thick and fit-ideal images resulted in increased weight and appearance dissatisfaction and lower overall body satisfaction. Both Study 1 and Study 2 used samples of young women. In keeping with the results of the previous study, it was found that exposure to slim-thick imagery resulted in greater negative impacts to body satisfaction than exposure to thin-ideal imagery. Similar findings were also found by Betz and colleagues (2019) who exposed young women to idealized images of thin models, fit models, and curvy women with large butts and thighs. Together, the current findings and findings from Study 1 suggest that there has been a shift in internalized beauty ideals from previous periods in recent history where the thin-ideal was most prized. Indeed, exposure to thin-ideal images had no significant impact on women's body image in the current study. It could be that women are not inclined to emulate the thin ideal (and judge their own bodies unfavourably in comparison to it) when presented with alternative ideals in the form of slim-thick or fit-ideal body types. The within-subjects design and counterbalancing of images meant that most women were exposed to thin-ideal images after seeing the other types of bodies.

In line with this interpretation, it was found that the majority of young women reported that they personally aspired to either the slim-thick or fit-ideal, with a minority and smaller proportion aspiring to the thin-ideal. This is consistent with previous research, which found that

in recent years young women have aspired more to a fit-ideal body type than solely being thin (Boszik et al., 2018), and that a curvier-ideal is most preferred for Latina and Black women (Romo et al., 2016; Viladrich et al., 2009). The current sample was also very ethnically diverse, containing high proportions of women who identified as South Asian, Black, East Asian, and Middle Eastern, in addition to White women. Therefore, it is possible that similar to past research, the finding that the slim-thick-ideal was most preferred in the current sample is due to the fact that women of colour across various ethnicities prefer a more curvaceous ideal than the thin-ideal (Appleford, 2016; Brady et al., 2017; Khaled et al., 2018). Future research should assess if there are racial and ethnic differences in body ideal preferences for the slim-thick-ideal, thin-ideal, and fit-ideal.

Further, the overwhelming majority of young women in the current sample reported that they thought the slim-thick-ideal was the most desirable and attractive of the three body ideals. However, while many participants aspired to the slim-thick-ideal and thought it was the most desirable and attractive, they did not believe it to be very attainable; the majority of participants reported that the fit-ideal was the most attainable of the three body ideals. These results indicate that young women may have good insight into the fact that the slim-thick-ideal is difficult to attain naturally. The fit-ideal is sought through diet and exercise and the thin-ideal is sought through extreme dieting or other eating disorder behaviours. Past qualitative research has documented that while young women aspire to the slim-thick-ideal, many of them commented that it was unrealistic and difficult to achieve naturally through just diet and exercise, and participants mused that the slim-thick-ideal may require the use of cosmetic surgery to attain the exaggerated hour-glass proportions that are characteristic of the slim-thick body type (Appleford, 2016). In other words, it could be especially dangerous to young women's body image to aspire

to an ideal that is difficult to attain through changes to diet and exercise alone, and which women have little power to control through means other than plastic surgery. Past research has shown that when women internalize ideal body types as the standard of beauty and fail to achieve to it, they are likely to become dissatisfied with their own bodies (Cafri et al., 2005).

Recent research has documented the desire of young women to achieve slim-thick body types, which are characterized by a large butt and thighs, and small waist. Buttock augmentation via autologous fat grafting, more commonly known as the "Brazilian Butt Lift" surgery, has become a widely performed cosmetic surgery to shape and augment the butt while simultaneously slimming other areas of the body, such as the stomach (Sinno et al., 2016). This surgery is the fastest growing cosmetic surgery in the United States, with a growth of 28% between 2014-2016 (American Society of Plastic Surgeons, 2016; Del Vecchio & Dayan, 2019), which has been attributed in part to changing cultural beauty standards and the popularity of female celebrities that promote this body silhouette on social media (Fadavi et al., 2020; Tijerina et al., 2019). For example, research shows that when news circulated about Kim Kardashian supposedly having butt enhancement surgery, interest in the Google search terms "butt enhancement" and "butt implants" dramatically increased on the internet in the months following news coverage about Kardashian's procedure, who has 226 million followers on Instagram and who emulates the slim-thick-ideal; this increased interest in researching the cosmetic surgery may reflect an interest by some of Kardashian's followers to achieve similar procedures to achieve the same slim-thick shape (Tijerina et al., 2019). However, it is alarming that the popularity of this procedure is actively rising when this procedure has the highest mortality rate of any cosmetic surgery procedure, estimated as 1 death for every 3000 procedures (American Society of Plastic Surgeons, 2018). In sum, attempts to achieve a slim-thick-ideal may be

especially dangerous to the health of young women when it is attempted through cosmetic surgery or risky body modifications such as waist trainers (American Board of Cosmetic Surgery, 2016; Green & Roby, 2018; Isaac, 2017). The current findings demonstrate that exposure to slim-thick images, such as those commonly seen on social media, immediately and significantly increases body dissatisfaction. To extrapolate from these and other findings, this dissatisfaction could result in increased motivation for cosmetic surgery.

Results of the current study also indicated that women who aspire to the slim-thick-ideal possess personality traits and behaviours that have been reliably associated with poor body image and disordered eating, further supporting the notion that aspiration to the slim-thick-ideal can be dangerous to the mental and physical health of young women. More specifically, it was found that those who aspired to either the slim-thick- or thin-ideal reported greater overall eating pathology, as compared to those who aspired to the fit-ideal. Additionally, those who aspired to the slim-thick-ideal reported more dieting and associated behaviours, concern about eating, weight concern, and shape concern than those who aspired to the fit-ideal. Those who aspired to the slim-thick-ideal also reported greater thin-ideal internalization, greater overall body image investment, defined their self-worth in terms of appearance, engaged in more appearance management behaviours, and endorsed greater strivings for perfect physical appearance than those who aspired to the fit-ideal. These findings suggest that young women who aspire to the slim-thick-ideal endorse more yo-yo dieting and associated weight fluctuations, appearance management, and disordered eating behaviours and have greater concern about body image and appearance than those who aspire to the fit-ideal. Perhaps more importantly, there were no differences in these variables among those who aspired to the thin-ideal and slim-thick-ideal,

suggesting that aspiration to the slim-thick-ideal is just as dangerous, if not more so, than aspiration to the thin-ideal.

In sum, Study 2 replicated the findings of Study 1 in that it was found that exposure to slim-thick and fit-ideal imagery resulted in lower overall body satisfaction over time. Results indicated that most women aspired to a slim-thick or fit body type, and overwhelmingly reported that the slim-thick body type was the most attractive and desirable. However, the majority of women reported that the fit-ideal was the most attainable. These findings suggest a shift in beauty ideals away from the thin-ideal ideal, and towards the slim-thick ideal, at least in young women (18 to 25 years of age). Finally, results also demonstrated that women who aspire to the slim-thick ideal reported greater overall disordered eating, weight, shape, and eating concerns, repeated attempts at dieting and associated weight fluctuations, overall body image investment, appearance management behaviours, and strivings for a perfect physical appearance compared to those who aspired to the fit-ideal. Those who aspired to the slim-thick-ideal did not significant differ on any of these characteristics from those who aspired to the thin-ideal. Given that these preliminary findings showed that young women who aspire to the slim-thick-ideal were similar in behaviour and physical appearance perfectionism to those who aspired to the thin-ideal, Study 3 aimed to investigate what eating, exercise, and body modification behaviours women were engaging in to achieve their chosen body ideal, and if there were differences in behaviours based on what ideal women aspired to. Further, it was also a goal of Study 3 to examine whether there were differences in body ideal preferences based on ethnicity or race.

Study 3[3]

[3] This study is currently under peer-review at the journal *Body Image*.

Findings from Study 2 indicated that there has been a noticeable shift in cultural beauty-ideals away from the thin-ideal towards a more curvaceous body-ideal like the slim-thick-ideal. Based on the findings from Study 2 and past research (Appleford, 2016; Brady et al., 2017; Khaled et al., 2018) it has been hypothesized that the slim-thick-ideal may have gained popularity in mainstream media because it is an ideal that appeals to a greater number of women and across racialized ethnic groups. The current study aims to specifically test this hypothesis by examining whether there is an association between ethnicity and what body ideal participants aspire most to (i.e. slim-thick-ideal, thin-ideal, or fit-ideal). Past research has documented that compared to White women, women of colour prefer a more curvaceous ideal. The bulk of research has focused on differences in body ideal preferences between White and Black women.

Past research on ethnicity and body image has focused largely on comparing White and Black women's body image on aspects of body image that are largely studied and validated on White women of European descent, namely drive for thinness and thin-ideal internalization. Studies of this nature have largely found that White women report greater body dissatisfaction and greater drive for thinness than Black women, and that White women reported thinner body ideals than their Black counterparts (Gordon et al., 2010). More specifically, research suggests that White women report more dissatisfaction with their bodies overall and want to be thin, and also want their lower bodies (thighs, hips, and butt) to be smaller than do Black women (Warren, 2014). Overall, White women report a special importance of thinness in their ethnic culture, personally endorse thinness more strongly, and perceive media-portrayed thin-ideal bodies to be a more desirable than do their Black counterparts (Fujioka et al., 2009). In contrast, Black women do not seem to be significantly affected by forced exposure images of thin-ideal media in terms of subsequent body image or mood (Frisby, 2004). While Black and White women both

reported aspiring to a curvaceous ideal, White women preferred a thinner figure overall and a smaller lower body shape (i.e. hips, thighs, and butt), whereas Black women preferred a larger and more curvaceous lower body shape (Overstreet et al., 2010). It seems that White women report aspiring to a beauty ideal that incorporates aspects of thinness, curvaceousness, and toned musculature in different body areas; in a focus group study, European White women reported that they aspire to have a thin and flat stomach, protruding collar bones, large breasts, with chiseled leg and arm muscles (Webb et al., 2013). Conversely, Black women reported they did not aspire to the same body type as White women, and used words such as "sickly", "anorexic" and "super skinny" to describe White beauty ideals (Webb et al., 2013). Black women seem to largely reject beauty ideals of thinness and do not use that standard in their self-evaluations (Hesse-Biber et al., 2010; Kelch-Oliver & Ancis, 2011). In fact, some Black women report embarrassment about being too skinny and not being more curvaceous (Appleford, 2016). Instead, research largely reflects that Black women place more of an emphasis on being shapely and curvaceous than on maintaining a low weight and being thin (Kelch-Oliver & Ancis, 2011). In particular, qualitative research reveals that Black women report that they aspire to a beauty ideal that emulates "thickness", characterized by large thighs, butt, and breasts, with a small waist and hourglass figure (Appleford, 2016; Hesse-Biber et al., 2010). Overall it appears that Black women largely reject the thin-ideal and do not consider it to be a culturally-relevant standard of beauty to which they aspire. Instead Black women seem to aspire to the slim-thick-ideal.

Comparatively less research has been done on the body image of other ethnic groups, such as South Asian or Middle Eastern women, but research seems to suggest that both of these groups also prefer a curvaceous ideal to the thin-ideal. Qualitative studies that examined the

body preferences of South Asian women found that they had more difficulty than other ethnic groups at describing their ideal body shape and weight. More specifically, South Asian women described difficulties with reconciling beauty standards of Western culture and traditional South Asian culture (Goel et al., 2021). South Asian women remarked that while thinness was important to their body image, it was also important to not be considered "too skinny" and to be "not fat, but heavy [and] healthy", which was perceived as an indicator in South Asian communities of eating well, being healthy, and being able to give birth to healthy babies (Goel et al., 2021). Researchers have therefore proposed that, like Black women, the thin-ideal may affect South Asian women differently than White women, and their ideal body type may be slightly curvier than Eurocentric descriptions of the thin-ideal (Goel et al., 2021). Perhaps this is why past research has found that neither thin-ideal internalization nor appearance teasing was not significantly associated with body dissatisfaction or maladaptive eating attitudes among South Asian women (Reddy & Crowther, 2007), since being "too thin" is viewed negatively among South Asian cultures. When interviewed about what body characteristics they most aspired to have or found most attractive, South Asian women reported idealizing a thin and flat stomach, large breasts, and curvy hips. Participants reported a desire for an hourglass figure that was curvaceous, and reported discontent at their inability to achieve the shift in recent Western standards of beauty, particularly curvaceous butts and larger breasts (Brady et al., 2017). Several participants in that study reported dissatisfaction that they did not "measure up to the curvy body type" and reported feelings of self-consciousness when they compared themselves to their White peers who emulated a slim, but curvy body type (Brady et al., 2017). Therefore, it might be expected that the slim-thick-ideal would be preferred to the thin-ideal among South Asian

women, given that it incorporates aspects of both thinness and curvaceousness, which seem to fit the preferred characteristics described by South Asian women about their ideal body shape.

Research on body image among women from Middle Eastern cultures is sparse, however existing results suggest that women from Middle Eastern cultures also prefer a more curvaceous ideal to the thin-ideal. Historically, it has been the norm for Middle Eastern cultures to show a preference for heavier or more curvaceous body shapes and sizes for women, which are associated with perceived wealth and fertility (Melisse et al., 2020). These cultural values may have protected women from Middle Eastern cultures from the adverse effects of thin-ideal internalization, especially among women who identify more closely with their native culture. Past research has documented that Muslim girls from the Middle East who wear hijab (i.e., Islamic head and body coverings) reported lower levels of adoption of Western beauty standards of thinness and felt the lowest levels of pressure to achieve the thin-ideal, compared to Muslim girls who dress in Western styled clothing or who are non-Muslim. They also showed the least willingness to change their eating behaviour to lose weight and achieve the thin-ideal (Durovic et al., 2016). Another study found that although Jordanian female college students reportedly spent more time viewing media than American students, Jordanian women reported significantly less internalization of the thin-ideal (Baptista, 2011). Further, experimental research has documented that exposure to thin-ideal media did not increase Arab females desire for a thinner body size relative to those who viewed average sized models, but in fact made Arab women desire a more curvaceous ideal that was characterized by larger hips and breasts (Khaled et al., 2018). When shown a series of silhouette body shapes, a majority of Arab women also reported a personal preference for an hourglass body shape characterized by large breasts, small waist, and large butt, similar to the slim-thick-ideal, with few women selecting as their most preferred body shape

the silhouette characteristic of the thin-ideal (Khaled et al., 2018). Therefore, like Black women and South Asian women, women from Middle Eastern cultures also seem to report a preference for a slim-thick-ideal to the thin-ideal.

In addition to examining the relationship between preferred body ideal and ethnicity, the current study aimed to examine whether there are associations between preferred body type and eating, exercise, purging, and body modification behaviours used to achieve each preferred body ideal. The sociocultural model of body image suggests that pressure to achieve societal beauty ideals (i.e. thin-ideal, fit-ideal or slim-thick-ideal) comes from pressure from the media, parents, and peers, which then leads women to internalize these ideals as the standard of beauty to achieve. Internalization of beauty ideals may lead women to become dissatisfied with their bodies if they cannot achieve that ideal, which then results in them engaging in unhealthy eating, purging (i.e. behaviours intended to aid in weight loss such as self-induced vomiting, laxative misuse, and diet pill usage), and exercise behaviours directed towards attaining these beauty ideals (Donovan et al., 2020). Considerable support for the sociocultural model of body image has been found in past research, for both thin-ideal internalization and fit-ideal internalization (e.g. Donovan et al., 2020; Rodgers et al., 2011) and across racial groups (Burke et al., 2021), indicating that idealization of both types of ideals is associated with unhealthy eating, purging, and exercise behaviours. There is no research to date on whether the model applies to the slim-thick body ideal.

It has been well-established in past research that thin-ideal internalization is a risk factor implicated in disordered eating, dieting, and fasting (i.e., going 8 or more waking hours without eating solid food; Chithambo, 2018; LePage et al., 2008; Morton et al., 2020), as well as purging behaviours, such as self-induced vomiting, laxative misuse, diet pill usage, and compulsive

exercise (Donovan et al., 2020; LePage et al., 2008). Findings regarding the relationship between fit-ideal internalization and disordered eating and purging behaviours has been less consistent. Some research has found that women who regularly engage with “fitspiration” posts on social media (described earlier in this dissertation) report more bulimic symptoms (Bell et al., 2016), including purging behaviours, than those who do not regularly engage with fitspiration content, and that a fifth were at risk for an eating disorder (Holland & Tiggemann, 2017). Similarly, it was found that fit-ideal internalization was also related to increased dieting (Bell et al., 2016). However, other longitudinal research has found that regular exposure to fitspiration content was unrelated to disordered eating behaviours (Krug et al., 2020). Research that has compared the associations between thin-ideal internalization and fit-ideal internalization with dieting and bulimic symptoms found that thin-ideal internalization was directly related to self-reported dieting and bulimia symptoms, while fit-ideal internalization was not (Donovan et al., 2020). Similarly, longitudinal data has found that thin-ideal internalization, but not fit-ideal internalization, was related to an increase in dieting over a 7-month period (Homan, 2010). Therefore, research seems to reflect overall that thin-ideal internalization is more strongly related to disordered eating, dieting, and purging behaviours than fit-ideal internalization. However, results from Study 2 indicated that young women who aspire to the slim-thick-ideal reported the greatest levels of disordered eating, weight, shape, and eating concerns, and dietary restraint, compared to those who aspired to the thin- or fit-ideal. Thus, it is expected that young women who internalize the slim-thick-ideal would be just as likely, if not more likely, to engage in disordered eating, dieting, and purging behaviours to achieve their ideal body, as those who aspire to the thin-ideal. However, research on this is lacking.

Another eating behaviour that may be of interest, but which has been sparsely researched, is the increase of dietary protein intake for weight, shape, and muscularity management. A diet that is high in protein has been shown to increase muscle mass and promote healthy weight gain (Devries & Phillips, 2015; Tieland et al., 2012). It is common for athletes, bodybuilders, and those who engage in weightlifting and strength training to increase the amount of dietary protein in their diets to facilitate building muscle and increasing their metabolism (Devries & Phillips, 2015; Snijders et al., 2015). Additionally, content analyses of fitspiration images on social media have documented that fitspiration influencers commonly advertise and attribute their fit bodies to the use of protein powders, protein shakes, or diets high in protein (Tiggemann & Zaccardo, 2018). Therefore, it might be expected that those who aspire to the fit-ideal or the slim-thick-ideal may be more likely to increase their dietary intake than those who aspire to the thin-ideal in order to increase their muscularity or weight as the fit-ideal is characterized by a toned or athletic body and the slim-thick-ideal is characterized by having voluptuous thighs and butt.

