THE RELATIONSHIP BETWEEN SOCIAL MEDIA USE AND BODY IMAGE IN YOUNG PEOPLE

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Trigger warning: The following report includes discussions and images of disordered eating, body dysmorphia and mental health disorders

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CONTENTS

SOCIAL MEDIA AND BODY IMAGE

Social media

Social media encompasses the websites and applications that are used for the generation and sharing of content, usually for the purpose of social networking. Popular social media sites include Facebook, Twitter, Instagram, YouTube and Tumblr. New social media platforms are constantly being developed and updated, with new sites being created every day. It is difficult to pinpoint the exact moment that social media became popular. However, since 2006, sites such as Facebook and Twitter have been available worldwide.

In January 2019, the number of social media users worldwide was determined to be 3.484 billion according to We Are Social's Global Digital Report. This is a 9% rise since January 2018. Key differences between social media sites and traditional media are the active use and that the majority of the viewing material is peer-generated, containing images of a variety of types of individual, including celebrities, distant and close peers, and family.

The largest social media penetration in 2019 is in Saudi Arabia (99% compared to the global average of 45%) (Kemp, 2019), followed by Taiwan, South Korea and Singapore. The largest social media platform in 2019 is Facebook. A survey conducted in January 2017 revealed that the largest Facebook user group is men aged 18 to 24 years old, who constitute 18% of Facebook users worldwide. This was followed by men aged 25 to 34 years old.

In addition to its global reach, social media has become a fundamental part of our daily lives. In 2018, online users worldwide spent an average of 136 minutes on social media every day. This shows an increase from 2016, where the average time was 126 minutes. Comparatively, in the Philippines, the average time was 4 hours and one minute in 2018 (Clement, 2019). However, this number is rapidly increasing.

Investigating the impact of social media, which has become so integral to human life, is therefore crucially important. The Royal Society for Public Health and the Young Health Movement recently published a report, Status of Mind, examining the negative effects of social media. This showed that individuals with a higher global frequency score had significantly increased odds of depression (Lin et al., 2016). Other studies have investigated the

impact of social media on quality of sleep, self-esteem, anxiety and depression (Woods and Scott, 2016) and determined night-time specific social media use to be linked to poor sleep quality.

Body image

Body image refers to the thoughts, evaluations and behaviours related to one's body. A negative body image may be linked to a profound preoccupation and dissatisfaction with one's body shape and weight (Spreckelsen et al., 2018).

