

Can time spent on social media affect thin-ideal internalisation, objectified body consciousness and exercise motivation in women?

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The primary aim of this study was to investigate the effect of exposure to social media on ideal body image, awareness of one's body and motivation to exercise. Participants completed a measure of Facebook, Instagram and Pinterest use, after which they proceeded to complete measures of thin-ideal internalisation, exercise motivation and objectified body consciousness. One hundred female students at a UK university, aged between 18 and 52 years, completed the measures described, with age weight and height used as covariates. Multivariate analysis of covariance revealed that time spent on social media was related to levels of thin-ideal internalisation, objectified body consciousness and motivation to exercise. Exposure to social media has negative effects on female's perceptions of their ideal beauty and their own body as well as on motivation to engage in exercise.

Keywords: body image; exercise; motivation; social media; thin-ideal internalisation

The media is one of the most influential sociocultural factors affecting ideal body type (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), featuring exercise and dieting-related content and depicting idealised images of women (Luff & Gray, 2009). Research has also found that exposure to the mass media is related to body dissatisfaction and negative body image among women (Grabe, Ward, & Hyde, 2008; Groesz, Levine, & Murnen, 2002; Harrison & Cantor, 1997; Tiggemann, Verri, & Scaravaggi, 2005). Body image may be defined as feelings, thoughts and perceptions about one's own body (Grogan, 2008). Body dissatisfaction, on the other hand, occurs when an individual views their body negatively perceiving a discrepancy between their real and ideal body (Cash & Szymanski, 1995).

Social media

The use of social media such as Facebook, Instagram and Pinterest has become particularly popular in recent years, with such platforms allowing users to create and manage online profiles, interact with friends and share information and photos (Tiggeman & Zaccardo, 2015). Those most likely to use social media are 18–29 year-olds (Lenhart, Purcell, Smith, & Zickuhr, 2010) with 90% of 16–24 year olds in the UK reporting using social media and 90% of 18–29 year olds in the US using it (Pew Research, 2013). More importantly, females are more likely to engage in the use of this compared to males (Duggan & Brenner, 2013). Certain types of social media platforms allow various editing filters which may enhance a user's content, allowing them to impression manage their appearance (Levine & Chapman, 2011). Therefore the photos uploaded on social media profiles may portray idealised versions of users (Manago, Graham, Greenfield, & Salimkhan, 2008). Accordingly, those users viewing filtered images may upwardly compare themselves with unrealistic beauty ideals uploaded by other users, leading to feelings of inadequacy (Alperstein, 2015), and consequently extreme dieting and exercise (Lewallen & Behm-Morawitz, 2016). Furthermore, Blomfield-Neira and Barber (2014), point out that the use of social media differs from the use of traditional media in several ways. Firstly, self-promotion and self-presentation are facilitated via social media (Murray, 2015; Van Dijck, 2013). Secondly, social media content is personalised, and users tend to attribute 'higher perceived realism' to this, which may be more persuasive (Perloff, 2014). Similarly, users are likely to view friends' exercise post-workout photos, for example, as more realistic than photos portraying idealised body types of real athletes found in the traditional media. Thirdly, unlike traditional media, access to social media is unlimited, allowing users to receive and view information, such as photos and status updates shared by their peers at any time. Thus, people's exposure to an idealised body, depicted in edited photos of peers has increased (Andsager, 2014).

Social comparison

Social comparison occurs when individuals compare their own limitations and abilities to those of their peers, (Ruble, Boggiano, Feldman, & Loebel, 1980). Making task-related comparisons can be observed among children as young as seven (Ruble et al., 1980), with appearance-related comparisons usually occurring around the period of early adolescence (Chen & Jackson, 2009; Mueller, Pearson, Muller, Frank, & Turner, 2010). Upward social comparison has been linked with body image concerns and specifically with the drive for thinness and body dissatisfaction (Ho, Lee, & Liao, 2016; Strahan, Wilson, Cressman, & Buote, 2006; Want, 2009). In the context of traditional media, Bessenoff (2006) suggested that younger individuals who engaged in social comparison of images featuring thin females in commercials were more likely to report higher levels of body dissatisfaction and depression than individuals who were exposed to commercials that did not feature these. Furthermore, Tiggemann and McGill (2004) found that females, who compared themselves with others in their close environment, also had a tendency engage in social comparison with women depicted in magazines more frequently, especially when coming across depictions of thinness. Similarly, Chrisler and colleagues (2013) analysed 977 tweets sent by individuals watching a Victoria's Secret Fashion Show. They found that