Compulsive exercise is another potential harmful predictor and outcome of thin- and fit-ideal internalization, which has yet to be examined in relation to slim-thick internalization. The positive benefits of exercising on mood, energy levels, and physical health have been well-documented (Anderson & Durstine, 2019; Aylett et al., 2018; Paolucci et al., 2018), however *compulsive* exercise has also been implicated in the development and maintenance of poor body image and eating disorders (Alcaraz-Ibanez et al., 2020). Compulsive exercise can be defined as exercise that is driven or compulsive in nature, and which significantly interferes with taking part in other activities and is prioritized over other activities, that is rigid in nature, occurs in inappropriate settings or times, exercise that persists despite injury or medical complications, and that is used to manage emotions, as a means or purging or as permission to eat. Compulsive

exercise is also associated with feelings of extreme distress, anxiety, and guilt when exercise is postponed, and that continues despite the desire to reduce exercise frequency (Meyer & Taranis, 2011; Rubin et al., 2016). Compulsive exercise is more likely among those who exercise for shape and weight management, rather than for health-related reasons (Panao & Carraca, 2020). Past research has continuously found that compulsive exercise is associated with poor body image, drive for thinness, low self-esteem, dietary restraint, purging behaviours, binge eating, and body dissatisfaction (Meyer et al., 2011; Ruiz-Turrero et al., 2022). Concerningly, compulsive exercise is also a common weight, shape, and affect management behaviour among those with anorexia nervosa and bulimia nervosa, particularly among restricting-type anorexia nervosa, and is a risk factor for eating disorder relapse (Dalle Grave et al., 2008).

Additionally, past research has consistently shown that fit-ideal internalization is strongly related to compulsive exercise (Bell et al., 2016; Holland & Tiggemann, 2017; Uhlmann et al., 2020). It has been found that, in particular, fit-ideal internalization is related to exercising for appearance reasons (Uhlmann et al., 2020). Thin-ideal internalization has also been found to be positively associated with engagement in compulsive exercise, although not to the same extent as fit-ideal internalization (Martin & Racine, 2017). Some research has found that both thin-ideal and fit-ideal internalization predicted increased engagement in compulsive exercise (Homan, 2010), while other research has found that only fit-ideal internalization is predictive of compulsive exercise (Donovan et al., 2020; Uhlmann et al, 2020). It has yet to be examined how slim-thick internalization is related to exercise behaviour, but it is possible that young women who aspire to a slim-thick ideal are engaging in comparable excessive or compulsive exercise behaviours compared to those who aspire to the thin-ideal or fit-ideal. Slim-thick idealization could be associated with a desire to tone one’s stomach and reduce one’s waist size, as well as

specialized exercise behaviours to achieve their aspired ideal, particularly exercises that targets butt and leg muscles, which is not a key feature of thin-ideal and fit-ideal body shapes. There is no research on this in the literature.

Past research on young women's body image and steroid use has been mixed, with few conclusive findings. Most research has focused on steroid use in relation to young women's drive for muscularity, which reflects the degree of preoccupation one has with increasing their muscularity (McCreary & Sasse, 2000). Some research has shown that drive for muscularity and leanness among young women is positively associated with steroid use (Hartmann et al., 2018), and that drive for muscularity was associated with intentions to use steroids (Zelli et al., 2010); while other research has found that steroid use was unrelated to drive for muscularity in young women (de Carvalho et al., 2019; McCreary & Sasse, 2000). Therefore, if there were to be a relationship between steroid use and body ideal internalization, it seems most likely that fit-ideal internalization would be most strongly associated with steroid use, however more research on this topic area is needed to address gaps in the literature.

Past research has also shown that internalization of certain media beauty ideals is related to attitudes and considerations for cosmetic surgery. More specifically, past research has shown that thin-ideal internalization was positively related to positive attitudes about cosmetic surgery and behavioural intentions to have cosmetic surgery (Nerini et al., 2014). Findings regarding fit-ideal internalization and cosmetic surgery attitudes have been mixed. Some research has found that although thin-ideal internalization was more strongly related to pro-cosmetic surgery attitudes, fit-ideal internalization was also significantly positively related to positive attitudes about cosmetic surgery (Menzel et al., 2011). On the other hand, some research has found that fit-ideal internalization is unrelated to positive attitudes about cosmetic surgery (Lunde, 2013).

Findings from Study 2 of this dissertation indicated that women who aspired to the slim-thick-ideal reported the highest scores on measures of body image investment (compared to either the thin-ideal or the fit-ideal), which is a construct that reflects both the extent to which individuals define or measure themselves and their self-worth by their physical appearance and the extent to which one engages in appearance-management behaviors. Past research has documented that body modification is a strong predictor of attitudes towards and desire for cosmetic surgery (de Vries et al., 2014; Slevec & Tiggemann, 2010; von Soest et al., 2006), and thus it might be expected that women who aspire to the slim-thick-ideal may be relatively more likely to report having undergone cosmetic surgery to achieve their desired ideal. This may be especially likely because unlike the thin- and fit-ideal, the slim-thick-ideal has been perceived to be more difficult to achieve through dieting and exercise alone. In fact, in one study, many women acknowledged that in order to achieve the slim-thick-ideal, they would consider having cosmetic surgery to alter their breasts, waist, and butt (Appleford, 2016).

Beyond, cosmetic surgery, young women also report using waist trainers as a body modification behaviour aimed at achieving a slim-thick shape (Appleford, 2016). Waist trainers are corset-like devices that flatten the stomach and cinch the waist to help achieve an hourglass silhouette. This is alarming as several serious and adverse health risks of using waist trainers have been noted, such as reducing lung capacity and making breathing more difficult (Green & Roby, 2018), squashing internal organs such as the kidneys and liver which can affect organ function and cause organ failure (American Board of Cosmetic Surgery, 2016), deforming the rib cage, slowing digestion, and causing acid reflux (Isaac, 2017). Given that the slim-thick-ideal is the only body ideal that is characterized by an exaggerated hourglass shape it is unlikely that waist trainers would be used by women who aspire to the thin- or fit-ideal, representing a unique

body modification behaviour used exclusively by women who aspire to the slim-thick-ideal. There is no current research available on this.

The Current Study

The overall aim of the current study was to extend the research literature on the slim-thick-ideal and to address some research questions not answered by Studies 1 and 2, including who the slim-thick-ideal appeals most to and how slim-thick internalization relates to women's eating, purging, exercise, and body modification behaviours. More specifically, Study 3 examined how ethnicity is related to the body type women most aspire to (slim-thick-ideal, thin-ideal, or fit-ideal). Based on the findings from Study 2, it was hypothesized that greater proportions of women would aspire to the slim-thick-ideal than the other two ideals, and this would be especially true among women of colour given past research findings about women of colour aspiring to a more curvaceous ideal than White women (Brady et al., 2017; Khaled et al., 2018; Overstreet et al., 2010). Given the paucity of research literature on the slim-thick and eating pathology, this study was the first study to specifically compare the eating, purging, exercise, and body modification behaviours between women who aspire to the slim-thick-, thin-, or fit-ideal. More specifically, the current study examined whether there are associations between young women's preferred body ideal and the following behaviours: restricting caloric intake, increasing dietary protein intake, fasting, self-induced vomiting, laxative use, diet pill usage, exercise that specifically targets the butt, cardio exercise, weight training, exercising 4 or more times a week, waist trainer usage, cool sculpting procedures, liposuction, breast augmentation procedures, butt-lift surgery, or steroid use. It was hypothesized that there would be no association between preferred body ideal and engagement in caloric restriction or fasting as this is a common weight control strategy behaviour across body ideals (Bell et al., 2016; Donovan et

al., 2020; Homan, 2010). Conversely, it was hypothesized that a greater proportion of women who aspire to the slim-thick-ideal or fit-ideal would reported increased dietary protein than women who aspire to the thin-ideal, as increased dietary protein is a strategy used to increase muscle mass and healthy weight gain (Jespersen & Agergaard, 2021). In regard to purging behaviours, it was hypothesized that a greater proportion of women who aspire to the thin-ideal or slim-thick-ideal would report engaging in purging behaviours to achieve their ideal body, than those who aspired to the fit-ideal as these behaviours have been reported to be less common among women who aspire to the fit-ideal (Donovan et al., 2020; Krug et al., 2020). It was hypothesized that there would be no association between preferred body ideal and cardio exercise or exercising 4 or more times a week, but that a greater proportion of those who aspired to the slim-thick-ideal would report doing exercise that specifically targeted the butt, given that the slim-thick-ideal is the only ideal that is specifically characterized by having a curvaceous butt. In regard to body modification behaviours, it was hypothesized that greater proportions of those who aspired to the slim-thick-ideal would report using a waist trainer, having liposuction, breast augmentation surgery, and butt-lift surgery compared to those who aspired to the thin- or fit-ideal given that the slim-thick-ideal is difficult to achieve without cosmetic surgery (Appleford, 2016). Finally, no hypotheses were made regarding steroid use and body ideal internalization as findings in past research have been inconclusive; this analysis was exploratory in nature.

Methods

Participants

Participants were 388 female psychology undergraduate students recruited through a research participant pool at York University in Toronto, Canada. As with Studies 1 and 2, inclusion criteria included identifying as female and being between the ages of 18–25 years. Participant ages ranged from 18 to 25 years (M = 19.17, SD = 1.76). The self-reported ethnic distribution of the sample was 27.2% South-Asian, 20.1 % Caucasian, 14.7 % Middle Eastern, 13.4 % Black/African-Canadian, 10.8% identified as "Other", 8.7 % East-Asian, 3.1% Hispanic/Latino, 1.3% West Asian, and .5 % Native.

Measures and Procedure

Ethics approval was granted by the university's Human Participants Review Committee (see Appendix Q for ethics approval of all three studies). Eligible participants could sign up for the study through an online experiment management system. The study was advertised as a study about body preferences and eating, exercise, and body modification behaviours. Upon signing up for the study, participants provided their informed consent to participate (see Appendix R). All participants were exposed to one image of the slim-thick-ideal, thin-ideal, and fit-ideal and asked to report which of the three body types or shapes they most aspired to have themselves, which they thought was most attractive, desirable, and attainable, and which they saw most often on social media (these were the same images and procedure used in Study 2; see Appendix O). After reporting which body type they most aspired to have themselves, participants were asked to indicate through a series of yes/no questions whether they had engaged in specific behaviours to achieve the body type they indicated that they most aspired to. Participants were asked to only indicate behaviours they had engaged in to achieve their most recent body ideal, and to exclude behaviours that they may have engaged in previously to achieve different body ideals to which they aspired in the past. Participants were asked to answer "yes" or "no" to whether they had

engaged in any of the following: eating, purging, or exercise behaviours in the last 12 months or had cosmetic surgery to achieve the body ideal they most aspired to: dieted or restricted their caloric intake, increased their protein intake, fasted, engaged in self-induced vomiting, taken laxatives, taken diet pills, taken anabolic steroids, cardio exercise, weight training, exercise that specifically targets the butt, exercised 4 or more times a week, had liposuction, had a butt enhancement surgery, had breast augmentation surgery, had cool sculpting procedures, or used a waist trainer (see Appendix S). Definitions of each of the behaviours were provided to participants. Participants then completed demographic questions and were compensated with partial course credit for their participation.

Data Analysis

All statistical analyses were conducted using SPSS 27. An a priori power analysis indicated that a total sample size of 155 participants would be adequate to achieve a power estimate of .80, a medium effect size (.25), using alpha .05 (Faul et al., 2007), which was achieved. Because behaviours that are relatively uncommon in the general population were being assessed (i.e., self-induced vomiting, compensatory laxative use, cosmetic surgery) a larger sample was recruited to increase the likelihood that meaningful differences in these behaviours based on body preference could be examined, and so that expected cell frequencies might be above 5 in order to meet assumptions for a chi square test of independence. Participants were divided into three groups based on which one of the three body ideals they reported they most aspired to. A chi-square test of independence was conducted to determine whether there was an association between body ideal preferences and eating, purging, exercise, and body modification behaviours. Further, a chi square independence test was conducted to examine if there was an association between participant ethnicity and what body ideal participants most aspired to. To

conduct the chi square test between ethnicity and what ideal participants most aspired to, the four most commonly reported ethnic categories were used (i.e. White, Black, South Asian, and Middle Eastern, $N = 294$); the other six ethnic groups were not included because they were not widely reported by participants and data from those participants were not included in this particular analysis . Significant chi-square analyses were followed up with post hoc *z*-tests to determine where the significant differences occurred. To control for Type I error caused by multiple comparisons, a Bonferroni correction was used to adjust the *p*-values for each *z*-test. As a result of the adjustment, for the analyses that compared engagement in eating, purging, exercise, and body modification behaviours among those who aspired to the slim-thick-, thin-, or fit-ideal, alpha was set to .016 ($\alpha = 0.05/3$ comparisons). For the analysis that examined the association between race and preferred body type alpha was set to .004 ($\alpha = 0.05/12$ comparisons).

Results

Preliminary Analyses

Each of the four statistical assumptions for the chi-square test of independence were met. Namely, both variables included in each analysis were categorical, all observations were independent, each cell in the contingency tables were mutually exclusive, and expected values of cells were 5 or greater in at least 80% of cells (Field, 2013).

Ratings of Each Body Ideal

Results demonstrated that 43.8% of participants reported that they most aspired to the slim-thick-ideal, followed by the fit-ideal (30.2%), and thin-ideal (26.0%). Most participants also reported that they thought the slim-thick ideal was the most attractive and desirable body type,

but also the least attainable (see Figure 6). Participants also overwhelmingly reported (88%) that the slim-thick-ideal was the body ideal that they saw most often on social media.

Results indicated that there was a significant association between preferred body type and participant ethnicity (see Table 6). Among those who identified as White, there were no statistically significant differences between the number of participants that aspired to a slim-thick- (33.3%), thin- (32.1%), or fit-ideal (34.6 %) body type. In other words, nearly equal proportions of White participants reported aspiring to each of the three body ideals. Among participants who identified as Black, results indicated that a greater proportion of Black women aspired to the slim-thick-ideal (69.2%) than both the thin-ideal (9.6%) and the fit-ideal (21.2%; see Figure 7). There were no significant differences between preferences for the thin- versus the fit-ideal among Black women. Among participants who identified as South Asian, results indicated that a greater proportion of South Asian women aspired to the slim-thick-ideal (41.5%) than to the thin-ideal (28.3%). There were no significant differences between preferences for the slim-thick-ideal versus the fit-ideal (30.2%) or between preferences for the thin- versus the fit-ideal among South Asian women. Among those who identified as Middle Eastern, results indicated that a greater proportion of Middle Eastern women aspired to the slim-thick-ideal (43.3%) than the thin-ideal (16.4%). There were no significant differences between preferences for the slim-thick-ideal versus the fit-ideal (25.4%) or between preferences for the thin- versus the fit-ideal among Middle Eastern women.

Behaviours to Attain Each Body Ideal

Dietary habits. Results indicated that there were no significant associations between preferred body type and restrictive eating or fasting (see Table 7). In terms of restrictive eating, 61.8% of participants who aspired to the slim-thick ideal reported restricting their caloric intake

in an attempt to achieve their preferred body ideal, compared to 61.4% for those who aspired to the thin-ideal and 54.7% who aspired to the fit-ideal. In regard to fasting, 40.0% of those who aspired to the slim-thick ideal reported going for 8 or more waking hours without eating solid food in an attempt to achieve their aspired body ideal, compared to 43.6% for those who aspired to the thin-ideal and 29.9% who aspired to the fit-ideal. There was however a significant association between preferred body type and increasing one's dietary protein intake to achieve one's preferred body type. More specifically, a greater proportion of participants who aspired to the slim-thick-ideal reported increasing their dietary protein intake to achieve their desired ideal (44.1%) than both those who aspired to the thin-ideal (28.7%) or the fit-ideal (40.0%)[4]. Further, a greater proportion of those who aspired to the fit-ideal reported increasing their dietary protein intake to achieve their desired body ideal than those who aspired to the thin-ideal.

Purging. Results indicated that there were no significant associations between preferred body type and self-induced vomiting, laxative use, or diet pill usage. Put differently, self-induced vomiting was endorsed in similar proportions among participants who aspired to the slim-thick- (8.8%), thin- (9.9%), or fit-ideal (5.1%). Laxative use was also endorsed in similar proportions among those who aspired to the slim-thick- (5.3%), thin- (5.9%), or fit-ideal (2.6%). Finally, diet pill usage was also endorsed in similar proportions among those who aspired to the slim-thick- (6.5%), thin- (5.9%), or fit-ideal (5.1%). Although differences were not statistically significant, in each instance each type of purging behaviour was endorsed most often among those who aspired to the slim-thick or thin-ideal.

[4] To ensure confidence in the results, all significant chi square analyses were followed up with three types of post-hoc testing. In addition to the post hoc sample proportion *z*-tests reported, significant chi square analyses were also followed up with Bonferroni corrected post hoc pairwise *z*-tests generated in SPSS and post hoc tests using the standardized residual method by Beasley and Schumacker (1995). Results were similar regardless of which method of post hoc testing was used. The post hoc sample proportion *z*-tests were reported as they offered the most meaningful type of interpretation.

Exercise. Results revealed that there was a significant association between preferred body type and exercise that specifically targets the butt. More specifically, a greater proportion of participants who aspired to a slim-thick-ideal (71.8%) reported engaging in exercise that specifically targeted the butt than those who aspired to either the thin-ideal (67.3%) or fit-ideal (58.1%). There were no differences between participants who aspired to the thin- or fit-ideal. Results indicated that there were no significant associations between preferred body type and engagement in cardio exercise, weight training, or exercising 4 or more times per week. Put differently, cardio exercise was endorsed in similar proportions among participants who aspired to the slim-thick-ideal (81.8%), thin-ideal (73.3%), or fit-ideal (73.5%). Weight training was also endorsed in similar proportions among those who aspired to the slim-thick- (53.5%), thin- (40.6%), or fit-ideal (53.0%). Finally, exercising 4 or more times per week was also endorsed in similar proportions among those who aspired to the slim-thick-ideal (66.5%), thin-ideal (60.4%), or fit-ideal (66.7%). Although these differences were not statistically significant, a greater proportion of participants who aspired to a slim-thick ideal reported engaging in cardio exercise, and a greater proportion of those who aspired to a slim-thick- or fit-ideal reported engaging in weight training or exercising 4 or more times a week.