Body image dissatisfaction is hugely prevalent in young people. An online survey organised by the Mental Health Foundation of over 1,000 British teenagers aged between 13 and 19 years old found that 37% of teenagers felt "upset" and 31% of felt "ashamed" about their body image (Figure 1). Whilst body image satisfaction is an important phenomenon to investigate in itself, there is reason to suggest that the use of social media may further impact negative body image. Indeed, 40% of British teenagers who responded to the Mental Health Foundation body image survey reported that social media had caused them to worry about body image.
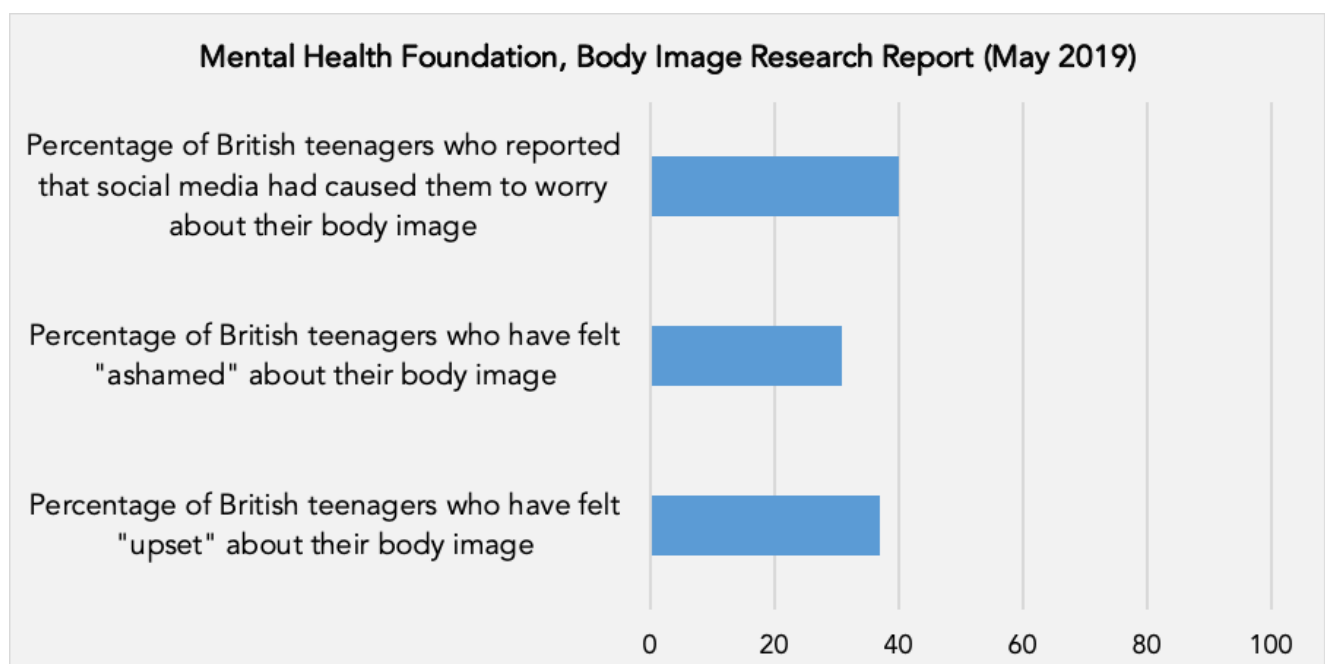
Figure 1: Data taken from the Mental Health Foundation's 'Body image research report' (May 2019)[1]

On social media, users tend to present idealised versions of themselves on social media, "untagging" or removing photos of themselves which are not in accordance with societal beauty ideals (Vitak and McLaughlin, 2011),

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[1] https://www.mentalhealth.org.uk/sites/default/files/DqVNbWRVvpAPQzw.pdf

selectively posting flattering images of themselves and editing or enhancing images before uploading them (Manago et al., 2008). Therefore, social media may present idealised images of peers, a fact which users are often unaware of (Manago et al., 2015), which may then be used in social comparison, mediating body dissatisfaction.

Social media also provides the opportunity for harmful comparisons with peers. Social comparison theory suggests that "comparisons will be most readily made with targets who are perceived as similar to the self because this provides the most information" (Brown and Tiggemann, 2016). Additionally, the many images on social media sites, such as profile pictures, provide frequent opportunities to make appearance-related comparisons.

EVIDENCE FOR A CORRELATION BETWEEN SOCIAL MEDIA AND NEGATIVE BODY IMAGE

The evidence of a link between social media use and body dissatisfaction or negative body image is a vital connection to investigate. This is especially important given social media's increasing influence in modern society, particularly amongst young women. Some key aspects of this relationship that require further investigation include the mechanisms through which social media can influence body image perceptions and the strength of the causal link between this and harmful health behaviours.

This section will investigate the empirical evidence available on the extent to which and ways in which social media influences body perception, and if this is reliably linked further to problematic behaviours. It will also explore the evidence on which groups and personalities are more susceptible to the negative influences of social media, although this requires further investigation.