90% of tweets about body image indicated that viewers engaged in a process of upward social comparison.

Thin-ideal internalisation

Thin-ideal internalisation is described as ‘the extent to which an individual “buys into” socially defined ideals of attractiveness and engages in behaviours designed to approximate these ideals’ (Thompson & Stice, 2001), and thin-ideal female beauty is prevalent in Western media, (Levine & Chapman, 2011). Meta-analyses (e.g., Grabe et al., 2008) and literature reviews of research (e.g., Scharrer, 2013) suggest that media depictions of the thin-ideal body have a significant impact on women’s body image concerns. Furthermore, a link has also been found between thin-ideal internalisation and body dissatisfaction with the suggestion that thin-ideal internalisation may predict higher levels of body dissatisfaction (Keery, Van den Berg, & Thompson, 2004).

Objectified body consciousness

Objectified body consciousness, is defined as a preoccupation with how one’s body appears to others (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). Objectification theory (Fredrickson & Roberts, 1997) states that women are socialised to view their bodies from an observer’s point of view because they live in environments that pervasively and persistently objectify the female body (Manago, Ward, Lemm, Reed, & Seabrook, 2015). Objectified body consciousness consists of three main features: body surveillance, internalisation of beauty ideals that are culturally dominant and appearance based evaluation of the self (Manago et al., 2015). However, there is little research which has explored the effect of social media on objectified body consciousness.

Exercise motivation

Females with positive body image frequently quote regular exercise as being a tool to increase their well-being, a way to enjoy themselves, improve their health and relieve stress (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010), rather than a way to lose weight. However, females who use Instagram may be affected in a negative way (Holland & Tiggemann, 2017), although only a small body of research has investigated the link between exposure to social media and exercise motivation (e.g., Tiggemann & Zaccardo, 2015). Holland and Tiggemann (2017) investigated compulsive exercise and disordered eating among females who engage in posting exercise routines on Instagram, with women who posted such images scoring higher on measures of compulsive exercise, drive for muscularity, disordered eating and drive for thinness than women in a control group who posted travel-related images.

The present study

Time spent on social media has been linked with low mood (Fardouly, Diedrichs, Vartanian, & Halliwell, 2015), body dissatisfaction (Stronge et al., 2015) and disordered eating (Mabe, Forney, & Keel, 2014). However, the evidence regarding the relationship between social media exposure and body image concerns is still limited. Therefore, the aim of the present study is to investigate the link between exposure to Facebook, Instagram and Pinterest with body image concerns and exercise motivation among females. It is hypothesised that more time spent on Facebook, Instagram and Pinterest will be associated with higher levels of thin-ideal internalisation, objectified body consciousness and exercise motivation.

Participants

Participants were 100 female students at a UK university and selected from various classes within the university. They were aged between 18 and 52 years, with a mean age of 22.04 years ($SD = 6.16$). Participants were also asked to report their weight which ranged from 48 to 108 kilograms ($M = 65.77$), and height which ranged from 150 to 180 centimetres ($M = 166.76$).

Measures

Ideal Body Stereotype Scale (Stice & Agras, 1998) – This measure assessed internalization of the thin-ideal requiring participants to indicate the extent to which they agreed with each of six statements, about what an attractive female looks like (e.g., ‘Women who are in shape are more attractive.’). This scale used a 5-point Likert scale, from ‘strongly disagree’ to ‘strongly agree’. This scale possesses concurrent, discriminant, predictive and convergent validity as well as acceptable internal consistency (Stice & Agras, 1998). Higher scores on the scale indicate higher levels of thin-ideal internalisation.