Body modification. Results revealed that there was a significant association between preferred body type and waist trainer usage. A greater proportion of participants who aspired to a slim-thick-ideal (28.8%) reported using a waist trainer to achieve their desired ideal than those who aspired to either the thin- (15.8%) or fit-ideal (14.5%). There were no significant differences between those who aspired to the thin-ideal or fit-ideal. Results indicated that there were no significant associations between preferred body type and having had cool sculpting procedures, liposuction, or using anabolic steroids. Put differently, having cool-sculpting procedures was

endorsed in similar proportions among participants who aspired to the slim-thick-ideal (2.9%), thin-ideal (5.0%), or fit-ideal (1.7%). Having liposuction procedures was also endorsed in similar proportions among those who aspired to the slim-thick-ideal (2.4%), thin-ideal (0.0%), or fit-ideal (3.4%). Further, using anabolic steroids was also endorsed in similar proportions among those who aspired to the slim-thick-ideal (0.60%), thin-ideal (0.0%), or fit-ideal (0.90%). Additionally, no participants reported having breast augmentation or butt-lift surgery; therefore, chi square analyses could not be computed to analyze associations between those procedures and preferred body type.

Discussion

The purpose of Study 3 was to investigate whether there is a relationship between the type of body women most aspire to (slim-thick, thin, or fit) and participant ethnicity and eating, purging, exercise, and body modification behaviours. This was the first study of its kind to investigate differences in eating, purging, exercise, and body modification behaviours among women who aspire to the slim-thick-ideal, thin-ideal, or fit-ideal. This research is an important addition to the literature as it speaks to whether one body ideal is more harmful than another in terms of leading young women to engage in disordered eating, purging, excessive or compulsive exercise, and/or body modification behaviours. These results identify important behaviours to monitor and change in body image and eating disorders interventions, which may need to be more carefully monitored depending on what type of body ideal patients aspire to.

Several key findings emerged from the current study. First, the findings demonstrated that participant ethnicity was associated with the type of body ideal to which participants most aspired. In line with the study hypotheses, it was found that greater proportions of Black, South Asian, and Middle Eastern women aspired to the slim-thick-ideal more than the thin-ideal, and

that Black women also aspired to the slim-thick-ideal more than the fit-ideal. In contrast, equal proportions of White women reported aspiring to the slim-thick-ideal, thin-ideal, and fit-ideal, with no ideal being significantly and disproportionately preferred over the other. These results indicate that the slim-thick-ideal is more widely preferred among women compared to the thin- and fit-ideal, especially among women of colour. These findings are in line with past research that has found that Black women prefer a curvier ideal with larger buttocks than do White women (Overstreet et al., 2010), and research that found that Middle Eastern and South Asian preferred a more curvaceous ideal with curvy hips and larger buttocks (Brady et al., 2017; Khaled et al., 2018). It could be that the slim-thick-ideal is preferred over the thin-ideal and fit-ideal among women of colour because the slim-thick-ideal simultaneously incorporates aspects of beauty that are valued in their native culture, namely feminine curves and a healthy weight, as well as aspects of beauty valued in Eurocentric culture, namely having a thin waist and a flat stomach (Appleford, 2016). In line with the findings of Study 2, the slim-thick body type was also rated by participants as the most attractive and desirable, and the slim-thick-ideal was the one most aspired to for themselves. Interestingly, and surprisingly given the lack of research on the slim-thick-ideal, this body type was widely reported as the body type seen most often on social media. Taken together, these results suggest that beauty ideals have shifted away from predominantly being the thin-ideal, especially for women of colour, and that the ubiquity of slim-thick images on social media is related to this shift towards a preference for the slim-thick-ideal. The current study cannot address whether the prevalence of the slim-thick body images on social media has led to internalization of this ideal or *reflects* women's preferences (which may have originated for other reasons). But the results are clear that most young women, particularly women of colour, are not concerned with being as thin as possible.

Past research has documented that women of colour do not internalize the thin-ideal to the same extent as White women, and thus it has often been concluded that women of colour have less negative body image compared to White women or that they are protected from the sociocultural pressure to lose weight and have a thin body (Grabe et al., 2008; Overstreet et al., 2010). However, results from the current study suggest that perhaps it is not that women of colour are less impacted by media portrayals of idealized body images, but that research has not adequately examined the impact of body ideals most relevant to women of colour. Findings from the current study suggest that the slim-thick-ideal appeals to a high proportion of women across racial groups, which points to the importance of clinicians and researchers paying attention to slim-thick-internalization as it may be increasingly necessary to address internalization of this ideal in body image and eating disorder interventions.

Study 3 investigated whether there is a relationship between what body type women most aspired to and the eating, purging, exercise, and body modification behaviours they engaged in to achieve that ideal. In regard to dietary practices, a key finding of the study was found that young women who aspired to either the slim-thick- or fit-ideal were more likely than those who aspired to the thin-ideal to report increasing their protein intake to achieve their desired body ideal. It is possible that women who aspire to the slim-thick- and fit-ideal would be more likely to increase their dietary protein intake than those who aspire to the thin-ideal because increasing dietary protein is often done to increase muscle mass and achieve healthy weight gain (van Loon & Meeusen, 2013), which would arguably be more desired by those who aspire to the slim-thick- and fit-ideal than those who aspire to the thin-ideal. Conversely, there was no significant relationship between the body type that women aspired to and restrictive eating or fasting. In other words, women who aspired to the slim-thick-ideal, thin-ideal, or fit-ideal were equally as

likely to report restricting their caloric intake or to engage in fasting (i.e., going eight or more hours awake without eating solid food). Both these behaviours were relatively common among participants; one half to one third of participants reported restricting their caloric intake to achieve their desired body ideal and over a third of women reported fasting. These findings are alarming given that regular engagement in these behaviours is predictive of disordered eating, body dissatisfaction, and several negative physical symptoms including dizziness, fainting, fatigue, irritability, reduced concentration, and in extreme cases electrolyte imbalances that can lead to heart arrythmias (Cuccolo et al., 2021; Homan, 2010; Fairburn, 2008). Findings from Study 2 found that young women who aspire to the slim-thick-ideal or thin-ideal reported greater disordered eating and weight and shape concerns as measured by standardized self-report measures than do those who aspired to the fit-ideal, and that those who aspired to the slim-thick-ideal reported more frequent unsuccessful attempts at dieting, as captured by the Revised Restraint Scale. Yet it appears from the findings of Study 3 that those who aspire to the fit-ideal are still not immune to dieting and fasting practices as a means of weight and shape control.

No significant associations were found between preferred body type and self-induced vomiting, laxative use, or diet pill usage. In other words, these behaviours were reported in similar proportions by young women who aspired to the slim-thick-, thin-, or fit-ideal. While body image interventions and public health campaigns, such as Dove's Real Beauty Campaign or Aerie's Real Campaign, have called for the inclusion of diverse body types in advertising and the media, the current results suggest that the slim-thick- and fit-ideal are not necessarily healthier alternatives to the thin-ideal, and that young women are engaging in the same purging behaviours to achieve these larger body types as women who aspire to the thin-ideal. This is worrying given that regular engagement in purging has been associated with a greater likelihood

of mortality and a host of negative health complications, such as dental erosion and gum recession, damage to the esophageal and stomach lining, gastric reflux, dehydration, electrolyte imbalances, heart arrythmia, kidney damage or failure, and muscular-skeletal conditions (Forney et al., 2016). Regardless of what body-ideal women aspire to or emulate, medical providers and clinicians should carefully assess for and monitor purging behaviours and associated medical complications among patients.

Study 3 investigated how engagement in various types of exercise were related to participants' preferred body type. Another key finding of the study was that a significant association was found between preferred body type and engaging in exercise that specifically targets the butt. More specifically, a greater proportion of those who aspired to the slim-thick-ideal reported engaging in exercise that targeted the butt, than those who aspired to the thin-ideal or fit-ideal. This was in line with study hypotheses, and was expected given that the slim-thick-ideal is an ideal that is characterized specifically by having a round and large butt. Other than these specialized exercises, the results revealed that participants generally engaged in similar types and level of exercise regardless of what body-ideal they aspired to. More specifically, no significant associations were found between preferred body type and engagement in cardio exercise, weight training, or exercising 4 or more times per week. Regardless of what body type women aspired to, approximately three thirds of participants reported engaging in cardio exercise to achieve their desired ideal, one half endorsed engaging in weight training, and two thirds indicated that they had exercised four or more times per week to achieve their desired body ideal.

These findings were unexpected, as it had been hypothesized that young women who aspire to the fit-ideal would engage in more exercise overall. However, other than the dichotomous variable of exercise that occurs more than 4 times per week, the current study did

not assess the frequency of how often participants engaged in these exercise behaviours, but only if they had *ever* engaged in those behaviours to achieve their body ideal. A more nuanced assessment of frequency and *intensity* of exercise behaviours might indicate a different pattern of findings, as past research has shown that women who aspire to the fit-ideal engage in greater amounts of exercise than those who aspire to the thin-ideal (Donovan et al., 2020). Future research might also assess the motivation behind women's exercise, as those who aspire to the fit-ideal may exercise in the context of both health and exercise for body weight and shape control (Raggatt et al., 2018; Homan, 2010), while those who aspire to the thin-ideal may engage in excessive or compulsive exercise as a compensatory purging behaviour to facilitate or maintain weight loss (Homan, 2010). Overall, in order to better assess whether women are engaging in healthy versus unhealthy or compulsive exercise in the pursuit to achieve certain body ideals, future research should not only assess the frequency and intensity of exercise, but also how rigid the exercise routine is, if it occurs in inappropriate circumstances or settings, whether the motivation for the exercise is solely for shape, weight, and appearance management, as well as levels of distress that occur if exercise is missed; a combination of these factors would indicate exercise that is compulsive in nature, which has been associated with the development, maintenance, and relapse of eating disorders and poor body image (Dalle Grave et al., 2008; Meyer et al., 2011; Ruiz-Turrerro et al., 2022). In the context of clinical eating disorders, compulsive exercise is also used as a method of purging calories to lose weight or maintain low weight or must be done prior to or after eating before one gives themselves permission to eat, this is especially true in anorexia nervosa (Dalle Grave et al., 2008). Findings from the current study can only speak to the frequency of exercise and types of exercise that young women are engaging in to achieve each ideal, which may or may not be inherently unhealthy.

Finally, the last goal of Study 3 was to investigate whether there is any association between preferred body type and body modification behaviours. As predicted, there was a significant association between preferred body type and waist trainer usage, whereby a greater proportion of those who aspired to the slim-thick-ideal reported using a waist trainer than those who aspired to the thin- or fit-ideal. This result was unsurprising as waist trainers are marketed as body shapewear to achieve an hourglass figure, as is characteristic of the slim-thick-ideal. In fact, several celebrities who emulate the slim-thick-ideal have done paid promotions for waist trainer products, such as Kim Kardashian and Amber Rose, who each have extensive followings on social media (Appleford, 2016). Just under one third of participants who aspired to the slim-thick-ideal reported using a waist trainer. Several adverse health risks of using waist trainers have been noted, such as reducing lung capacity and making breathing more difficult (Green & Roby, 2018), squashing internal organs such as the kidneys and liver which can affect organ function and cause organ failure (American Board of Cosmetic Surgery, 2016), deforming the rib cage, slowing digestion, and causing acid reflux (Isaac, 2017). Thus, waist trainer usage is a body modification behaviour that should be more routinely assessed by eating disorder clinicians and addressed in body image interventions. Otherwise, there were no significant relationships between preferred body type and other body modification behaviours, including cool-sculpting procedures, liposuction, or using anabolic steroids. However, these behaviours were infrequently reported and therefore it may have been difficult to determine meaningful associations. Additionally, none of the surveyed participants reported having breast augmentation or butt-lift surgery and so associations with preferred body type could not be examined. Since these activities appear to be relatively uncommon in a sample of young female university students, future research might better assess these relationships by surveying patients from cosmetic

surgery clinics and inquiring about their preferred body type and which procedures they have undertaken.

In sum, Study 3 replicated the findings of Study 2, and found that most women surveyed aspired to the slim-thick body type, overwhelmingly reported that the slim-thick body type was the most attractive and desirable, and that it is the body type they see most often on social media. Additionally, Study 3 added to the findings of Study 2 by examining if there was a relationship between participant ethnicity and the body ideal women most aspired to. Results indicated that greater proportions of Black, South Asian, and Middle Eastern women reported aspiring to the slim-thick-ideal than the thin- or fit-ideal. Conversely, nearly equal proportions of White women reported aspiring to the slim-thick-ideal, thin-ideal, or -fit-ideal. These findings suggested a shift in beauty ideals away from the thin-ideal ideal, and towards the slim-thick ideal, especially for women of colour. Further, the findings of Study 3 demonstrated that eating, exercise, and body modification behaviours that were endorsed to a greater degree by women who aspired most to the slim-thick-ideal. Specifically a greater proportion of women who aspired to the slim-thick-ideal reported increasing dietary protein, engaging in exercise that specifically targets the butt, and using a waist trainer, compared to women who aspired to the thin- or fit-ideal. Equally as important, there were no significant associations between preferred body type and dietary restraint, fasting, self-induced vomiting, laxative use, diet pill usage, cardio exercise, weight training, exercising 4 or more times a week, having cool-sculpting procedures, liposuction, or using steroids. These results demonstrated that women who aspire to the slim-thick-ideal engage in the same harmful dietary, purging, exercise, and body modification behaviours as women who aspire to the thin- and fit-ideal, suggesting that the slim-thick-ideal is not a healthier body ideal alternative.

General Discussion

The overall purpose of the current set of studies was to extend the literature on internalization of beauty standards and young women's body image, by investigating the impact of the slim-thick-ideal on women's body image satisfaction, eating, exercise, purging, and body modification behaviours. In particular, the current research was guided by the following research questions: 1) What is the impact of social comparison to slim-thick-ideal images on Instagram on young women's body image, relative to social comparison to thin-ideal and fit-ideal imagery?; 2) What personality features (i.e. physical appearance perfectionism) make women most vulnerable to the negative effects of slim-thick-ideal imagery found on Instagram on body image?; 3) Which types of women are most likely to aspire to the slim-thick-ideal, in terms of ethnicity, personality, and behavioural features?; 4) What behaviours are women engaging in, in an attempt to achieve a slim-thick body type, relative to the behaviours engaged in to achieve a thin or fit body type?; 5) Which of the three body ideals (slim-thick, thin, or fit) is most aspired to, and which is perceived to be the most attainable, attractive, and desirable to young women? For the most part, the research hypotheses were supported and findings pointed to important ramifications of young women's internalization of and comparison to the new slim-thick ideal. Findings from the current set of studies are ground-breaking in a number of ways. First, these are the first empirical studies to experimentally investigate the impact of social comparison to the slim-thick-ideal on women's body image. The current set of studies included examinations of, the thin-ideal and fit-ideal as comparison targets. Past research is very limited and, thus far, has only investigated the impact of the slim-thick-ideal on women's body image through qualitative interviews, and experimental research thus far has focused only on the impact of comparison to the thin- and fit-ideal or to average or plus-sized women, and has neglected the impact of thin but

curvy bodies on women's body image. Second, these were the first sets of studies to examine personality differences and differences in eating, purging, exercise, and body modification behaviours between women who aspire to the thin-, fit-, or slim-thick-ideal. Finally, the current set of studies also assessed if there had been a shift in cultural beauty standards by asking young women to report which of the three body ideals they found the most attractive and desirable, and to which they aspired most. Thus, this research has clinical significance for body image and eating disorder prevention and intervention efforts, which are currently primarily focused on combatting the thin ideal and drive for thinness, and which may be excluding important targets of treatment for women who aspire to a curvier ideal.

In terms of the impact of social comparison to slim-thick-ideal imagery on women's body image, Study 1 found that comparing oneself to a slim-thick, thin, or fit model on Instagram resulted in increased weight and appearance dissatisfaction and lower overall body satisfaction compared to an appearance-neutral control condition. Further, these findings were greater for those who compared themselves to slim-thick imagery on Instagram than thin-ideal imagery. Similar findings were replicated in Study 2. More specifically, a within-subjects experimental design found that comparison to slim-thick and fit imagery on Instagram resulted in reduced body satisfaction, which was not true following comparison to thin-ideal imagery. These findings were surprising given that comparison to the thin-ideal has been reliably associated with poor body image (Brown & Tiggemann, 2016; McComb & Mills, 2021). However, these findings were in keeping with recent research that documented that exposure to fit-ideal imagery (Robinson et al., 2017) and curvy-ideal imagery (Betz et al., 2019) was more harmful to women's body image than exposure to thin-ideal imagery. Taken together, these findings seem to suggest that exposure and comparison to the slim-thick-ideal and fit-ideal is even more

threatening to young women's body image than exposure to thin-ideal imagery. These findings lend further support to social comparison theory, and suggest that when a negative contrast in appearance becomes salient between oneself and another women with a slim-thick body type, it can result in negative changes to body image.

The sociocultural model of body image can incorporate these findings and other evidence that points to the fact that the slim-thick-ideal is becoming increasingly threatening to young women's body image due to increased societal pressures for women to be simultaneously thin and curvy. The sociocultural model of body image theorizes that pressure from the media, family, and peers to attain certain body ideals results in internalization of that ideal and comparison to that ideal to judge how one's own body measures up to that ideal. When discrepancies between one's body and the internalized ideal become apparent, that can result in body dissatisfaction and subsequent disordered eating and purging behaviours in an effort to achieve that ideal (Donovan et al., 2020). Findings from the current set of studies suggests that there may be increased pressure from both the media and peers to achieve a slim-thick-ideal. The resulting processes elicited by perceived discrepancies between one's own body and the "perfect" body are the same. Study 3 results indicated that participants overwhelmingly reported that the slim-thick-ideal was the body type they saw most often on social media. Social media features idealized images of celebrities and models who may approximate the slim-thick-ideal, but photo-editing apps, filters, and body shapewear also allow the average woman to post idealized images of herself. Therefore, slim-thick-imagery may be abundantly available to young women on social media and may feature slim-thick images of celebrities, models, and their peers, which increases societal pressures from both the media and their peers to achieve the slim-thick-ideal. Findings also suggest that the slim-thick-ideal has been internalized by many women

as the standard of beauty to achieve. Results from both Study 2 and Study 3 indicated that the majority of women thought the slim-thick-ideal was the most desirable and attractive body ideal, relative to the thin- and fit-ideal, suggesting some internalization of the slim-thick-ideal as a standard of beauty. Further, women who compared themselves to the slim-thick-ideal in Study 1 and Study 2 experienced considerable body dissatisfaction, lending further support to the sociocultural model of body image. Taken together, these results provide evidence that there is considerable pressure from social media and peers to achieve a slim-thick body type, and that internalization and comparison to this ideal in the current studies resulted in increased body dissatisfaction after exposure to slim-thick imagery. Conversely, very few women in Study 2 or Study 3 reported that they aspired to the thin-ideal or thought that it was the most attractive or desirable ideal; the thin-ideal was also seen less often on social media than the other body ideals. Therefore, societal pressure to achieve the thin-ideal may have decreased, and findings suggest that internalization of the thin-ideal has also decreased. This may be one explanation for why women in the current studies reported greater body dissatisfaction after comparison to slim-thick imagery than after comparison to thin-ideal imagery.