Multiple studies have investigated the relationship between general use of social media, or specific use of certain platforms, and body image. In a cross-sectional (CS) study of pre-teenage girls, Tiggemann and Slater (2014) found that time spent online was significantly related to internalisation of the thin ideal, body surveillance, reduced body esteem, and increased dieting. Specifically, time spent on Facebook and MySpace had stronger correlations with body image concerns than overall internet exposure. In another CS study, Fardouly (2017) found that overall Instagram use was positively correlated with self-objectification. Similarly, Manago et al. (2015) found that for both women and men, Facebook involvement predicted objectified body consciousness, which in turn predicted greater body shame.

Other studies have also found that the frequency with which people check their SNS accounts is significantly related to body surveillance and adolescent's appearance investment respectively, as well as body dissatisfaction 18 months later (Holland and Tiggemann, 2016). Bennett et al. (2019) found that the number of social networking sites visited, but not the time spent on them, was a significant predictor of body dissatisfaction. In a longitudinal study, De Vries et al. (2016) found that the use of social

networking sites positively and significantly predicted body dissatisfaction. Over two years, Tiggemann and Slater (2017) found that the number of Facebook friends, but not time spent, prospectively predicted the observed increased drive for thinness, consistent with a causal role.

Several experimental studies have also examined the relationship between social media and body image. Haferkamp and Krämer (2011) showed profiles of "attractive" or "unattractive" individuals to participants and found that recipients had a more negative body image after looking at the "beautiful" users. The authors noted that the attractive scenario is the most likely, given that users tend to present idealised images of themselves of social media. Mabe (2014) exposed participants to either their own Facebook account or a control website for 20 minutes. They found that internet use was associated with decreases in weight and shape preoccupation, but that this decrease was much lower for Facebook users, suggesting that despite the overall positive experience, Facebook was, to some extent, maintaining women's weight concerns compared to other types of internet activity.

Relatedly, Fardouly et al. (2015) had participants browse for 10 minutes, either on their own Facebook account, a fashion magazine website, or a control website. Participants exposed to the Facebook condition reported a more negative mood, however, there was no significant effect on body, face, skin or hair dissatisfaction. However, for women who have high comparison tendencies, spending time on Facebook led to more face, hair, and skin-related discrepancy, perhaps due to the portrait-like images common to Facebook. Conversely, Brown and Tiggemann (2016) found that brief exposure to Instagram images of celebrities and peers caused greater body dissatisfaction and negative mood compared to travel images, with no difference between celebrities and peers.

In a systematic review of twenty studies, Holland and Tiggemann (2016) found a consistent association between social media use and negative body image and disordered eating. Particular activities, such as viewing and uploading photos and seeking feedback via status updates, were identified as particularly problematic. However, the researchers also concluded that more longitudinal and experimental studies were needed, as most of the studies to date are CS studies.

MODERATING FACTORS

Is it all about social media content?

Meier and Gray (2014) argued that measuring social media exposure alone does not account for the differences in features and content exposure. Their study found that appearance exposure score on Facebook relative to total use was significantly correlated with weight dissatisfaction, drive for thinness, thin-ideal internalisation, and self-objectification. In another CS study, Kaewpradub (2017) found that using the internet and social networks for content related to body image and eating behaviours, compared to non-specific usage, was associated with lower body image satisfaction.

However, while the use of media for content related to body image was significantly related to body image problems, after adjusting for age, gender, and general use of the internet and social media, they were no longer significantly related. In an experimental study, Tiggemann and Barbato (2018) found that women who looked at an image of an attractive Instagram post coupled with a positive, body-related comment, had worse body satisfaction after the experiment that the same image coupled with a place related comment. Although appearance comments did not affect state self-objectification, trait self-objectification predicted an increase in body dissatisfaction in response to viewing Instagram photos. There are also particular aspects of body image content for which more specific data is available. For example, Wang et al. (2019) found that selfie-viewing was positively related to facial dissatisfaction in a sample of over 1,000 Chinese adolescents. They also found that this relationship was mediated by general attractiveness internalisation, but that this was moderated by body appreciation.