Objectified Body Consciousness Scale (McKinley & Hyde, 1996) – This scale consisted of three subscales: (1) body surveillance, which measured whether an individual views their body from an observer’s point of view; (2) body shame, which measured the shame felt due to their body not meeting the cultural standards; and, (3) appearance control beliefs, which measured belief of control of their own appearance. This scale comprised of 24 items and a 7-point Likert scale from ‘strongly disagree’ to ‘strongly agree’. Higher scores on the scale indicated higher levels of objectified body consciousness.

Exercise Motivation Scale (Markland & Ingledew, 1997). This scale assessed motivation to participate in exercise, and comprised of 51 items, 20 of which were used in this study (e.g., ‘I exercise to help control my weight.’) on a 6-point Likert scale, from ‘not at all true for me’ to ‘very true for me’. Higher scores on the scale indicated higher levels of exercise motivation.

Procedures

Participants completed the measure of Facebook, Instagram and Pinterest use, after which they proceeded to complete the measures of thin-ideal internalisation, exercise motivation and objectified body consciousness. For the purpose of analysis, participants were assigned to one of the four groups, based on the self-reported time spent on Facebook, Instagram and Pinterest. Group 1 ($N = 19$) consisted of females who reported spending less than 0.5 hour on Facebook, Instagram and Pinterest per day. Females, reporting spending between 0.5 hour and 1 hour on Facebook, Instagram and Pinterest per day were assigned to Group 2 ($N = 20$). Group 3 ($N = 25$) was made up of females who reported spending between 1 hour and 1.5 hours on Facebook, Instagram and Pinterest daily, and finally, females who reported spending over 1.5 hour per day on Facebook, Instagram and Pinterest were assigned to Group 4 ($N = 36$). Age, weight and height were used as covariates in the analysis.

RESULTS

A multivariate analysis of covariance (MANCOVA) was conducted for the three dependent variables, with age, height and weight used as covariates. There was a significant effect for the time spent on Facebook, Instagram and Pinterest for thin-ideal internalisation, $F(3, 93) = 5.21, p = .002, \eta^2 = .144$. Bonferroni’s post hoc test revealed significant differences between Group 1 (Facebook, Instagram and Pinterest for less than 0.5 hour per day; $M = 15.73$) and Group 4 (Facebook, Instagram and Pinterest for over 1.5 hour per day; $M = 20.26$). The covariate, weight, was significantly related to thin-ideal internalization, $F(1, 93) = 8.61, p = .004$. However, height and age were not significantly related to thin-ideal internalisation. MANCOVA analysis revealed that there was a significant difference between the

time spent on Facebook, Instagram and Pinterest for objectified body consciousness, $F(3, 93) = 14.5$, $p < .001$, $\eta p^2 = .319$. Bonferroni's post hoc test revealed significant differences between group 1 (Facebook, Instagram and Pinterest for less than 0.5 hour per day; $M = 85.46$) and Group 3 (Facebook, Instagram and Pinterest for a period of 1 hour to 1.5 hour per day; $M = 107.5$), as well as significant differences between Group 1 and Group 4 (Facebook, Instagram and Pinterest for over 1.5 hour per day; $M = 106.48$). Bonferroni's post hoc test also revealed significant differences between Group 2 (Facebook, Instagram and Pinterest for a period of 0.5 to 1 hour per day; $M = 84.23$) and Group 3. Significant differences were also found between Group 2 and Group 4. The covariates weight, height and age were not significantly related to objectified body consciousness. The MANCOVA further revealed that there was a significant difference between the time spent on Facebook, Instagram and Pinterest for exercise motivation, $F(3, 93) = 4.47$, $p = .006$, $\eta p^2 = .013$. Bonferroni's post hoc test revealed significant differences between Group 1 (females using Facebook, Instagram and Pinterest for less than 0.5 hour per day; $M = 38.1$) and Group 4 (females using Facebook, Instagram and Pinterest for over 1.5 hour per day; $M = 51.66$). Bonferroni's post hoc test also revealed significant differences between Group 2 (females using Facebook, Instagram and Pinterest for a period of 0.5 to 1 hour per day; $M = 37.7$) and Group 4. The covariates weight, height and age were not significantly related to exercise motivation.