Another related explanation for why slim-thick imagery may have been more threatening to women's body image than thin-ideal imagery is that the slim-thick-ideal appeals to a greater number of women across racial and ethnic groups, which was not true of the thin-ideal according to the current findings. Findings from Study 3 found that there was a significant relationship between ethnicity and preferred body ideal, such that a greater proportion of women who identified as Black, South Asian, or Middle Eastern reported preferring the slim-thick-ideal to the thin- or fit-ideal, whereas the proportion of women who identified as White and who most preferred the slim-thick-, thin-, or fit-ideal did not differ. These findings were especially

pronounced for Black women, who rarely reported that the thin-ideal was their most preferred body ideal. These findings were in keeping with other research which has found that Black, South Asian, and Middle Eastern women prefer a more curvaceous ideal than the thin-ideal, and a more curvaceous ideal compared to the preferences of their White counterparts (Appleford, 2016; Brady et al., 2017; Khaled et al., 2018). In particular, the slim-thick-ideal may be appealing to women of colour because it offers a middle ground which incorporates aspects of beauty from their culture of origin, such as curvaceous which is valued as a sign of good health and ability to bear children (Goel et al., 2021), as well as thinness which is prized in Eurocentric or Western culture. In contrast, research, including the current set of studies, shows that women of colour internalize the thin-ideal to a much lesser extent than their White counterparts (Appleford, 2016; Webb et al., 2013). This may account for why comparison to the thin-ideal did not elicit the same magnitude of body dissatisfaction as comparison to the slim-thick-ideal in the current set of studies, particularly because the samples in the current set of studies were ethnically diverse.

Therefore, study results point to the fact that slim-thick imagery is not a healthier ideal for women's body image than thin- or fit-ideal imagery, even though the slim-thick ideal represents a larger body type. This conclusion was further supported with the findings of Study 2 and 3, which found that women who aspire to the slim-thick-ideal scored high on reliable indicators of poor body image and disordered eating, and were engaging in harmful eating, purging, exercise, and body modification behaviours to the same or greater extent as those who aspired to the thin- or fit-ideal. More specifically, it was found in Study 2 that women who aspired to the slim-thick-ideal scored higher than those who aspired to the fit-ideal on measures of global disordered eating, unsuccessful attempts at dieting weight and shape concerns,

concerns over eating, thin-ideal internalization, body image investment, self-worth based on appearance, appearance management behaviours, and physical appearance perfectionism, which are all reliable predictors of disordered eating and poor body image (Argyrides & Kkeli, 2014; Donovan et al., 2020; McComb & Mills, 2021; Yang et al., 2017). Further, there were no differences in these measures between those who aspired to the slim-thick-ideal and the thin-ideal, which suggests that those who internalize the slim-thick-ideal are just as at risk for disordered eating and poor body image as those who aspire to the thin-ideal, possibly more so given that comparison to slim-thick imagery caused greater body dissatisfaction than thin-ideal imagery in the current studies.

Further, it was found in Study 3 that for the most part, young women who aspire to the slim-thick-ideal engage in the same harmful dieting, purging, and body modification behaviours as those who aspire to the thin- and fit-ideal. More specifically, it was found that similar proportions of those who aspired to the slim-thick-, thin-, and fit-ideal reported restricting their caloric intake, fasting, self-inducing vomiting, misusing laxatives, and using diet pills to achieve their desired ideal. These findings are alarming given that dieting, fasting, and purging behaviours are associated with the development and maintenance of eating disorders (Fairburn, 2008; Levallius et al., 2017; Stice et al., 2011) and dangerous medical complications. For example, self-induced vomiting is associated with health risks such as dental erosion and tooth decay, irritation or damage to the esophageal and stomach lining, gastric reflux, dehydration, electrolyte imbalances which can cause heart arrythmias and cardiac arrest, while laxative misuse is associated with medical complications to the kidneys, colon, and gastrointestinal tract, bowel dysfunction, impaired colon motility, chronic diarrhea, constipation, and bloody stool (Forney et al., 2016).

Further, women were just as likely to have had cool sculpting procedures, liposuction, or used anabolic steroids to achieve their desired ideal. Additionally, those who aspired to the slim-thick-ideal were more likely than those who aspired to the thin- or fit-ideal to use a waist trainer to achieve their desired body ideal, and this behaviour was relatively common. This is alarming given the negative health risks associated with waist trainer usage, such as reducing lung capacity and making breathing more difficult (Green & Roby, 2018), squashing internal organs such as the kidneys and liver which can affect organ function and cause organ failure (American Board of Cosmetic Surgery, 2016), deforming the rib cage, slowing digestion, and causing acid reflux (Isaac, 2017).

Additionally, there were no statistically significant differences in the number of women who aspired to the slim-thick-ideal, thin-ideal, or fit-ideal and who engaged in doing cardio exercise, weight training, and exercising 4 or more times a week to achieve their desired ideal. Additionally, those who aspired to the slim-thick-ideal were more likely than those who aspired to the thin- or fit-ideal to do exercise that targeted the butt to achieve their desired body ideal. While for most people engaging in exercise is a positive behaviour to maintain good physical and mental health, for those with low body satisfaction exercise can be a potentially risky behaviour that is linked to the development and maintenance of clinical eating disorders (Dalle Grave et al., 2008). Past research has shown that those with poor body image, drive for thinness, low self-esteem, and body dissatisfaction are more likely to engage in compulsive exercise (Ruiz-Turrero et al., 2022). In particular, when exercise is compulsive in nature (i.e. exercise that is rigid in nature and significantly interferes with taking part in other, occurs in inappropriate settings or times, that persists despite injury or medical complications, and that is used to manage emotions, as a means or purging or as permission to eat) it can result in feelings of distress,

anxiety, depression, or guilt when exercise is postponed, an inability to reduce exercise despite the desire to do so, and can also be used as a maintaining mechanism in clinical eating disorders to purge calories and maintain low weight (Meyer et al., 2011; Meyer & Taranis, 2011; Ruiz-Turrero et al., 2022; Rubin et al., 2016). Findings from Study 3 suggested that approximately two thirds of women had exercised 4 or more days a week to achieve their desired ideal (regardless of which of the three ideals they aspired to), which may suggest some presence of compulsive exercise that is used to achieved one's beauty ideal, although high frequency of exercise is just one component of exercise that is compulsive in nature. Therefore, findings from Study 3 lend some preliminary evidence that slim-thick internalization is associated with a high degree of exercise to achieve one's beauty ideal, that is comparable to that seen among those who idealize the thin-ideal and fit-ideal; further research would be needed to determine if slim-thick-internalization is associated with more compulsive exercise.

Overall, these findings lend further support to the sociocultural model of body image and support the notion that internalization and comparison to slim-thick imagery, results in body dissatisfaction, which may influence engagement in dieting, purging, and exercise behaviours to try to achieve one's body ideal, similar to studies that have formally tested the fit of the sociocultural model of body image with thin- and fit-ideal internalization (Donovan et al., 2020).

Largely, study findings suggest that comparison to slim-thick imagery is harmful for women's body image, and internalization of this ideal is associated with a host of dieting, purging, exercise, and body modification behaviours, as well as high scores on measures of disordered eating, body modification, physical appearance perfectionism, and thin-ideal internalization. Although the slim-thick-ideal represents a larger and more curvaceous body type

than the thin- or fit-ideal, it is not a healthier alternative body ideal, and still puts women at risk for negative body image and disordered eating behaviours.

Clinical Implications

There are several implications of the following research. First, study findings provide preliminary evidence that comparison to slim-thick-ideal media is more threatening to women's body image than thin-ideal imagery, particularly among women who strive to have a perfect appearance, and that those who aspire to the slim-thick-ideal are just as likely, if not more likely as those who aspire to the thin- and fit-ideals to engage in restrained eating or fasting, purging behaviours, body modification behaviours, and have high weight and shape concerns, thin-ideal internalization, physical appearance perfectionism, body image investment, self-worth based on appearance, and perfectionistic strivings for perfect appearance. These findings suggest that women who aspire to the slim-thick ideal may be just as at risk for poor body image and eating disorders as those who aspire to the thin-ideal. Yet, most body image and eating disorder prevention and intervention efforts are focused on combatting the thin ideal and drive for thinness. While these efforts are important, they may be excluding important targets of treatment among women who ascribe to a curvier ideal. In particular, the study findings highlighted that this may disproportionately affect women of colour, such as those from Black, South Asian, and Middle Eastern backgrounds, who most preferred a slim-thick-ideal. Therefore, in addition to focusing on fears of weight gain and drive for thinness, assessments of eating disorders and poor body image should also carefully assess shape concerns that are separate from weight concerns. Findings also support addressing perfectionism in eating disorder and body image treatment, given that women who were perfectionistic about their appearance were especially likely to endure harmful effects to body image after comparison to slim-thick imagery. Further, in

addition to assessing for purging behaviours, eating disorder and body image assessments should assess other means of weight and shape control or modification such as waist trainer usage, which was commonly endorsed in the current studies and which have harmful effects on physical health.

Findings also suggest that body image interventions, eating disorders treatment, and media literacy programs should incorporate psychoeducation about the slim-thick-ideal and psychoeducation about the relationship between social media use, social comparison, and body dissatisfaction in order to target slim-thick internalization in addition to thin-ideal internalization. In particular, it would be prudent to provide education about weight science and set point theory, health risks of body modification behaviours used to achieve the slim-thick ideal, as well as media literacy about how photoshop, filters, strategic posing, and body garments can be used to artificially achieve the slim-thick-ideal commonly seen on Instagram. Weight science and set point theory propose that each person has a biological or genetic "set point" for their weight, or preferred weight range, that the body attempts to keep in homeostasis to support optimal health; this "set point" will differ for each person. Set point theory therefore posits that major changes in weight due to dieting or periods of excess exercise are unlikely to be maintained or sustainable in the long-term (Farias et al., 2011). Further, it would be useful to remind and educate young women that it is unrealistic and unfeasible to have a naturally curvaceous and plump butt, thighs, and hips and simultaneously having a slender and thin stomach and waist; it is more likely that if one were to have these curvaceous features that they would be curvy in most body parts overall. This education is important to provide to young women to explain why dieting and excess exercise are not sustainable solutions to drastically modify one's body weight or shape to achieve or maintain a slim-thick body.

It would also be useful to provide psychoeducation about the health risks associated with body modification behaviours that may be used to achieve a slim-thick body type, in addition to the psychoeducation provided about restrictive eating, compulsive exercise, and purging behaviours that are currently already provided in eating disorder and body image treatments that focus on drive for thinness and fitness. In particular, it would be important to provide education about the increased risk of death following butt enhancement and autologous fat grafting surgeries, as well as the risk to internal organs from using waister trainers. A meta-analysis on eating disorder prevention programs targeting university students have found that psychoeducation-based eating disorder programs were effective at reducing current eating disorder symptoms, dieting, body dissatisfaction, drive for thinness, weight concerns, and affective symptoms as well as preventing subthreshold and full-syndrome eating disorders (Harrer et al., 2020). These programs were offered online and in group formats and pose a feasible option to target a large-group of at-risk young adults.

Further, results have clinical implications for existing body image and eating disorder treatments, beyond the incorporation of psychoeducation about slim-thick internalization. Results suggest that existing CBT treatments for body image and eating disorders should focus on reducing body checking behaviours and social comparison to slim-thick bodies to help treat self-evaluation that is unduly dependent upon achieving a slim-thick body. In particular, it may be important for CBT treatments to focus on reducing social comparisons or body checking behaviours that occur following social media use, as slim-thick imagery was reported to be prevalent on social media and resulted in negative changes to state weight and appearance dissatisfaction. Results, also suggest that appearance perfectionism and slim-thick internalization could be well-treated through the use of two chair-work in Emotion-Focused Therapy (EFT),

which has been used to address self-critical splits that perpetuate poor body image and eating disorder psychopathology (Dolhanty & Greenberg, 2009). Finally, poor body image following exposure or comparison to slim-thick imagery on social media may be mitigated by engagement in self-compassion exercises prior to social media use. Recent research has shown that having young women engage in a three-minute writing task where they express kindness, compassion, and understanding towards their weight, appearance, and body shape prior to using Instagram was effective at preventing negative changes in body image following exposure to body-ideal images on Instagram (Gobin et al., 2022).

Additionally, media literacy programs would do well to highlight how the use of digital filters, photo-editing and retouching programs, and photoshop, as well as strategic posing, the use of waist trainers, and padded undergarments can be used to manipulate a slim-thick figure that is not natural. Certainly, past research has shown that women can learn to critically analyze manipulated images and that when they do, they report better body image than those with less media literacy skills (McLean et al., 2016; Wilksch & Wade, 2009). Media literacy programs, such as Dove's Campaign for Real Beauty, include video tutorials that demonstrate how advertisements of models and social media influencers are made, which include professional hair and makeup services, the use of professional photographers and strategic lighting, and digital alteration that involves elongating and thinning body parts, enlarging eyes and lips, smoothing skin, and digitally trimming fat from the model's body. The purpose of these videos is to show viewers how advertisers can manipulate and edit media images, and that the final images do not resemble the model's original appearance. Participation in media literacy programs has been shown to increase the ability to critically analyze edited images and reduce their negative impact on body image (McLean et al., 2016; Selensky & Carels, 2021).

Finally, campaigns or advertisers that use curvier models with the intent to promote body-inclusiveness and body positivity should be aware that using slim-thick models may be at least as much and even more detrimental to women's body image than using thin models. For example, Quebec's fashion and advertising industry have created a working group to design a voluntary charter that works to eliminates extreme thinness in the fashion industry, which has contributed to societal pressures to achieve unrealistic thinness. Some suggested resolutions include advertising a diversity of body shapes, heights, and proportions, rather than just thin body types, amongst others (CBC News, 2009). While charters of this type are a positive step in the right direction to reduce sociocultural pressures for thinness by including more diversity of body shapes in the media, advertisers and campaign organizers should be aware that including slim-thick body types in the media may not be a healthier alternative to advertising of the thin-ideal. Results from the current study suggest that while the slim-thick-ideal is a larger and curvier body type, including slim-thick bodies in the media may be ineffective at lessening women's body image distress and may actually negatively impact a greater number of women than thin-ideal imagery. This is possible for several reasons. First, the current studies indicate that the slim-thick-ideal was overwhelmingly preferred to other body ideals, especially among women of colour. Because the slim-thick-ideal appeals more widely, this suggests that slim-thick media images stand to negatively impact a greater number of women across racial groups, which has not necessarily been true of thin-ideal media. It is also possible that slim-thick-ideal imagery may be more harmful than thin-ideal media because slim-thick images are not as ubiquitous, and until recently have not been part of widespread media representations of women. Consequently, there may be less habituation to slim- thick imagery than thin-ideal imagery, which may be why slim-thick imagery caused greater body dissatisfaction than thin-ideal imagery. Therefore, while

charters of this type are a positive step in the right direction, results from the current set of studies suggest that inclusion of any body ideal, whether that is thin-, fit-, or thin-ideal, is likely to worsen women's body image. Instead, eating disorders and body image prevention efforts should focus on evidence-based methods, such as media literacy and distribution of psychoeducation materials.

Strengths, Limitations, and Future Research

It was a strength that all three studies had large and ethnically diverse samples, which increases the generalizability of the results to multiple ethnic groups. This is an important contribution to the body image literature and is in contrast to the majority of body image research which focuses exclusively on the experiences of White women. It was also a strength that Study 1 and Study 2 were both able to experimentally demonstrate that social comparison to idealized body types on Instagram causes negative changes in body image, rather than investigating this relationship through correlational methods which can only speak to associations between variables. An experimental design also provided the opportunity to assess changes to state body image caused by social comparison in the moment, rather than relying on retroactive experiences of social comparison and recall biases of state body image, which is a limitation of many correlational research designs. The fact that the experimental findings were replicated in two separate studies also increases confidence in the conclusion that slim-thick-imagery is in fact harmful to young women's body image. Further, using a within-subjects experimental design in Study 2 reduced the likelihood that spurious groups were responsible for the results, and greater confidence can be had that any changes in body satisfaction over time were due to exposure to the various body ideal images. These were also the first set of studies to experimentally investigate the impact of slim-thick-ideal images on women's body image, which adds to the

field of qualitative research on women's preferences for that type of body ideal. These studies were also the first to investigate whether there are personality and behavioural differences between women who aspire to the slim-thick-ideal or thin- and fit-ideals, which adds to the sparse literature on the slim-thick-ideal and provides important targets for body image and eating disorders treatment among women who aspire to the slim-thick-ideal.

Despite the many strengths of these studies, there are several important limitations to consider. The first limitation is that the results of the current studies are limited to young women between the ages of 18–25 years and therefore cannot be generalized to men or to women and girls of other ages. Future research should examine the impact of the slim-thick ideal on adolescent girls and older women. Future research might also examine men's reactions to slim-thick-, thin-, and fit-ideal media to assess how attractive and desirable they rate each ideal, and whether that is consistent or discrepant with the ratings and preferences of women.

Second, Study 1 and Study 2 took place in an online controlled environment and therefore participants did not view the Instagram images in the way they might in everyday life (i.e. on the Instagram platform, in an untimed manner, with photos that feature likes and comments), and therefore effects to body image may be different in other viewing environments. Future research might assess the impact of slim-thick-ideal imagery in a more naturalistic environment to overcome this limitation, by using ecological momentary assessment methods or through qualitative research.