Fitspiration

'Fitspiration' content is designed to motivate users to exercise and eat healthily, often containing images of people with thin, athletic or toned bodies (see Figures 2 and 3). Lewallen and Behm-Morawitz (2016) used an online survey and found that following Fit Pin Boards significantly predicted that overall Pinterest habits influenced participants to want to engage in weight-loss behaviours. Despite some positive effects, including increased exercise, healthy eating and sense of community, these pages can negatively impact mental and physical health (Raggatt et al., 2018). In their study, the

group, who all engaged in Fitspiration content, showed a higher than average count of psychological distress. Fardouly (2017) found that frequently viewing Fitspiration images on Instagram was associated with greater body image concerns, compared with just Instagram usage.

In their experimental study, Tiggemann and Zaccardo (2015) found that acute exposure to Instagram Fitspirational images led to increased negative mood and body dissatisfaction and decreased appearance self-esteem relative to travel images. However, the images also had a positive effect on motivation to pursue "healthy" goals. In an interview study, Easton (2018) reported that Fitspirational content, although sometimes deemed to be 'motivational', made interviewees feel negative about their bodies and guilty about their behaviours. For some participants, viewing Fitspirational content even increased their likelihood of engaging in behaviours associated with disordered eating.

Figure 2: An image posted on Instagram with the hashtag 'Fitspiration'[2]

Figure 3: An image taken from the Instagram account @fitspiration, which reposts images of 'toned' and 'fit' women's bodies and quotes to motivate women to diet and exercise[3]

Thinspiration

As opposed to Fitspiration, which typically displays muscular and athletic bodies, 'Thinspiration' and 'Bonespiration' content displays thin bodies (Talbot et al., 2017) (see Figures 4 and 5). In a meta-analysis of pro-eating disorder sites, Rodgers et al (2016) found significant effect sizes of exposure

[2] https://www.instagram.com/urwelcome2rome/
[3] https://www.instagram.com/fitspiration/?hl=en

pro-eating disorder websites on body image dissatisfaction, dieting, and negative affect. Another meta-analysis showed that the presentation of mass media containing thin images created a significantly more negative body image compared to other images, especially for those less than 19 years of age (Groesz et al., 2002). Looking at social networking sites, Griffiths et al. (2019) found that exposure to Thinspiration material was associated with lower body satisfaction and higher negative affect.
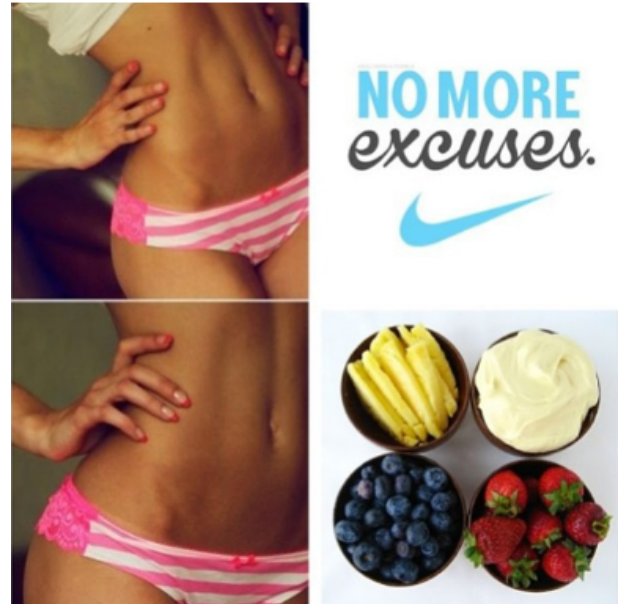

Figure 4: An example of 'Thinspiration' on the image-sharing website Flickr, which was posted with the following comment:

"When I wake, I'm empty, light, light-headed. I like to stay this way, free and pure, light on my feet, traveling light. For me, food's only interest lies in how little I need, how strong I am, how well I can resist, each time achieving another small victory of the will."[4]

Figure 5: A post taken from the Instagram account @thinspirationislife that encourages women to attain a slender physique.[5] Although Instagram, in a similar vein to other social media image sharing websites such as Pinterest and Tumblr, made hashtags such as 'thinspiration', 'probulimia' and 'proanorexia' unsearchable in recent years,[6] the existence of this account shows the ease with which 'Thinspiration' content can still be accessed.