Figures 1 to 3 show the thin idealisation, objectified body consciousness scores and exercise motivation scores for number of hours per week spent on social media.

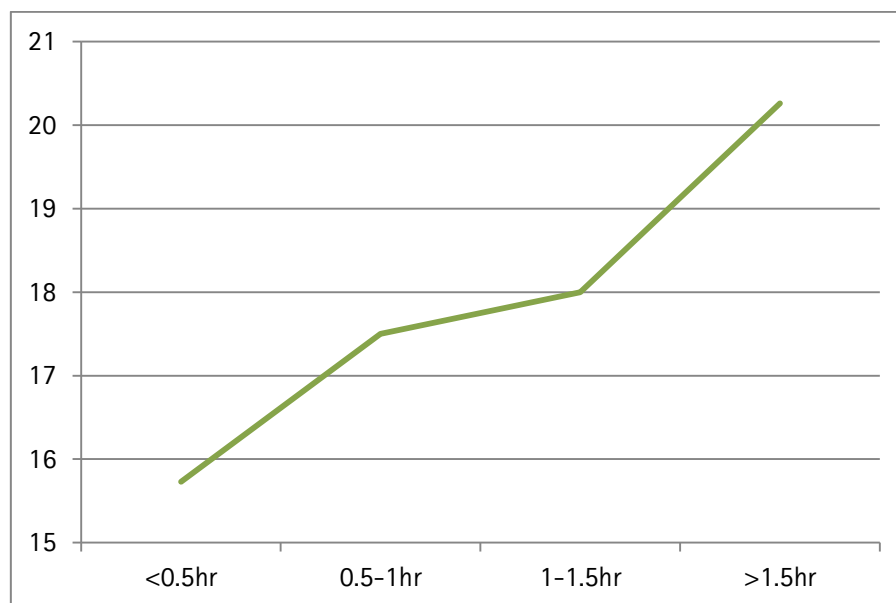


Figure 1: Thin idealisation scores for time spent on social media.

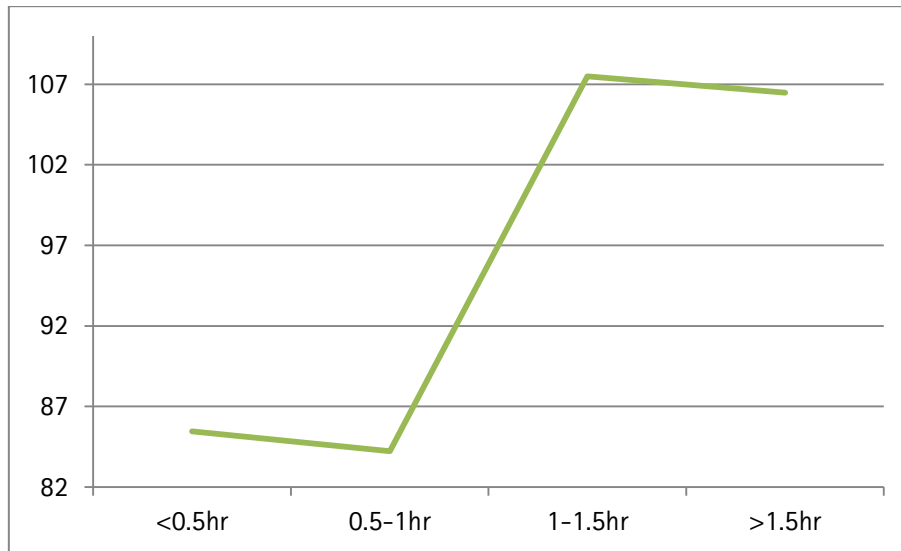


Figure 2: Objectified body consciousness scores for time spent on social media.