Third, all study images featured only Caucasian women, which means that some participants had to compare themselves to a woman of a different race. This decision was made because past research shows that images of Caucasian women are most commonly circulated in the media as the beauty ideal, and that women of various non-Caucasian ethnic groups still

experience increases in body dissatisfaction when exposed to idealized images of Caucasian women, which was not true when Caucasian women were exposed to idealized images of ethnic minorities (Daniels, 2009; Gordon et al., 2010; Thomas & Kleyman, 2020; Yan & Bissell, 2014). Therefore, the decision was made to use only Caucasian models across body ideals to avoid confounding the desired manipulation. However, future research should investigate if the race of the model featured in media images has differing impacts on body image following social comparison to slim-thick media. While the current studies clearly indicated that women of all races were negatively impacted by social comparison to a Caucasian model with a slim-thick body type, it would be interesting to assess if the same effects would be observed if the model was an ethnic minority. While it is known that a slim-thick body type is idealized in Black communities, it has only recently gained popularity in white-centred mainstream media, and therefore raises the question of whether Caucasian women would still aspire to or feel threatened by a slim-thick body type when social comparison was with a slim-thick model of a different race.

Fourth, it was a limitation that participants' sexual identity was not measured in the current study, as past research has shown that lesbian women are impacted differently by sociocultural pressures related to body image. In particular, past research has shown that lesbian women, especially lesbian women who endorse greater masculine traits (Steele et al., 2019) report greater body esteem, less internalization of cultural beauty ideals, less drive for thinness, and a higher ideal body size than heterosexual women (Alvy, 2013; Meneguzzo et al., 2018), and thus may not aspire to the slim-thick-ideal in the same way as heterosexual women. Future research should assess whether lesbian women aspire to the slim-thick ideal and how their body image is impacted following exposure and comparison to the slim-thick ideal.

Finally, it was a limitation that Study 3 only assessed whether young women had ever engaged in the listed eating, purging, exercise, and body modification behaviours in the last 12 months, rather than assessing the *frequency* of those behaviours in the last 12 months. Findings from the current studies suggested that regardless of what beauty ideal most women aspired to, that they were engaging in similar restrained eating, purging, exercise, and body modification behaviours. However, past research has clearly documented differences between those who aspire to the thin- and fit-ideal in terms of frequency of compulsive exercise and restrained eating and purging (Donovan et al., 2020). Further, findings from Study 2 indicated that those who aspired to the slim-thick ideal reported higher EDE-Q scores on all subscales, which measure the frequency of restrained eating, purging, and extent of weight and shape concerns. Thus, it is expected that a different pattern of results would be likely if the frequency of behaviours had been assessed, which may point to differences in the severity of restrained eating, purging behaviours, exercise frequency, or body modification.

Given that women who aspire to the slim-thick-ideal seem to differ from women who aspire to the thin- or fit-ideal on important personality, behavioural, and body image characteristics it provides some evidence that slim-thick internalization may be a separate construct from thin- and fit-ideal internalization and have different consequences for body image. Therefore, future research would benefit from developing validated measures of slim-thick-ideal internalization to measure these differences. To extend the current literature on body image theory, future research might also assess whether the sociocultural model of body image can be replicated when slim-thick-internalization is added as a mediator between societal pressures to achieve beauty ideals and body dissatisfaction, in place of thin-ideal-internalization.

Conclusions

Overall, it was found that comparison and aspiring to the slim-thick-ideal is harmful to women's body image, and is associated with a host of harmful eating, exercise, purging, and body modification behaviours. More specifically, it was found in Study 1 that comparison to the slim-thick-, thin-, and fit-ideal resulted in increased weight and appearance dissatisfaction and lower overall body satisfaction in young women, but that these effects were greater for those who compared themselves to the slim-thick-ideal than the thin-ideal, especially among women who were perfectionistic about their appearance. These findings were replicated in Study 2, which found that comparison to the slim-thick or fit-ideal resulted in decreased body satisfaction, while comparison to the thin-ideal did not. While comparison to the thin-ideal has been reliably associated with poor body image in past research, current research suggests that comparison to slim-thick imagery is more harmful to women's body image than thin-ideal imagery. Further, results from Studies 2 and 3 seemed to suggest that cultural beauty standards have shifted away from the thin-ideal towards the slim-thick-ideal. When asked which body ideal they most aspired to, the majority of women from Studies 2 and 3 selected the slim-thick-ideal, and also thought that it was the most attractive and desirable ideal. Conversely, the thin-ideal was the least preferred body ideal of young women in both Studies 2 and 3. These findings were especially pronounced in Study 3 among women of colour, and women who identified as South Asian, Black, or Middle Eastern overwhelmingly reported a preference for the slim-thick ideal over the thin- and fit-ideal. While many campaigns have attempted to broaden the definition of female beauty and introduce a greater variety of body shapes in their advertising to promote positive body image and acceptance of all body types, results from the current sets of studies show that the slim-thick-ideal is not a positive alternative to the thin- or fit-ideal in terms of promoting more positive body image, despite featuring heavier models with larger butts and thighs. In fact,

findings from Study 2 demonstrated that there were no differences in disordered eating, weight and shape concerns, dietary restraint, thin ideal internalization, body image investment, or physical appearance perfectionism among women who aspired to the thin- or slim-thick-ideals. This suggests that women who aspire to the slim-thick-ideal are similar in terms of personality and behaviour to those who aspire to the thin-ideal and may be at the same risk for disordered eating. Additionally, significant negative differences in these variables were observed between women who aspired to the slim-thick-ideal versus the fit-ideal, suggesting that aspiring to a slim-thick-ideal may be riskier to health than aspiring to a fit-ideal. Further, results from Study 3 indicated that there were no differences in the proportion of women who aspired to the thin-, fit-, or slim-thick-ideal and who reported engaging in dietary restraint, fasting, self-induced vomiting, laxative misuse, diet pill usage, cardio exercise, weight lifting, exercising 4 or more times a week, cool sculpting procedures, liposuction, or using steroids to achieve their desired body ideal. Additionally, those who aspired to the slim-thick ideal were more likely than those who aspired to the thin- or fit-ideal to report also using a waist trainer, increasing their dietary protein, and doing exercise that specifically targets the butt in order to achieve their aspired ideal. Therefore, women who aspire to the slim-thick-ideal are engaging in the same types of harmful eating, exercise, purging, and body modification behaviours as those who aspire to the thin- or fit-ideals, and for some behaviours to an even greater extent. Body image and eating disorder interventions would do well to assess for and target slim-thick internalization, as current efforts that only focus on the thin-ideal may be culturally misinformed and may be excluding important targets of treatment for women who ascribe to a curvier ideal.

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Tables

Table 1

Means (standard deviation) for overall attractiveness and representativeness of study images

Condition	Mean Attractiveness Rating	Mean Ideal-Representativeness Rating
Slim-thick	87.88 (3.74)	93.52 (1.48)
Thin	87.97 (9.07)	90.65 (7.04)
Fit	85.60 (6.96)	93.36 (2.70)

Table 2

Means (standard deviation) for outcome variables by experimental condition.

		Experimental Condition				
		Control (*n*= 101)	Slim-thick (*n*= 100)	Thin (*n*= 99)	Fit (*n* = 102)	Total (*N*= 402)
Baseline scores	Weight dissatisfaction	43.66 (33.96)	44.32 (35.31)	42.96 (32.71)	44.09 (34.16)	43.76 (33.93)
	Appearance dissatisfaction	37.21 (30.07)	41.13 (30.53)	40.36 (30.39)	43.84 (31.86)	40.64 (30.70)
	Body satisfaction (BISS)	4.90 (1.70)	4.89 (1.65)	4.88 (1.56)	4.82 (1.57)	4.87 (1.61)
Post-exposure scores	Weight dissatisfaction	33.01 (33.44)	46.05 (35.51)	37.47 (31.14)	44.69 (34.47)	40.31 (33.98)
	Appearance dissatisfaction n	30.32 (30.28)	46.34 (35.05)	36.07 (30.09)	44.20 (33.14)	39.24 (32.73)
	Body satisfaction (BISS)	4.97 (1.68)	4.36 (1.97)	4.73 (1.75)	4.29 (1.81)	4.59 (1.81)
Moderators	Worry about imperfection	21.86 (6.46)	22.89 (6.83)	22.56 (5.97)	22.67 (5.82)	22.49 (6.26)
	Hope for perfection	19.09 (3.70)	18.95 (3.56)	19.52 (3.00)	19.35 (3.15)	19.23 (3.35)
Manipulation check	State appearance comparison		13.57 (5.11)	13.57 (5.11)	14.35 (5.21)	13.68 (5.15)

Table 3

Moderated regression results and simple slopes analysis at low, medium, and high levels of hope for perfection and worry about imperfection for post- exposure body image.

	B	*SE*	*t*	*p*
Worry about imperfection (WAI)				
Weight dissatisfaction				
Condition				
Slim-thick	10.10	3.97	2.54	.011
Thin	2.67	3.98	0.67	.502
Fit	9.47	3.95	2.40	.017
WAI	2.58	0.43	5.93	.000
Condition x WAI				
Slim-thick x WAI	0.74	0.60	1.23	.219
Thin x WAI	0.07	0.64	0.10	.918
Fit x WAI	0.77	0.65	1.19	.236
Appearance dissatisfaction				
Condition				
Slim-thick	12.89	3.53	3.65	.000
Thin	3.92	3.54	1.10	.269
Fit	11.61	3.52	3.30	.001
WAI	2.60	0.39	6.72	.000
Condition x WAI				
Slim-thick x WAI	1.14	0.53	2.14	.033
Low WAI	5.73	4.81	1.19	.234
Moderate WAI	12.89	3.53	3.65	.000
High WAI	20.04	4.92	4.07	.000

Thin x WAI	0.37	0.57	0.65	.518
Fit x WAI	0.98	0.58	1.70	.089
Body satisfaction				
Condition				
Slim-thick	-0.39	0.18	-2.23	.026
Thin	-0.10	0.18	-0.57	.571
Fit	-0.52	0.18	-2.95	.003
WAI	-0.20	0.02	-10.41	.000
Condition x WAI				
Slim-thick x WAI	-0.03	0.03	-1.06	.289
Thin x WAI	0.00	0.03	0.13	.899
Fit x WAI	0.01	0.03	0.34	.730
Hope for perfection (HFP)				
Hope for perfection				
Weight dissatisfaction				
Condition				
Slim-thick	14.26	4.58	3.11	.002
Thin	3.54	4.58	0.77	.441
Fit	11.42	4.55	2.51	.012
HFP	0.84	0.88	0.96	.335
Condition x HFP				
Slim-thick x HFP	3.97	1.27	3.14	.001
Low HFP	0.91	6.07	0.15	.880
Moderate HFP	14.26	4.58	3.11	.002
High HFP	27.60	6.43	4.29	.000
Thin x HFP	1.95	1.40	1.39	.165

Fit x HFP	0.26	1.35	0.19	.845
Appearance dissatisfaction				
Condition				
Slim-thick	16.98	4.38	3.87	.000
Thin	4.63	4.40	1.05	.293
Fit	13.56	4.35	3.11	.002
HFP	1.38	0.84	1.65	.100
Condition x HFP				
Slim-thick x HFP	2.79	1.21	2.30	.022
Low HFP	7.62	5.80	1.31	.190
Moderate HFP	16.98	4.38	3.87	.000
High HFP	26.33	6.15	4.28	.000
Thin x HFP	1.83	1.34	1.37	.171
Fit x HFP	-0.39	1.29	-0.30	.761
Body satisfaction				
Condition				
Slim-thick	-0.66	0.25	-2.64	.008
Thin	-0.20	0.25	-0.79	.428
Fit	-0.67	0.25	-2.70	.007
HFP	-0.05	0.05	-1.12	.264
Condition x HFP				
Slim-thick x HFP	-0.14	0.07	-1.99	.047
Low HFP	-0.20	0.33	-0.59	.553
Moderate HFP	-0.66	0.25	-2.64	.009
High HFP	-1.12	0.35	-3.20	.002
Thin x HFP	-0.06	0.08	-0.85	.398

Fit x HFP	0.03	0.07	0.44	.658

Table 4
Body satisfaction scores after exposure to each body ideal.

Body Satisfaction Scores	Mean	Standard Deviation
Baseline	4.85	1.53
After slim-thick-ideal exposure	4.62	1.70
After thin-ideal exposure	4.73	1.68
After fit-ideal exposure	4.55	1.60

N = 123.

Table 5

Means (standard deviations) for personality variables based on what ideal participants most aspire to.

Measure	Slim-thick-ideal aspirers (*n* = 42)	Thin-ideal aspirers (*n* = 34)	Fit-ideal aspirers (*n* = 47)	Total (N = 123)
EDE-Q-G	2.57 (1.50)	2.23 (1.36)	1.50 (1.11)	2.07 (1.39)
EDE-Q-R	2.23 (1.89)	1.76 (1.56)	1.01 (1.18)	1.63 (1.63)
EDE-Q-EC	1.61 (1.39)	1.41 (1.20)	0.86 (0.86)	1.27 (1.20)
EDE-Q-WC	3.22 (1.79)	2.78 (1.65)	1.98 (1.61)	2.63 (1.76)
EDE-Q-SC	3.24 (1.73)	2.98 (1.63)	2.12 (1.50)	2.74 (1.68)
RRS	15.64 (7.34)	12.79 (6.69)	10.79 (5.86)	13.00 (6.89)
SATAQ-TII	30.83 (9.99)	29.12 (10.29)	25.40 (10.21)	28.28 (10.35)
ASI-T	3.67 (0.64)	3.56 (0.64)	3.27 (0.51)	3.49 (0.61)
ASI-SES	3.61 (0.63)	3.51 (0.66)	3.19 (0.57)	3.42 (0.64)
ASI-MS	3.75 (0.75)	3.65 (0.74)	3.40 (0.58)	3.59 (0.70)
PAPS-WAI	25.50 (5.83)	24.62 (6.08)	22.98 (4.55)	24.29 (5.52)
PAPS-HFP	18.93 (4.16)	17.79 (4.29)	16.19 (4.09)	17.57 (4.30)

Note. EDE-Q-G = Eating Disorder Examination Questionnaire-Global score; EDE-Q-R = Eating Disorder Examination Questionnaire-Restraint subscale score; EDE-Q-EC = Eating Disorder Examination Questionnaire-Eating Concerns subscale score; EDE-Q-SC = Eating Disorder Examination Questionnaire-Shape Concerns subscale score; EDE-Q-WC = Eating Disorder Examination Questionnaire-Weight Concern subscale score; RRS = Revised Restraint Scale; SATAQ-TII = Sociocultural Attitudes Towards Appearance Questionnaire-Thin Ideal Internalization subscale score; ASI-T = Appearance Schemas Inventory Total score; ASI-SES = Appearance Schemas Inventory-Self-Evaluative Salience subscale score; ASI-ME = Appearance Schemas Inventory-Motivational Salience subscale score; PAPS-WAI = Physical Appearance Perfectionism Scale-Worry About Imperfection subscale score; PAPS-HFP = Physical Appearance Perfectionism Scale-Hope for Perfection subscale score

Table 6.
Chi Square Test and Post Hoc Results Examining Associations between Preferred Body Type and Participant Ethnicity

Category		χ^2	*df*	*z*	*p*	Cramer's V
Preferred body type *x* Ethnicity		9.34	6	--	.004	.18
White	Slim-thick vs. thin	--	--	0.17	.865	--
	Slim-thick vs. fit	--	--	0.17	.865	--
	Thin vs. fit	--	--	0.34	.728	--
Black	Slim-thick vs. thin	--	--	6.22	<.001	--
	Slim-thick vs. fit	--	--	4.93	<.001	--
	Thin vs. fit	--	--	1.63	.103	--
South Asian	Slim-thick vs. thin	--	--	2.02	.004	--
	Slim-thick vs. fit	--	--	1.72	.085	--
	Thin vs. fit	--	--	0.30	.764	--
Middle Eastern	Slim-thick vs. thin	--	--	3.53	<.001	--
	Slim-thick vs. fit	--	--	2.29	.022	--
	Thin vs. fit	--	--	1.31	.190	--

$\alpha = 0.004$

Table 7.
Chi Square Test and Post Hoc Results Examining Associations between Preferred Body Type and Eating, Purging, Exercise, and Body modification Behaviours

Category	χ^2	*df*	*z*	*p*	Cramer's V
Eating Behaviours					
Preferred body type *x* restrictive eating	1.63	2	--	.443	.07
Preferred body type *x* fasting	4.87	2	--	.088	.11
Preferred body type *x* increasing protein intake	6.44	2	--	.040	.13
Slim-thick vs. thin	--	--	5.57	<.001	--
Slim-thick vs. fit	--	--	3.28	<.001	--
Thin vs. fit	--	--	-2.39	.016	--
Purging Behaviours					
Preferred body type *x* self-induced vomiting	1.96	2	--	.374	.07
Preferred body type *x* laxative use	1.69	2	--	.429	.07
Preferred body type *x* diet pill usage	0.22	2	--	.894	.02
Exercise Behaviours					
Preferred body type *x* targeted butt exercise	5.83	2	--	.054	.12
Slim-thick vs. thin	--	--	4.93	<.001	--
Slim-thick vs. fit	--	--	4.93	<.001	--
Thin vs. fit	--	--	0	1.00	--
Preferred body type *x* cardio exercise	3.79	2	--	.151	.10
Preferred body type *x* weight training	4.84	2	--	.089	.11
Preferred body type *x* exercising 4+ times/week	1.24	2	--	.537	.06
Body modification Behaviours					
Preferred body type *x* waist trainer usage	10.79	2	--	.005	.17
Slim-thick vs. thin	--	--	5.27	<.001	--
Slim-thick vs. fit	--	--	5.10	<.001	--
Thin vs. fit	--	--	-.19	.849	--
Preferred body type *x* cool sculpting	1.92	2	--	.382	.07
Preferred body type *x* liposuction	3.26	2	--	.195	.09
Preferred body type *x* butt-lift surgery	--	--	--	--	--

Preferred body type *x* breast augmentation	--	--	--	--	--
Preferred body type *x* steroid use	0.80	2	--	.669	.05

$\alpha = 0.016$

Note. No participants had had a breast augmentation or butt-lift surgery and so no statistics were provided.

Note. Observed cell frequencies were below 5 for liposuction and steroid use and chi-square analyses may not be accurate.