Active vs. passive use

Although content is an important factor, other studies have pointed to how users engage with social media as a key moderating factor. How one makes sense of social networks and how one uses them is said to be one moderating factor of the influence of social media.

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[4] https://www.flickr.com/photos/66841817@N05/6679163863
[5] https://www.instagram.com/thinspirationislife/?hl=en
[6] https://www.washingtonpost.com/blogs/arts-post/post/instagram-bans-thinspiration-pro-eating-disorder-images/2012/04/24/gIQAXLeaeT_blog.html

Hanna et al. (2017) distinguished two different ways in which users would behave on the Facebook platform. Following from a scale developed by Manago et al. (2014, in Hanna et al., 2017) a passive use was differentiated from an active use. Users that behaved passively would only consume content, which included visiting the app, viewing or liking posts. Active users, on the other hand, produced content by way of posting or updating information and pictures. The analysis of these two separate ways of engaging with social media may facilitate an understanding of a broader social network use.

Indeed, passive use may lead to damaging attitudes towards body image. For example, Kim and Chock (2015) found that higher levels of social grooming behaviours on FB e.g. viewing other profiles, clicking likes, messaging and comments; were correlated with a greater drive for thinness while overall Facebook exposure was not. This will be discussed in more detail later. It has been argued that one's idea of one's own appearance is mostly influenced by what is seen rather than read (Mingoia et al., 2017). This claim matches the study presented in the same article, which stated that there was a larger correlation between exposure to appearance-related content than for exposure to general content.

The way users view their bodies is therefore influenced by images they see when they consume social media content. While such matter remains harmless if considered alone, it could lead to body dissatisfaction when combined with self-objectification (Hanna et al., 2017). The latter mechanism refers to the way individuals assimilate cultural experiences of sexual objectification when repeatedly exposed to them – which they then use to define their self-perceptions. In other words, passive social media users learn to value their bodies for what they look like rather than for what they can do. As they compare their bodies with others' they may evaluate the former in a negative way if they differ from the consumed content (Hanna et al., 2017).

Passive social media use may have a pernicious impact on body image, and thus one could argue that users should engage in an active use of social media platforms to counteract such results. Posting information online would thus elicit content creation rather than assimilation. One way to produce material on social media is by way of posting "selfies" online. Those digital self-portraits (McLean et al., 2019) are an example of how the influence of social media on body image remains particular to each individual. Although they are first taken offline, selfies become relevant to social networks as they are posted on one's profile. However active users may not only produce content but also edit it: individuals can choose to digitally alter or apply filters to the image (McLean et al., 2019). In other words, individuals modify their appearances before sharing them online.

McLean et al. (2019) also reported that Australian and Singaporean girls who edited their selfies aimed at ideal self-representations. They associated this goal with a way of managing insecurity and low self-esteem and reported that girls who engaged more in selfie editing had lower body confidence. However, body confidence remains unique to each user. With further study of Singaporean girls' selfie habits, Chang et al. (2019, in McLean et al., 2019) noticed that the more the former posted selfies, the more they felt confident regarding their bodies.

These studies reveal the complexities inherent in active social media use, for whereas some users may alter their digital image in order to combat low self-esteem, others who post images of themselves online may conversely be displaying their body confidence.

Internalisation of ideals

Tiggemann and Slater (2014) found that time online was specifically related to the internalisation of the thin ideal and body surveillance, with internalisation mediating the effect of the internet on body image concerns.