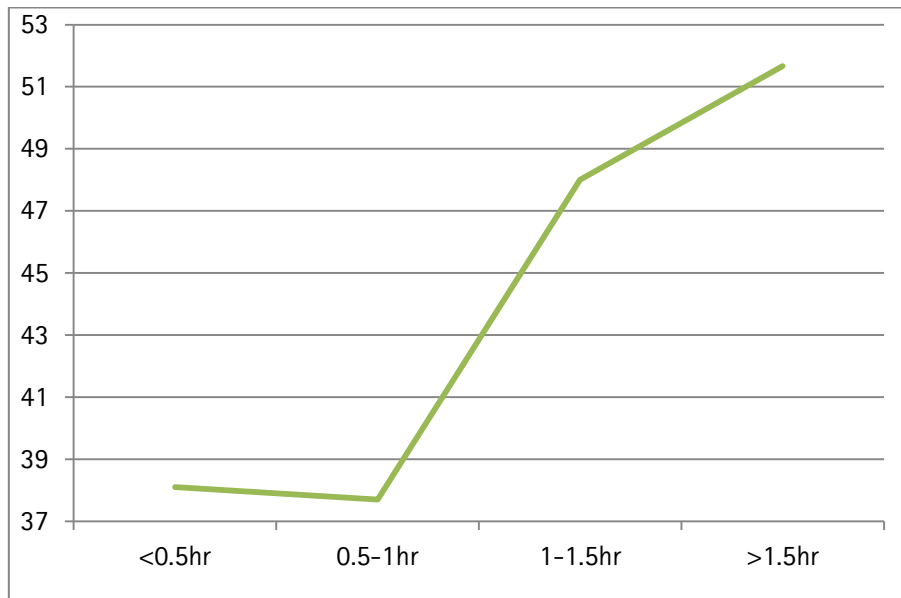


Figure 3: Exercise motivation scores for time spent on social media.

DISCUSSION

The aim of this study was to investigate the link between the time spent on Facebook, Instagram and Pinterest and levels of thin-ideal internalisation, objectified body consciousness and exercise motivation. As hypothesised, the results of this study revealed that time spent on Facebook, Instagram and Pinterest were linked to higher levels of thin-ideal internalisation, objectified body consciousness and exercise motivation, with participants who spent more time on social media scoring significantly higher on all three measures of body image concerns than participants who spent lower amounts of time on social media per day. Overall, these findings are in line with previous research on the effects of social media on body image concerns and exercise motivation (e.g., Meier & Gray, 2014; Tiggemann & Slater, 2013).

Thin-ideal internalisation

It is possible that women use Facebook, Instagram and Pinterest for inspiration and comparison, which gives them an opportunity for self-evaluation. Indeed according to Tiggemann, Polivy and Hargreaves (2009) comparisons made online can be inspirational at the beginning, however as time passes and women see no major effects of dieting and exercising, they may become frustrated which may consequently result in body dissatisfaction. Putting together existing knowledge on negative effects of media exposure with the present results, it is possible that even if the use of Facebook, Instagram and Pinterest is initially enjoyable and inspirational, it may result in social comparison and internalisation of the thin-ideal which is recognised as being a risk factor for body dissatisfaction and weight concern (Keel & Forney, 2013), both of which are precursors for eating disorders (Stice & Agras, 1998). Interestingly, the literature regarding the effects of traditional media, suggests that girls with body image issues and girls exhibiting disordered eating report higher motivation to use media that depict thin-ideal beauty (Thomsen et al., 2002). As proposed in the previous literature, individuals who report high levels of thin-ideal internalisation are driven to use social media and engage in appearance-related activities more frequently which in turn reinforces existing body image concern (Meier & Gray, 2014). Future research should therefore focus on examining the nature of relationship between Social Media exposure and thin-ideal internalisation.