Figures

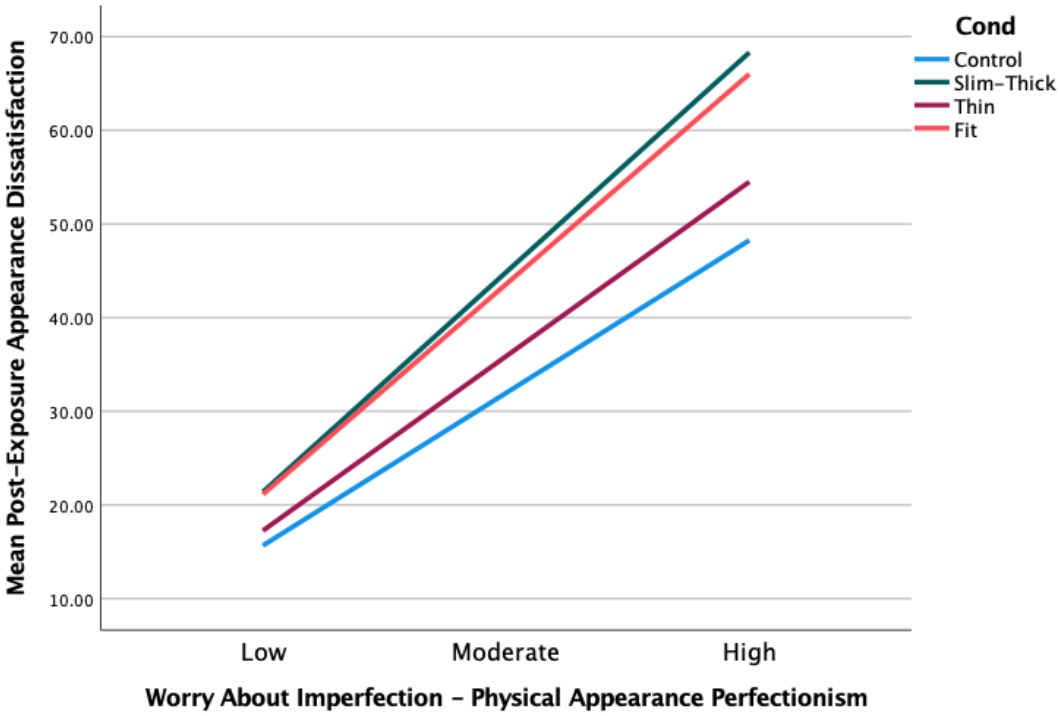


Figure 1. Appearance dissatisfaction as a function of condition and worry about physical appearance perfection.

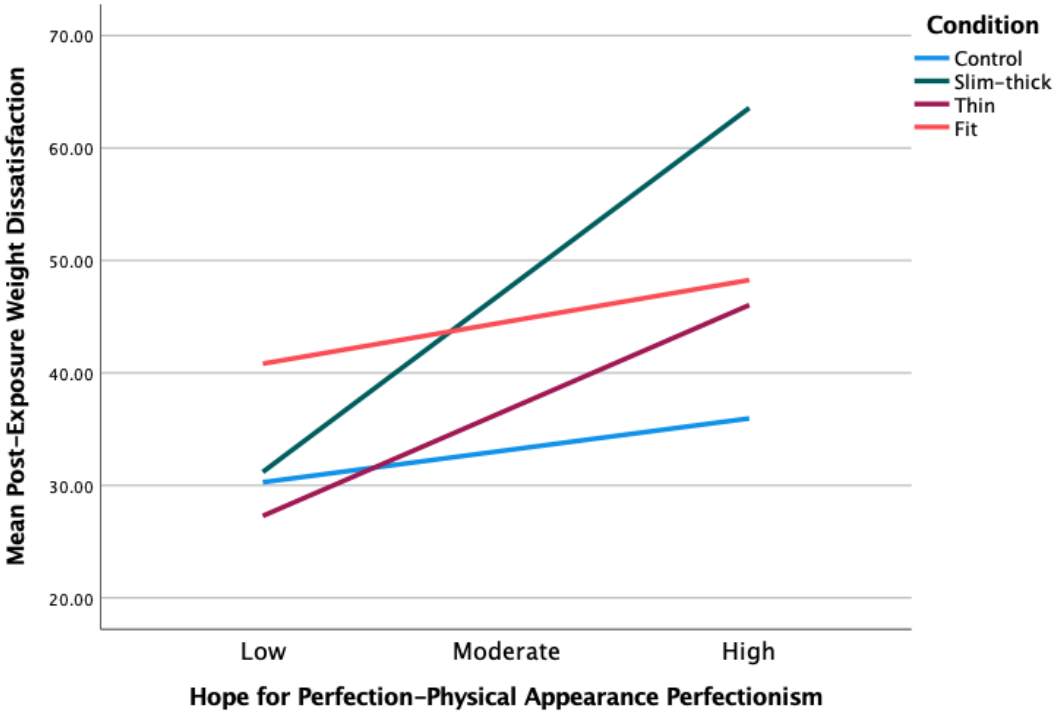


Figure 2. Weight dissatisfaction as a function of condition and hope for physical appearance perfection.

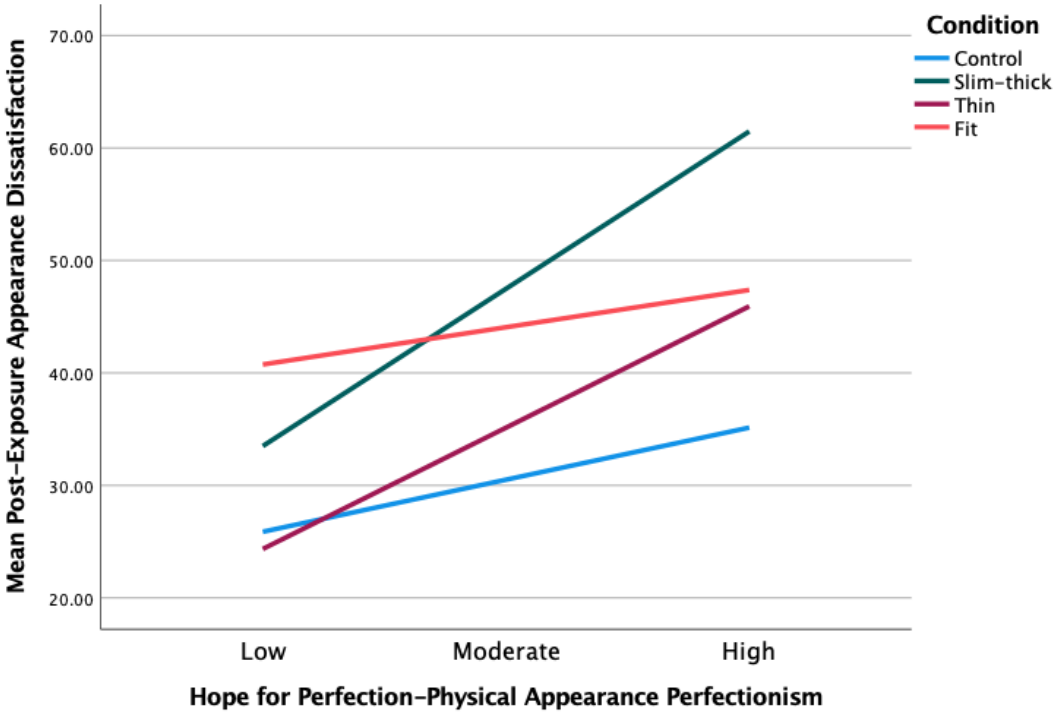


Figure 3. Appearance dissatisfaction as a function of condition and hope for physical appearance perfection.

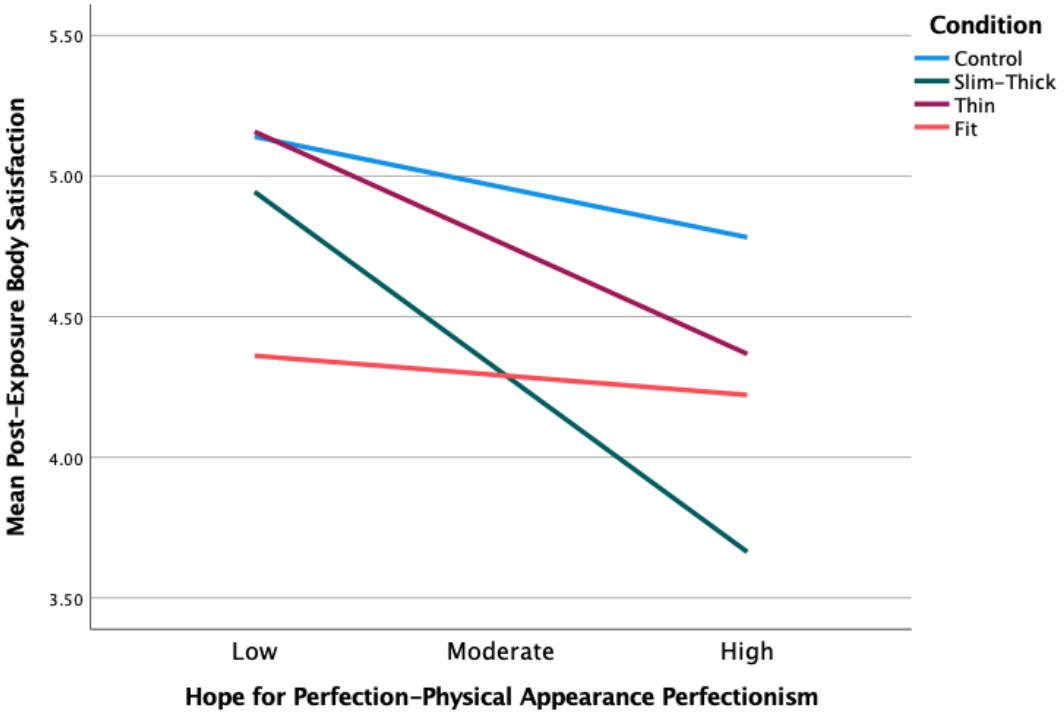


Figure 4. Body satisfaction as a function of condition and hope for physical appearance perfection.

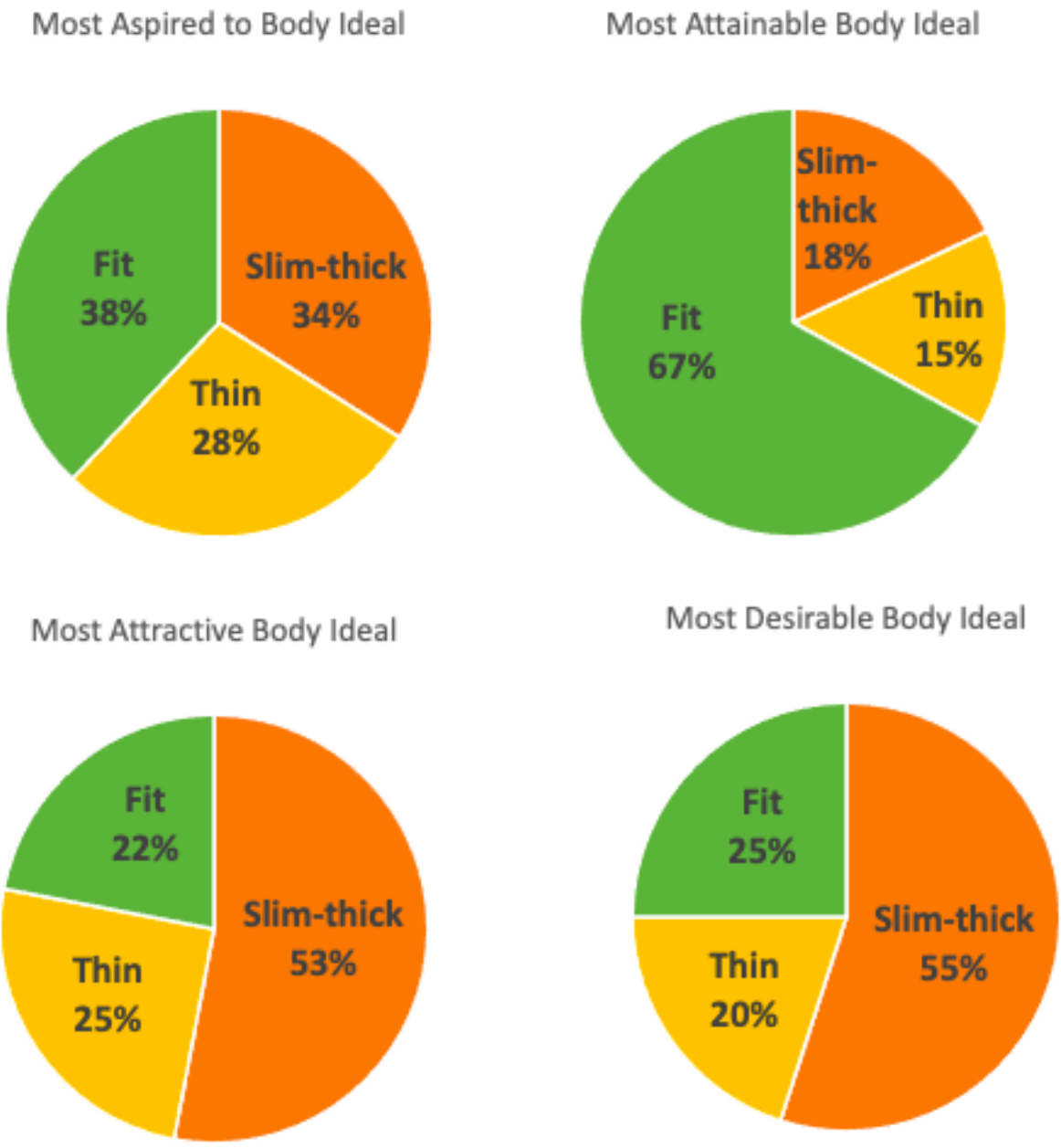


Figure 5. Participant ratings of each body ideal in Study 2.

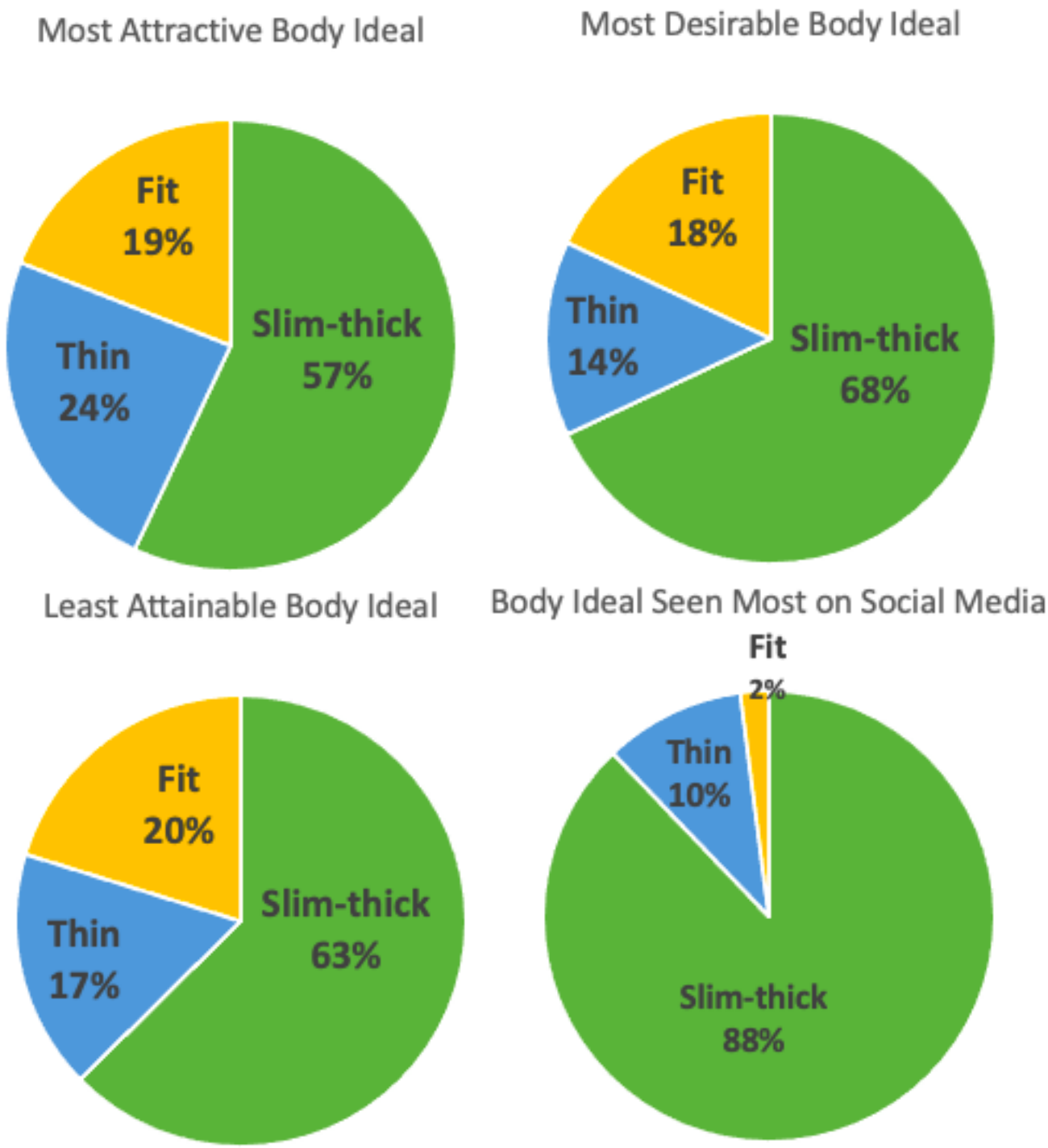


Figure 6. Participant ratings of each body ideal in Study 3.

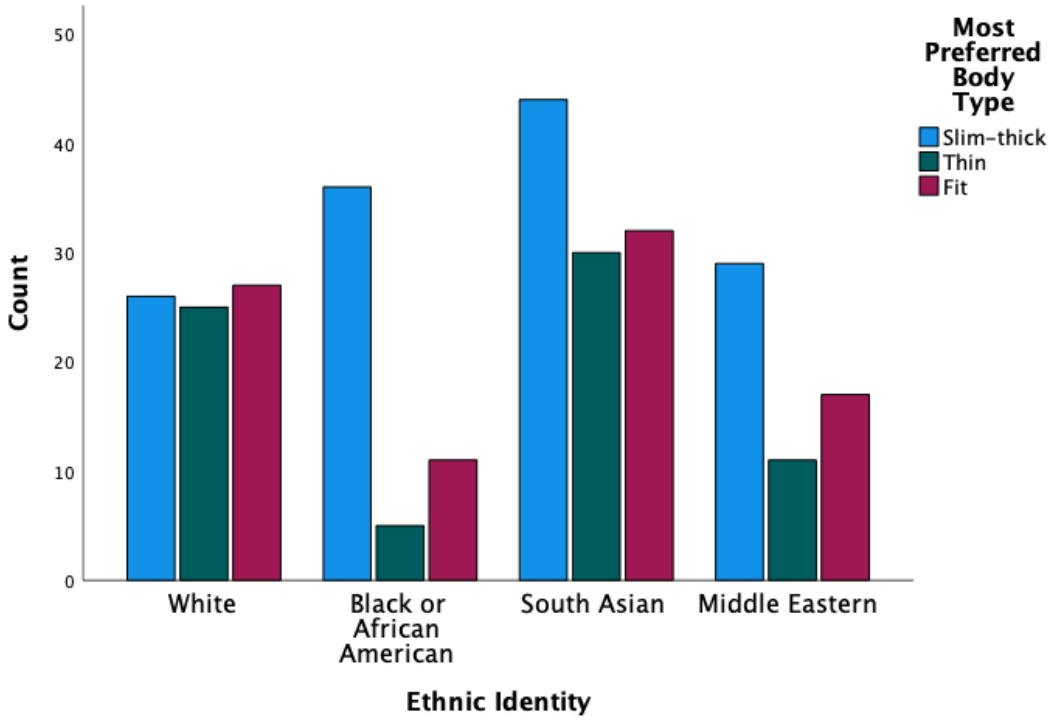


Figure 7. Most preferred body type among different ethnic identities.