Other studies have yielded similar results. Raggatt et al. (2018) found that participants often explicitly consumed Fitspiration posts that portrayed an idealised body. Particularly troubling was Lewallen and Behm-Morawitz's (2016) discovery that the endorsement of an ideal female body type on Pinterest led participants to compare their bodies to those seen online and engage in extreme weight-loss behaviours. Mingoia et al. (2017) also found that higher use of social media was associated with significantly higher internalisation of a thin ideal and that the use of appearance-related features had a stronger relationship than general social media use. Finally, in a meta-analysis of studies investigating mass media depicting a thin ideal, Gabe et al. (2008) found that this was related to body image concerns for women. All these suggest that the promotion of an idealised female body across a variety of social media channels has negatively impacted women's body image.

Using the Body Image Paradigm test and fMRI scanning, Van der Meulen et al. (2017) produced data suggesting that older adolescents' body ideals were biased towards unhealthily thin body ideals. The authors proposed that exposure to the 'thin ideal' on social media may have permeated the perception of normality, though more research into this hypothesis is needed.

One of the problems of social media may be that users are often unaware that social media presents idealised images of peers, making comparison more likely to be negative for the viewer (Manago et al., 2015). In their combined neural and behavioural study, Van der Meulen et al. (2017) found

that neural activity was associated with receiving feedback that peers considered the model too thin, whereas their rating was normal (but notably not for the reversed contrast), was stronger for those with lower self-esteem. These authors also found a significant negative correlation between self-esteem and body dissatisfaction and a significant positive correlation between BMI and body dissatisfaction. The evidence thus suggests that social media has the power to negatively impact body image.

Comparison

In Fardouly (2017), the relationship between Instagram use and self-objectification was partly mediated by both the internalisation of ideals and appearance comparison. Contrary to Fardouly's prediction, it was the comparison to celebrities rather than peers that wielded the most significant effect. In their experimental study, Brown and Tiggemann (2016) found that participants who viewed celebrity and peer images performed more appearance comparison, and appearance comparison was itself significantly correlated with post-exposure body dissatisfaction. The indirect mediation pathway via comparison was found to be significant (Figure 6). These authors hypothesised that social media enables more peer comparison than mass media, which could have a greater influence on body discontent.
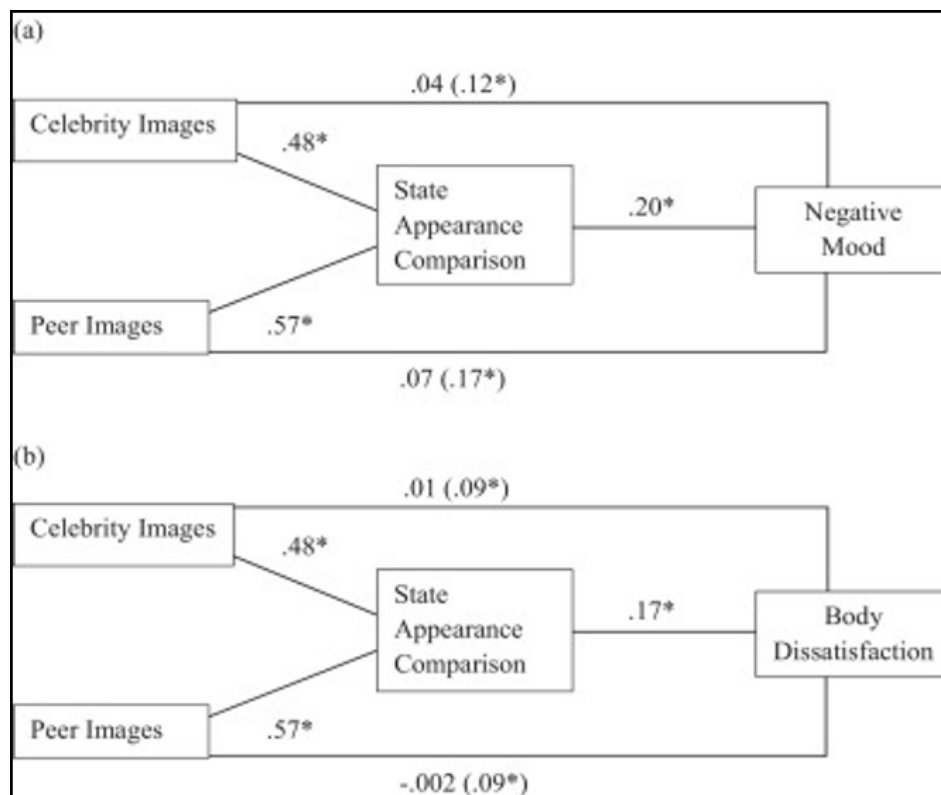
Figure 6: Standardised regression coefficients for the effect of images on (a) negative mood and (b) body dissatisfaction as mediated by state appearance comparison (Brown and Tiggemann, 2016). Note: The standardised regression coefficient in parentheses is the direct effect not controlling for the mediator; *p < .05