Objectified body consciousness

Objectified body consciousness measured in this study, had three main components, which were body surveillance, internalization of beauty ideals that are culturally dominant and appearance based evaluation of the self (Manago et al., 2015). Recently, researchers started to explore objectified body consciousness in the context of mass media and suggested that exposure to social media can increase levels of objectified body consciousness among females (e.g. Tiggemann & Miller, 2012). Therefore, it was hypothesised that engagement in social media would affect objectified body consciousness among participants. As predicted, participants who spent time on Facebook, Instagram and Pinterest reported significantly higher levels of objectified body consciousness. This finding supports objectification theory, which argues that self-objectification creates increased opportunities for body surveillance, body shame and perceived control over one's body (McKinley & Hyde, 1996). Online communication may explain high levels of objectified body consciousness among participants, who spent large amounts of time on Facebook, Instagram and Pinterest. Due to the fact that social media allows users to share their posts to large amounts of people, individuals often cautiously monitor and edit the content they upload (Levine & Chapman, 2011). This may be because users realise that their friends might see the content, which motivates them to be vigilant about how they will portray themselves. This study was the first one to extend the investigation of the effects of social media use on objectified body consciousness to the context of Pinterest and Instagram use with previous studies employing only time spent on Facebook or Facebook involvement. However, due to the fact that the present study requested participants to report the overall time spent on Facebook, Instagram or Pinterest it is not possible to investigate the specific nature of the relationship between Pinterest and Instagram and objectified body consciousness alone. It may only be speculated that exposure to Pinterest and Instagram have negative effects on objectified body consciousness among women. Therefore further research is needed to explore the links between Social Media and objectified body consciousness.

Exercise motivation

The results of the present study confirm that time spent on Facebook, Instagram and Pinterest significantly predicted levels of exercise motivation. This finding is consistent with prior research that has explored the effects of social media exposure on motivation to engage in physical activities (Boepple & Thompson, 2016; Holland & Tiggemann, 2017). A previous pioneering study conducted by Holland and

Tiggemann (2017), found that exposure to 'fitspiration' images leads to higher scores on measures of compulsive exercise and disordered eating among women. The results of the current study revealed that none of the covariates were significantly related to exercise motivation. The participants in this study were of similar age and weight, however, according to Strelan, Mehhafey, and Tiggemann (2003), young women may possibly be more motivated to exercise for appearance-related reasons than older women who tend to exercise in order to gain health benefits.

LIMITATIONS AND CONCLUSION

Research regarding the effects of media on body image concern, is often limited to Western populations, frequently from the US, UK, or Australia which favour the same thin-ideal figures. However, women across the world seem to find similar female figures to be physically attractive (Tiggemann, 2011) and similar results have been found for ethnic groups other than young, white females; for instance, Latinas and Asian adolescents, report levels of body dissatisfaction comparable to that of Western women (e.g., Schooler & Lowry, 2011; Ho, Lee, & Liao, 2016). Additionally, participants in the present study were of a similar young age. Future research should further explore the effects of Facebook, Instagram and Pinterest use on body image concern in males, older people and members of various ethnic/racial groups. Furthermore, the present study examined the effects of the overall time spent on Facebook, Instagram and Pinterest collectively on the body image concern, which makes it difficult to estimate accurately the effect of each platform separately. In conclusion, this study contributes to the existing knowledge regarding media effects on body image. Given the growing popularity of Social Media, particularly among young people, it has become increasingly important to develop an understanding of how the relationships between social networking and body image concerns work. This study focused on exploring the influences of Facebook, Instagram and Pinterest on body image concerns and exercise motivation. Findings from this study demonstrate that time spent on these platforms may influence thin-ideal internalisation, objectified body consciousness and exercise motivation among females, which lends strong support to the Sociocultural theory (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Given that all measured variables in this study were linked with body dissatisfaction and disordered eating, it is essential to work towards minimising the negative effects of Social Media exposure, especially in times when the media has such a crucial function in society, it is essential to highlight the positive features of the Social Media while minimising the negative consequences.

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