Appendix A- Body Image and Mood Visual Analogue Scales

Please rate your current feelings on the following items:

a) Anxious mood

|----------|

None Very Much

b) Sad

|----------|

None Very Much

c) Happiness

|----------|

None Very Much

d) Anger

|----------|

None Very Much

e) Confidence

|----------|

None Very Much

f) Weight dissatisfaction

|----------|

None Very Much

g) Appearance dissatisfaction

|----------|

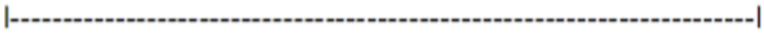
None Very Much

h) Jealousy

|----------|

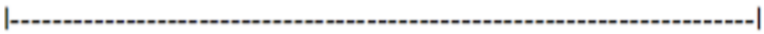
None Very Much

i) Motivated



None Very Much

j) Inspired



None Very Much

Appendix B – Body Image States Scale

For each of the items below, check the box beside the one statement that best describes how you feel **RIGHT NOW AT THIS VERY MOMENT**. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.

1. Right now I feel . . .
   - **Extremely dissatisfied** with my physical appearance
   - **Mostly dissatisfied** with my physical appearance
   - **Moderately dissatisfied** with my physical appearance
   - **Slightly dissatisfied** with my physical appearance
   - **Neither dissatisfied** nor satisfied with my physical appearance
   - **Slightly satisfied** with my physical appearance
   - **Moderately satisfied** with my physical appearance
   - **Mostly satisfied** with my physical appearance
   - **Extremely satisfied** with my physical appearance

2. Right now I feel . . .
   - **Extremely satisfied** with my body size and shape
   - **Mostly satisfied** with my body size and shape
   - **Moderately satisfied** with my body size and shape
   - **Slightly satisfied** with my body size and shape
   - **Neither dissatisfied** nor satisfied with my body size and shape
   - **Slightly dissatisfied** with my body size and shape
   - **Moderately dissatisfied** with my body size and shape
   - **Mostly dissatisfied** with my body size and shape
   - **Extremely dissatisfied** with my body size and shape

3. Right now I feel . . .
   - **Extremely dissatisfied** with my weight
   - **Mostly dissatisfied** with my weight
   - **Moderately dissatisfied** with my weight
   - **Slightly dissatisfied** with my weight
   - **Neither dissatisfied** nor satisfied with my weight
   - **Slightly satisfied** with my weight
   - **Moderately satisfied** with my weight
   - **Mostly satisfied** with my weight
   - **Extremely satisfied** with my weight

4. Right now I feel . . .
   - **Extremely** physically **attractive**
   - **Very** physically **attractive**
   - **Moderately** physically **attractive**
   - **Slightly** physically **attractive**
   - **Neither attractive nor unattractive**
   - **Slightly** physically **unattractive**
   - **Moderately** physically **unattractive**
   - **Very** physically **unattractive**
   - **Extremely** physically **unattractive**

5. Right now I feel . . .
   - **A great deal worse** about my looks than I usually feel
   - **Much worse** about my looks than I usually feel
   - **Somewhat worse** about my looks than I usually feel
   - **Just slightly worse** about my looks than I usually feel
   - **About the same** about my looks as usual
   - **Just slightly better** about my looks than I usually feel
   - **Somewhat better** about my looks than I usually feel
   - **Much better** about my looks than I usually feel
   - **A great deal better** about my looks than I usually feel

6. Right now I feel that I look . . .
   - **A great deal better** than the average person looks
   - **Much better** than the average person looks
   - **Somewhat better** than the average person looks
   - **Just slightly better** than the average person looks
   - **About the same** as the average person looks
   - **Just slightly worse** than the average person looks
   - **Somewhat worse** than the average person looks
   - **Much worse** than the average person looks
   - **A great deal worse** than the average person looks

Appendix C –Physical Appearance Perfectionism Scale

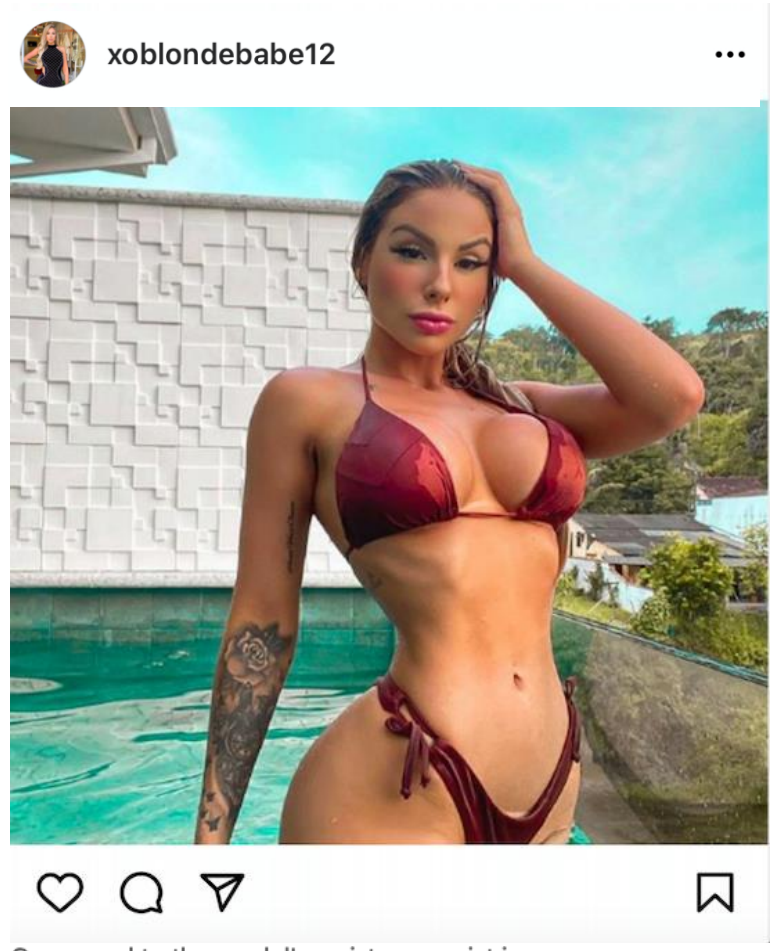
INSTRUCTIONS: Please answer the following statements in relation to how much they apply to you. For each question write the number that corresponds to your response in one of the boxes next to the question. 1= strongly disagree; 2 = disagree; 3= neither agree nor disagree; 4 = agree; 5= strongly agree.

	Strongly disagree (1)	**Disagree (2)**	**Neither disagree nor agree (3)**	**Agree (4)**	**Strongly Agree (5)**
1. I am not satisfied with my appearance					
2. I hope my body shape is perfect					
3. I am never happy with my appearance no matter how I dress					
4. I hope that I look attractive					
5. I worry that my appearance is not good enough					
6. I hope others admire my appearance					
7. I hope others find me attractive					
8. I wish I could completely change my appearance					
9. My appearance is far from my expectations					
10. I worry about others being critical of my appearance					
11. I often think about shortcomings of my appearance					
12. I hope I am handsome/beautiful					

Appendix D—State Appearance Comparison

1) To what extent did you think about your appearance when looking at the Instagram images?
    a. 1 = no thoughts about appearance
    b. 7= a lot of thought about appearance
2) To what extent did you compare your overall appearance to the women featured in the Instagram images?
    a. 1= no comparison
    b. 7= a lot of comparison
3) To what extent did you compare specific body parts with those of the women featured in the Instagram images?
    a. 1 = no comparison
    b. 7= a lot of comparison

Appendix E – Sample Slim-thick Images and Comparison Task



Compared to the model's waist, my waist is:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Compared to the model's butt: my butt is:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Compared to the model's overall appearance, my appearance is:

Much less attractive	Less attractive	The same level of attractiveness	More attractive	Much more attractive
○	○	○	○	○

Appendix F -Sample Thin-Ideal Images and Comparison Task

Compared to the model's hips, my hips are:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Compared to the model's butt: my butt is:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

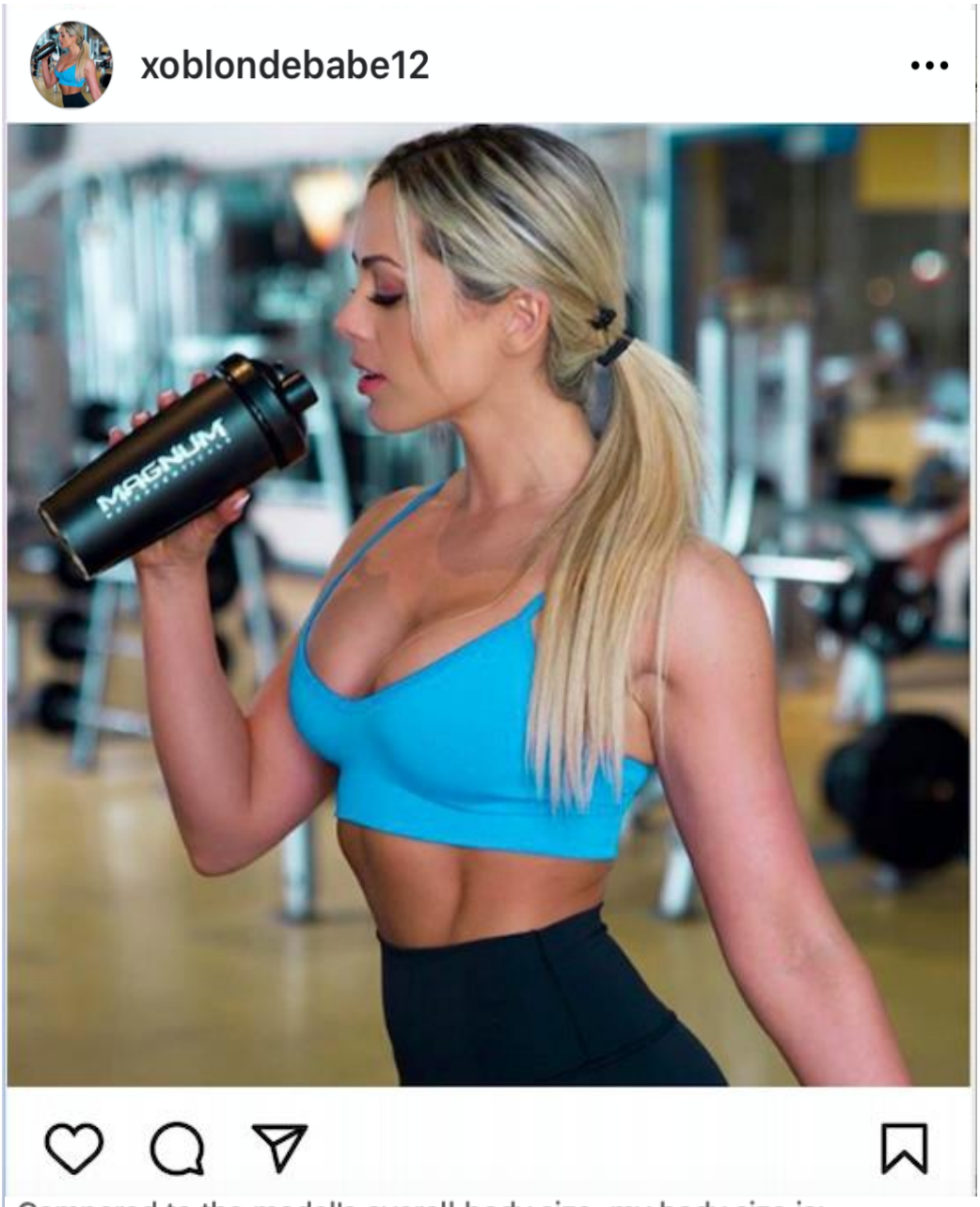
Compared to the model's breasts, my breasts are:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Appendix G – Sample Fit-ideal Images and Comparison Task

Compared to the model's stomach, my stomach is:

Much more toned	More toned	The same	Less toned	Much less toned
○	○	○	○	○



Compared to the model's overall body size, my body size is:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Compared to the model's arms: my arms are:

Much smaller	Smaller	The same size	Larger	Much larger
○	○	○	○	○

Appendix H – Product Control Images and Comparison Task

Compared to my dining room/eating area, the style of this dining room is

Much fancier	Fancier	Just as fancy	Less fancy	Much less fancy
○	○	○	○	○

Compared to my living room, this living room is

Much more trendy	More trendy	Equally as trendy	Less trendy	Much less trendy
○	○	○	○	○

Compared to my bed this bed is

Much more attractive	More attractive	Equally as attractive	Less attractive	Much less attractive
○	○	○	○	○

Appendix I: Online Consent Form Study 1

Study Name:

Marketing on Instagram: Investigating how Instagram clothing models compare to the average woman and how effective Instagram ads are.

Researcher names:

Dr. Jennifer Mills (principal investigator), Department of Psychology, Faculty of Health, York University.
Sarah E. McComb (investigator), Clinical Psychology, Master of Arts, York University
Contact: mccombs@yorku.ca or mail correspondence addressed to Sarah E. McComb, Department of Psychology, York University, Toronto, ON, M3J 1P3.

Purpose of the Research:

The purpose of this study is to examine how different personality types interpret the effectiveness of clothing advertisements for online stores on Instagram, and how the average woman compares to Instagram models. Four hundred fifty individuals will be invited to participate in this online experimental research study.

What You Will Be Asked to Do in the Research:

If you decide to participate in the research, you will be asked to complete an online experiment which will last approximately 60 minutes. You will begin by providing your informed consent. Then you will complete questionnaires about your thoughts, mood, and feelings about yourself. Next, you will scroll through an *Instagram* profile and rate the effectiveness of the Instagram ad in promoting the advertised clothing, and examine how you compare to the Instagram models featured. Once that is complete, you will once again complete measures about your thoughts, mood, feelings about yourself, and other personality traits. Upon request, the findings from this research will be made available to you when we have finished collecting the data and close the study. You will receive 1 URPP credits in Introduction to Psychology.

Risks and Discomforts:

This is a minimal risk study. However, there is the possibility that you may become uncomfortable thinking about or talking about your personality, body image, mood or self-esteem. You may choose to refuse to participate in any aspect of the research. Any discomfort experienced is not expected to be greater than you might experience in a typical day. If any aspect of this study makes you feel uncomfortable, you may temporarily or permanently discontinue your participation and still receive your full participation credit.

Benefits of the Research and Benefits to You:

There is no direct benefit to you in this study. However, you may benefit from developing self-awareness or insight into your personality. You will also have the opportunity to learn about psychological research and will contribute to social media research. The future results from this study may be presented in papers and talks related to this research, may be used in

subsequent research projects in the future, and will benefit psychological research.

Voluntary Participation and Withdrawal:

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, or the nature of your relationship with York University either now, or in the future.

If you decide to stop participating, you may withdraw without penalty, financial or otherwise, and you will still receive the promised inducement.

In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible. Should you wish to withdraw after the study, you will have the option to also withdraw your data up until the analysis is complete.

Confidentiality:

Dr. Jennifer Mills (principal investigator) and Sarah McComb (investigator) will have sole access to the data collected in this study for research purposes only. You will not put your name or student number on any materials. You will be asked to indicate your consent (if you decide to participate), and it will be saved separately from your data. Data will be entered into a password-protected electronic database for data analysis. Your name will not be included in this database; you will be identified only by a unique ID number.

Any de-identified statistical files may be kept indefinitely. All statistical information will be presented in aggregate form. That is, when we analyze and present the results, there will be no way for anyone to tell which data belong to you, specifically.

Unless you choose otherwise, all information you supply during the research will be held in confidence and your name will not appear in any report or publication of the research.

Confidentiality will be provided to the fullest extent possible by law.

The data collected in this research project may be used – in an anonymized form - by members of the research team in subsequent research investigations exploring similar lines of inquiry. Such projects will still undergo ethics review by the HPRC, our institutional REB. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

The researcher(s) acknowledge that the host of the online survey (e.g., Qualtrics, Survey Monkey etc.) may automatically collect participant data without their knowledge (i.e., IP addresses.) Although this information may be provided or made accessible to the researchers, it will not be used or saved without participant's consent on the researchers system. Further, "Because this project employs e-based collection techniques, data may be subject to access by third parties as a result of various security legislation now in place in many countries and thus *the confidentiality and privacy of data cannot be guaranteed during web-based transmission.*

Questions About the Research?

If you have questions about the research in general or about your role in the study, please feel free to contact us at mccombs@yorku.ca or jsmills@yorku.ca and/or (416) 736-2100 ext. 33153. You may also contact the Graduate Program in Psychology at gradpsyc@yorku.ca and/or (416) 736-5290.

This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.

If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Resources:

If completing any of these measurements or participating in this study raises psychological concerns that you would like to discuss, please contact one of the following resources:

Student Counselling & Development (SCD) located in the Bennett Centre (N110), 416-736-5297

York University Psychology Clinic (YUPC) located in the Behavioural Science Building (BSB 104), 416-650-8488

National Eating Disorder Information Center helpline, 416-340-4156, Monday to Friday from 9am to 9pm

Legal Rights and Signatures:

I consent to participate in Marketing on *Instagram: Investigating the relationship between personality traits and the effectiveness of Instagram clothing ads* conducted by Dr. Jennifer Mills and Sarah E. McComb.

I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. Checking the box below indicates my consent.