However, in their longitudinal study, Tiggemann and Slater (2017) found that the relationship between Facebook friends and body image concern could be mediated by the increased opportunity to make comparisons. Moreover, in a correlational study of female university students, negative comparisons about one's appearance mediated the relationship between Facebook usage and body image concerns (Fardouly and Vartanian, 2014).

Interestingly, De Vries et al. (2016) did not find support for peer appearance-related feedback as the underlying mediating link between SNS use and body dissatisfaction, highlighting the importance of one's own perceptions of comparison. However, validation seeking behaviour may influence social media engagement and usage. For example, Bazarova and Choi (2014) showed that female undergraduates are more likely to pursue self-validation goals by disclosures in public status updates, especially those who had dispositional vulnerabilities regarding self-image. Similar results were found by Hummel and Smith (2014) who found that users who wrote statuses in a negative feedback-seeking style were more likely to report weight, eating and shape concerns.

Finally, in Kim and Chock (2015), the positive relationship between social grooming and a greater drive for thinness was mediated by appearance comparison. Hendrickse et al. (2017) found that individuals who reported engaging in more appearance-related comparisons on Instagram reported experiencing a more intense drive towards thinness and greater body dissatisfaction and that this was the mediating factor for the positive relationship between Instagram photo-based activities and these outcomes.

Summary

This section has explored some of the moderating factors that affect the nature of the relationship between social media and body image. What emerges is a complex picture of how, and to what extent, social media influence users' body image. In an increasingly social media-obsessed world, it is necessary to have more research into the negative and positive effects that social media have on users.

THE NATURE OF THE RELATIONSHIP BETWEEN SOCIAL MEDIA AND BODY IMAGE

Understanding how social media content can influence women's body confidence and mental health is essential to encouraging healthier use of social media sites.

Does the use of social media lead to disordered eating and other negative effects?

An important aspect of the relationship between social media use and body image is whether the negative impact on body image has a further effect on health-related behaviours. In a sample of individuals with eating disorders, Griffiths et al. (2018) found that more frequent use of image-centric social media was associated with more frequent exposures to both Thinspiration and Fitspiration material. This exposure was associated with more frequent physical appearance comparisons and, mediated by these, greater symptom severity.

Kaewpradub (2017) found that the use of the internet and social media material related to body image was positively associated with inappropriate eating attitudes/behaviours, binging, purging, use of laxatives/diuretics and drive for muscularity. This association remained significant after adjusting for confounding variables. Similarly, Tiggemann and Slater (2014) found that time on-line was significantly related to increased dieting. In their CS study, Carotte et al. (2015) found that consumers of any health and fitness-related social media content were more likely to misuse detox/laxative teas or diet pills. Lewallen and Behm-Morawitz (2015) also found that the number of fitness-focused pin-boards followed on Pinterest predicted intentions to engage in extreme weight-loss behaviours.