- ☐ I have read the consent form
- ☐ I agree to participate in this study

Appendix J– Demographics

1. What is your current age in years?
2. What is your gender? Male/female/other
3. Please indicate your ethnicity (Check one)

- ☐ White/Caucasian
- ☐ Black
- ☐ Asian
- ☐ Indigenous
- ☐ South-Asian
- ☐ Middle-Eastern
- ☐ Latino-Hispanic
- ☐ Other: _____

4. What is your current weight in pounds (lbs)?
5. What is your current height in feet and inches?
6. What is your highest level of completed education?
    a. Less than high school
    b. High school
    c. Some college
    d. College diploma
    e. Some university
    f. Bachelor's degree
    g. Master's degree
    h. PhD

Appendix K- Eating Disorder Examination Questionnaire (EDE-Q)

The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all the questions. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

On how many of the past 28 days…	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1. Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2. Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3. Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4. Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5. Have you had a definite desire to have any empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6. Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6
7. Has thinking about food, eating, or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8. Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
9. Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6

10. Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11. Have you felt fat?	0	1	2	3	4	5	6
12. Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past four weeks (28 days)….

13. Over the past 28 days, how many <u>times</u> have you eaten what other people would regard as an <u>unusually large amount of food</u> (given the circumstances)? _____

14. …On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)? _____

15. Over the past 28 days, how many **<u>DAYS</u>** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)? _____

16. Over the past 28 days, how many <u>times</u> have you made yourself sick (vomit) as a means of controlling your shape or weight? _____

17. Over the past 28 days, how many <u>times</u> have you taken laxatives as a means of controlling your shape or weight? _____

18. Over the past 28 days, how many <u>times</u> have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape, or amount of fat, or to burn off calories? _____

Questions 19 to 21: please circle the appropriate number. Please note that the questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19. Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)?	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
……Do not count episodes of binge eating	0	1	2	3	4	5	6

20. On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? ……Do not count episodes of binge eating	None of the times	A few of the times	Less than half	Half of the times	More than half	Most of the time	Every day
	0	1	2	3	4	5	6

21. Over the past 28 days, how concerned have you been about other people seeing you eat? ……Do not count episodes of binge eating	Not at All		Slightly		Moderately		Markedly
	0	1	2	3	4	5	6

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past 28 days…	Not at All		Slightly		Moderately		Markedly
22. Has your <u>weight</u> influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23. Has your <u>shape</u> influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24. How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25. How dissatisfied have you been with your <u>weight</u>?	0	1	2	3	4	5	6
26. How dissatisfied have you been with your <u>shape</u>?	0	1	2	3	4	5	6
27. How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28. How uncomfortable have you felt about <u>others</u> seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes?	0	1	2	3	4	5	6

Appendix L-Revised Restraint Scale

The following questions refer to your normal eating patterns and weight fluctuations. Please select the answer that MOST describes you.

1. **How often are you dieting?**

   Never Rarely Sometimes Often Always

2. **What is the maximum amount of weight (in pounds) that you have ever lost within 1 month?**

   0-4 5-9 10-14 15-19 20+

3. **What is your maximum weight gain within a week?**

   0-1 1.1-2 2.1-3 3.1-5 5.1 +

4. **In a typical week, how much does your weight fluctuate?**

   0-1 1.1-2 2.1-3 3.1-5 5.1 +

5. **Would a weight fluctuation of 5 lbs. affect the way you live your life?**

   Not at All Slightly Moderately Very Much

6. **Do you eat sensibly in front of others and splurge alone?**

   Never Rarely Often Always

7. **Do you give too much time and thought to food?**

   Never Rarely Often Always

8. **Do you have feelings of guilt after overeating?**

   Never Rarely Often Always

9. **How conscious are you of what you're eating?**

   Not at All Slightly Moderately Very Much

10. **How many pounds over your desired weight were you at your maximum weight?**

    0-1 1-5 6-10 11-20 21+

Appendix M–Appearance Schemas Inventory Revised

The statements below are beliefs that people may or may not have about their physical appearance and its influence on life. Decide on the extent to which you personally disagree or agree with each statement and enter a number from 1 to 5 in the space on the left. There are no right or wrong answers. Just be truthful about your personal beliefs.

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

1. I spend little time on my physical appearance.
2. When I see good-looking people, I wonder about how my own looks measure up.
3. I try to be as physically attractive as I can be.
4. I have never paid much attention to what I look like.
5. I seldom compare my appearance to that of other people I see.
6. I often check my appearance in a mirror just to make sure I look okay.
7. When something makes me feel good or bad about my looks, I tend to dwell on it.
8. If I like how I look on a given day, it's easy to feel happy about other things.
9. If somebody had a negative reaction to what I look like, it wouldn't bother me.
10. When it comes to my physical appearance, I have high standards.
11. My physical appearance has had little influence on my life.
12. Dressing well is not a priority for me.
13. When I meet people for the first time, I wonder what they think about how I look.
14. In my everyday life, lots of things happen that make me think about what I look like.
15. If I dislike how I look on a given day, it's hard to feel happy about other things.
16. I fantasize about what it would be like to be better looking than I am.
17. Before going out, I make sure that I look as good as I possibly can.
18. What I look like is an important part of who I am.
19. By controlling my appearance, I can control many of the social and emotional events in my life.
20. My appearance is responsible for much of what's happened to me in my life.

Appendix N- Thin Ideal Internalization

Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely disagree (1)	Mostly disagree (2)	Neither agree nor disagree (3)	Mostly agree (4)	Definitely agree (5)
○	○	○	○	○

1. I would like my body to look like the people who are on TV.
2. I compare my body to the bodies of TV and movie stars.
3. I would like my body to look like the models who appear in magazines.
4. I compare my appearance to the appearance of TV and movie stars.
5. I would like my body to look like the people who are in the movies.
6. I compare my body to the bodies of people who appear in magazines.
7. I wish I looked like the models in music videos.
8. I compare my appearance to the appearance of people in magazines.
9. I try to look like the people on TV.

Appendix O – Rankings of Body Ideals

Which of these body types/shapes do you most aspire to have for yourself? Please rank them in order of preference with 1 being most preferred and 3 being least preferred. To rank the images drag and drop the images to put them in your preferred order from 1-3.

1

2

3

Which of these body types/shapes is the most attainable to achieve? Please rank them in order of attainability with 1 being most attainable and 3 being least attainable. To rank the images drag and drop the images to put them in your preferred order from 1-3.

1

2

3

Which of these body types/shapes is the most desirable? Please rank them in order of preference with 1 being most desirable and 3 being least desirable. To rank the images drag and drop the images to put them in your preferred order from 1-3.

1

2

3

Which of these body types/shapes is the most attractive? Please rank them in order of attractiveness with 1 being most attractive and 3 being least attractive. To rank the images drag and drop the images to put them in your preferred order from 1-3.

1

2

3

Appendix P: Online Consent Form for Study 2

Study Name:

Personality and Interpretation of Instagram Models

Researcher names:
Dr. Jennifer Mills (principle investigator), Department of Psychology, Faculty of Health, York University.
Sarah E. McComb (investigator), Clinical Psychology, Master of Arts, York University
Contact: mccombs@yorku.ca or mail correspondence addressed to Sarah E. McComb, Department of Psychology, York University, Toronto, ON, M3J 1P3.

Purpose of the Research:
The purpose of this study is to examine how different personality types interpret the attractiveness, attainability, and desirability of models with different body types on Instagram. Two hundred individuals will be invited to participate in this online survey study.

What You Will Be Asked to Do in the Research:
If you decide to participate in the research, you will be asked to complete an online survey which will last approximately 60 minutes. You will begin by providing your informed consent. Then you will complete questionnaires about your thoughts, mood, habits, and personality. Next, you will scroll through a series of images of models/influencers from Instagram and answer some questions about how you feel about each model. Upon request, the findings from this research will be made available to you when we have finished collecting the data and close the study. You will receive 1 URPP credits in Introduction to Psychology.

Risks and Discomforts:
This is a minimal risk study. However, there is the possibility that you may become uncomfortable thinking about or talking about your personality, body image, mood or self-esteem. You may choose to refuse to participate in any aspect of the research. Any discomfort experienced is not expected to be greater than you might experience in a typical day. If any aspect of this study makes you feel uncomfortable, you may temporarily or permanently discontinue your participation and still receive your full participation credit.

Benefits of the Research and Benefits to You:
There is no direct benefit to you in this study. However, you may benefit from developing self-awareness or insight into your personality. You will also have the opportunity to learn about psychological research and will contribute to social media research. The future results from this study may be presented in papers and talks related to this research, may be used in subsequent research projects in the future, and will benefit psychological research.

Voluntary Participation and Withdrawal:

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, or the nature of your relationship with York University either now, or in the future.

If you decide to stop participating, you may withdraw without penalty, financial or otherwise, and you will still receive the promised inducement.

In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible. Should you wish to withdraw after the study, you will have the option to also withdraw your data up until the analysis is complete.

Confidentiality:
Dr. Jennifer Mills (primary investigator) and Sarah McComb (investigator) will have sole access to the data collected in this study for research purposes only. You will not put your name or student number on any materials. You will be asked to indicate your consent (if you decide to participate), and it will be saved separately from your data. Data will be entered into a password-protected electronic database for data analysis. Your name will not be included in this database; you will be identified only by a unique ID number.

Any de-identified statistical files may be kept indefinitely. All statistical information will be presented in aggregate form. That is, when we analyze and present the results, there will be no way for anyone to tell which data belong to you, specifically.

Questions About the Research?
If you have questions about the research in general or about your role in the study, please feel free to contact us at mccombs@yorku.ca or jsmills@yorku.ca and/or (416) 736-2100 ext. 33153. You may also contact the Graduate Program in Psychology at gradpsyc@yorku.ca and/or (416) 736-5290.

This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.

If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Resources:
If completing any of these measurements or participating in this study raises psychological concerns that you would like to discuss, please contact one of the following resources:

Student Counselling & Development (SCD) located in the Bennett Centre (N110), 416-736-5297

York University Psychology Clinic (YUPC) located in the Behavioural Science Building (BSB 104), 416-650-8488
National Eating Disorder Information Center helpline, 416-340-4156, Monday to Friday from 9am to 9pm

Legal Rights and Signatures:

I consent to participate in Personality and Interpretations of Instagram Models by Dr. Jennifer Mills and Sarah E. McComb.

I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. Checking the boxes below indicates my consent.

- ☐ I do NOT agree to participate in this research
- ☐ I have read the consent form and AGREE to take part in this research

Appendix Q- Ethics Approval for all Studies

YORK
UNIVERSITÉ
UNIVERSITY

OFFICE OF RESEARCH ETHICS (ORE)
3rd Floor,
309 York Lanes

4700 Keele St.
Toronto ON
Canada M3J 1P3
Tel 416 736 5914
Fax 416 736-5512
www.research.yorku.ca

Certificate #:	**2021 - 039**
Approval Period:	**02/04/21-02/04/22**

ETHICS APPROVAL

To: **Professor Jennifer Mills**
Department of Psychology
Faculty of Health
jsmills@yorku.ca

From: Alison M. Collins-Mrakas, Sr. Manager and Policy Advisor, Research Ethics
(on behalf of Veronika Jamnik, Chair, Human Participants Review Committee)

Date: Thursday, February 4, 2021

Title: **The effects of thick ideal imagery on Instagram on young women's mood and body image**

Risk Level: ☒ Minimal Risk ☐ More than Minimal Risk

Level of Review: ☒ Delegated Review ☐ Full Committee Review

I am writing to inform you that this research project, **"The effects of thick ideal imagery on Instagram on young women's mood and body image"** has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.

Note that approval is granted for one year. Ongoing research – research that extends beyond one year – must be renewed prior to the expiry date.

Any changes to the approved protocol must be reviewed and approved through the amendment process by submission of an amendment application to the HPRC prior to its implementation.

Any adverse or unanticipated events in the research should be reported to the Office of Research ethics (ore@yorku.ca) as soon as possible.

For further information on researcher responsibilities as it pertains to this approved research ethics protocol, please refer to the attached document, **"RESEARCH ETHICS: PROCEDURES to ENSURE ONGOING COMPLIANCE".**

Please note that prior to commencing any research activities, researchers are advised to review the latest updates on research involving human participants at:
https://www.yorku.ca/research/researchers-faqs/

Should you have any questions, please feel free to contact me at: 416-736-5914 or via email at: acollins@yorku.ca.

Yours sincerely,

Alison M. Collins-Mrakas M.Sc., LLM

Appendix R- Online Consent Form for Study 3

Study Name: Body Preferences and Eating, Exercise, and Appearance Investment Behaviours

Researcher names:
Dr. Jennifer Mills (principle investigator), Department of Psychology, Faculty of Health, York University.
Sarah E. McComb (investigator), Clinical Psychology, Master of Arts, York University
Contact: mccombs@yorku.ca or mail correspondence addressed to Sarah E. McComb, Department of Psychology, York University, Toronto, ON, M3J 1P3.

Purpose of the Research:
The purpose of this study is to investigate what body types young women most aspire to and the eating, exercise, and appearance management behaviours they engage in to try to achieve those body types. Four hundred and fifty individuals will be invited to participate in this online survey study.

What You Will Be Asked to Do in the Research:
If you decide to participate in the research, you will be asked to complete an online survey which will last approximately 60 minutes. You will begin by providing your informed consent. Then you will be shown images of various female body types and be asked to rate them on attractiveness and desirability and indicate which of the body types you most aspire to. You will then be asked about a number of eating, exercise, and body modification behaviours.
Upon request, the findings from this research will be made available to you when we have finished collecting the data and close the study. You will receive 1 URPP credits in Introduction to Psychology.

Risks and Discomforts:
This is a minimal risk study. However, there is the possibility that you may become uncomfortable thinking about or talking about your body image and eating, exercise, and appearance management behaviours. You may choose to refuse to participate in any aspect of the research. Any discomfort experienced is not expected to be greater than you might experience in a typical day. If any aspect of this study makes you feel uncomfortable, you may temporarily or permanently discontinue your participation and still receive your full participation credit.

Benefits of the Research and Benefits to You:
There is no direct benefit to you in this study. However, you may benefit from developing self-awareness or insight into your body image. You will also have the opportunity to learn about psychological research and will contribute to social media research. The future results from this study may be presented in papers and talks related to this research, may be used in subsequent research projects in the future, and will benefit psychological research.

Voluntary Participation and Withdrawal:
Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, or the nature of your relationship with York University either now, or in the future.

If you decide to stop participating, you may withdraw without penalty, financial or otherwise, and you will still receive the promised inducement.

In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible. Should you wish to withdraw after the study, you will have the option to also withdraw your data up until the analysis is complete.

Confidentiality:
Dr. Jennifer Mills (primary investigator) and Sarah McComb (investigator) will have sole access to the data collected in this study for research purposes only. You will not put your name or student number on any materials. You will be asked to indicate your consent (if you decide to participate), and it will be saved separately from your data. Data will be entered into a password-protected electronic database for data analysis. Your name will not be included in this database; you will be identified only by a unique ID number.

Any de-identified statistical files may be kept indefinitely. All statistical information will be presented in aggregate form. That is, when we analyze and present the results, there will be no way for anyone to tell which data belong to you, specifically.

Questions About the Research?
If you have questions about the research in general or about your role in the study, please feel free to contact us at mccombs@yorku.ca or jsmills@yorku.ca and/or (416) 736-2100 ext. 33153. You may also contact the Graduate Program in Psychology at gradpsyc@yorku.ca and/or (416) 736-5290.

This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.

If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Resources:
If completing any of these measurements or participating in this study raises psychological concerns that you would like to discuss, please contact one of the following resources:

Student Counselling & Development (SCD) located in the Bennett Centre (N110), 416-736-5297
York University Psychology Clinic (YUPC) located in the Behavioural Science Building (BSB 104), 416-650-8488
National Eating Disorder Information Center helpline, 416-340-4156, Monday to Friday from 9am to 9pm

Legal Rights and Signatures:

I consent to participate in Body Preferences and Eating, Exercise, and Appearance Investment Behaviours conducted by Dr. Jennifer Mills and Sarah E. McComb.
I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. Checking the boxes below indicates my consent.

- ☐ I do NOT agree to participate in this research
- ☐ I have read the consent form and AGREE to take part in this research

Appendix S – Behaviours Engaged in to Achieve Desired Body Ideal

For the following set of questions please think of the **ONE** body ideal you just said you **MOST aspire to from the pictures (i.e. would most like to have yourself)**. Only say "yes" to behaviours you engaged in to try to achieve that specific body type.

If the body type you have aspired to has changed within the last 12 months, do not include behaviours you previously engaged in to achieve a body type that is different from what you currently aspire to. Only include behaviours you have engaged in to achieve the body type you **currently** wish to have.

Responded to as “yes” or “no”:

1. Within the last 12 months, have you **dieted or restricted your calorie intake** to try to achieve the body type you just said you most aspire to from the pictures?
2. Within the last 12 months, have you **fasted** (i.e. went 8 or more WAKING HOURS without eating) to try to achieve the body type you just said you most aspire to from the pictures?
3. Within the last 12 months, have you i**ncreased your protein intake** with the hopes of trying to achieve the body type you just said you most aspire to from the pictures?
4. Within the last 12 months, have you **purged/self-induced vomiting** to try to achieve the body type you just said you most aspire to from the pictures?
5. Within the last 12 months, have you taken **laxatives** to try to achieve the body type you just said you most aspire to from the pictures?
6. Within the last 12 months, have you taken **diet pills** to try to achieve the body type you just said you most aspire to from the pictures?
7. Within the last 12 months, have you done **cardio exercise** specifically to try to achieve the body type you just said you most aspire to from the pictures?
8. Within the last 12 months, have you done **weight training** specifically to try to achieve the body type you just said you most aspire to from the pictures?
9. Within the last 12 months, have you done **exercise that specifically target the butt** in order to try to achieve the body type you just said you most aspire to from the pictures?
10. Within the last 12 months, have you **worked out/exercised 4 or more times a week** to try to achieve the body type you just said you most aspire to from the pictures?
11. Within the last 12 months, have you **taken steroids** to try to achieve the body type you just said you most aspire to from the pictures?
12. Within the last 12 months, have you used a waist trainer to try to achieve the body type you just said you most aspire to from the pictures?
13. Have you ever had **liposuction** to try to achieve the body type you just said you most aspire to from the pictures?
14. Have you ever gotten a **butt lift surgery** to try to achieve the body type you just said you most aspire to from the pictures?
15. Have you ever had a **breast augmentation surgery** to try to achieve the body type you just said you most aspire to from the pictures?

16. Have you ever had **cool sculpting procedures** to try to achieve the body type you just said you most aspire to from the pictures?