With regards to Facebook, the world's most popular social media platform, Mabe et al. (2014) found a significant, albeit small, association between high Facebook use and disordered eating in two large samples of women. A 'higher' Facebook score, which reflected how often the women used Facebook, was associated with greater disordered eating. In their second study, their experiment (discussed above) indicated that Facebook use may

contribute to concerns about weight, an established risk factor for eating disorders. Those who placed greater importance on the responses elicited by their Facebook content reported greater eating pathology.

Relatedly, Raggat et al. (2018) found that a higher than average percentage (17.7%) of their sample of individuals who engage in Fitspiration posts were at risk of an eating disorder. Furthermore, in an online survey, Walker et al. (2015) found that online physical appearance comparison and online fat talk were associated with greater disordered eating. Smith et al. (2013) have also measured the relationship between certain Facebook behaviours (seeking negative evaluations and engaging in social comparisons) and eating pathologies and found that maladaptive Facebook use was related to greater levels of bulimic symptoms, body dissatisfaction, and shape concern. This suggests that excessive use of particular social media channels can lead to users developing increasingly negative thoughts about their body image.

Is the relationship between social media and body image bidirectional?

Comparatively few studies have analysed the possible bidirectional relationship between body dissatisfaction and the use of social networking sites. However, there may be a circular relationship between body image concern, the amount/nature of social media usage, and worsening body image concern.

In their longitudinal study, De Vries et al (2016) found that body dissatisfaction did not predict social network site use. However, Mabe (2014) found that women with greater eating pathology reported spending more time on Facebook and engaging more in appearance-focused behaviours (including comparison). Similarly, Carrotte et al. (2015) found that participants with eating disorders were 2-3 times more likely to consume health and fitness-related social media content than participants without eating disorders. Interestingly, Tiggemann and Slater (2017) found that internalisation and body surveillance prospectively predicted an increased number of friends, but that drive for thinness did not predict the number of friends.

Future research into the bidirectional relationship between social media and body image is increasingly necessary in our social media obsessed, globalised world.

CONCLUSION

Multiple studies, from cross-sectional to experimental, have recorded a negative effect of social media exposure on body image, and even mood and self-worth. This is likely mediated through the internalisation of a certain body ideal, as well as comparison to peers and celebrities. Particular behaviours and personality styles influence the effect of any given social media site on body image, highlighting the fact that it is the way the site is used, rather than the site itself, that influences body image. Indeed, this review has highlighted particular social media behaviours such as posting selfies which have been associated with improved body image, although there have been contradictory findings in this area. This lends itself to the question: how can we use social media differently so that it positively, as opposed to negatively, impacts body image?

The power of social media to connect to other individuals around the world and its centrality to the modern human experience is undeniable. It is therefore unreasonable to simply suggest stopping using social media platforms. The following guidelines have therefore been generated from the findings in this review to help individuals use social media more responsibly:

1. Restrict your social media usage
- [Scroll Free September](#) is a campaign by the Royal Society for Public Health which encourages individuals to give up social media for 30 days in order to reflect on social media use and how it may be negatively impacting your life.

2. Censor your social media content
- Unfollow the pages or people who post images which make you feel unhappy about your body.

3. Educate yourself and others about digitally manipulated photos
- Understand that many images on social networking sites are digitally manipulated and therefore represent an altered version of reality.

The relationship between social media and body image is clearly very complex. It is therefore important for future research to further understand the theoretical underpinnings of this relationship and how individuals can avoid the potentially negative impacts of social media use. Additional research and discussion are also needed to investigate how different groups

(e.g. young girls, LGBTQ+ individuals, highly educated groups) respond to social media, and whether we can draw lessons from their experiences. Although many studies focus on women, those that include men tend to show a similar pattern for the effect of social media on male body image, a finding worth further discussion.

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