The effect of Instagram "likes" on women's social comparison and body dissatisfaction

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ABSTRACT

Photo-based activity on social networking sites has recently been identified as contributing to body image concerns. The present study aimed to investigate experimentally the effect of number of likes accompanying Instagram images on women's own body dissatisfaction. Participants were 220 female undergraduate students who were randomly assigned to view a set of thin-ideal or average images paired with a low or high number of likes presented in an Instagram frame. Results showed that exposure to thin-ideal images led to greater body and facial dissatisfaction than average images. While the number of likes had no effect on body dissatisfaction or appearance comparison, it had a positive effect on facial dissatisfaction. These effects were not moderated by Instagram involvement, but greater investment in Instagram likes was associated with more appearance comparison and facial dissatisfaction. The results illustrate how the uniquely social interactional aspects of social media (e.g., likes) can affect body image.

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1. Introduction

Extensive research literature has documented negative effects of exposure to thin- ideal media images presented in magazines or on television for the body dissatisfaction and disordered eating of adolescent and young adult women (for meta-analyses, see Grabe, Ward, & Hyde, 2008; Groesz, Levine, & Murnen, 2002; Want, 2009). More recent research attention has shifted toward the Internet, with a particular focus on the impact of social networking sites, such as Facebook, Instagram, and Twitter. Australian statistics suggest that approximately 79% of adults (aged over 18 years) use social networking sites, with 89% of 18- to 29-year-olds doing so on an at least daily basis (Sensis, 2017). These sites allow users to create personal online profiles, to share photos and information, and to form relationships and interact with other users of the same website. In contrast to traditional media such as magazines and television, social networking content is largely peer-generated (although it does also contain some advertising), such that users are simultaneously information sources and receivers (Holland & Tiggemann, 2016). In addition, individuals are able to actively decide how, when, and for how long they wish to participate.

A small but growing body of research has addressed the impact of social networking sites, most commonly Facebook, on body image and disordered eating outcomes. In their recent systematic review of this research, Holland and Tiggemann (2016) concluded that while increased social networking use is linked to body image and eating concerns, it is photo-based activity, e.g., posting photos and viewing or making comments on others' photos (Meier & Gray, 2014), that is particularly salient. The authors also concluded that the existing evidence is largely correlational in design and called for more longitudinal and experimental approaches to determine the directionality of effects. The latter call reinforces Perloff's (2014) earlier general conclusion that there has been little experimental research on body image and newer media formats.

One increasingly popular photo-based social networking site is Instagram. Instagram is a unique platform in that it is purely dedicated to the posting and sharing of photos, either with friends (on a private profile) or the wider public (on a public profile). Around 200 million people use Instagram on a daily basis (Statista, 2017). Instagram users are able to carefully select the personal photos they wish to post and to enhance them with Instagram filtering and editing tools in order to manage their self-presentation (Dumas, Maxwell-Smith, Davis, & Giulietti, 2017). Recent correlational research has shown that Instagram use is related to a variety of body image concerns (Cohen, Newton-John, & Slater, 2017; Fardouly, Willburger, & Vartanian, 2017; Feltman & Szymanski, 2018; Hendrickse, Arpan, Clayton, & Ridgway, 2017). As of yet there is no longitudinal evi-

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dence, but initial experimental research has also shown that acute exposure to idealized Instagram images (attractive peers, celebrities) has a detrimental impact on body image (Brown & Tiggemann, 2016; Tiggemann & Zaccardo, 2015).

The negative effects of media exposure have generally been attributed to the process of social comparison (Levine & Murnen, 2009; Want, 2009). Social comparison theory (Festinger, 1954) argues that women evaluate their own appearance by comparing themselves with the sociocultural thin ideals of beauty presented in the media. Almost always this will constitute an upward comparison by which women fall short, resulting in dissatisfaction with their own body and appearance (Strahan, Wilson, Cressman, & Buote, 2006; Want, 2009). Furthermore, those individuals who are already anxious or uncertain about their body image seem to be particularly likely to seek out standards for (upward) social comparison, resulting in further body dissatisfaction (Want, 2009). In this, social comparison may be particularly pertinent to social networking sites. First, the ease with which individuals can connect to their networks at any time of the day gives rise to the opportunity for very fast and numerous comparisons on the basis of appearance (Tiggemann & Miller, 2010). Second, according to social comparison theory (Festinger, 1954), the drive for self-evaluation causes people to seek out comparisons with others who are similar rather than dissimilar to themselves. Thus peers, the major source of material on social media, provide more important comparison targets than do the models or celebrities featured in traditional media (Heinberg & Thompson, 1995). In support of this reasoning, Fardouly and Vartanian (2015) found that trait appearance comparison mediated the relationship between frequency of Facebook use and body image concerns, while Fardouly et al. (2017); Hendrickse et al. (2017), and Feltman and Szymanski (2018) showed similar relationships for Instagram use. More tellingly, in the Instagram experimental studies, the observed effects of idealized images on body dissatisfaction were shown to be mediated by state appearance comparison (Brown & Tiggemann, 2016; Tiggemann & Zaccardo, 2015).

Despite the fact that it is the interactivity of social media that most clearly distinguishes social media from traditional media (Perloff, 2014), as yet there has been little formal research on body image and the 'social' aspects of social media. The present study sought to begin this investigation by experimentally investigating the impact of one simple component, namely the number of likes on an Instagram image. Likes are an important and integral aspect of Instagram. Users can comment on and "like" photos, with "liking" being a very frequent activity (Frison & Eggermont, 2017). Importantly, the number of people who have "liked" a photo is then displayed under each image on Instagram for all to see. In this way, the number of likes can serve as a form of peer influence or social reinforcement. Social reinforcement theory postulates that the comments or actions of significant social agents, including media and peers, will reinforce particular attitudes and behaviours (Thompson & Stice, 2001). In the off-line environment, research has demonstrated that women and girls internalize the weight and shape ideals of their peer networks and share the resulting levels of body dissatisfaction (Leiberman, Gauvin, Bukowski, & White, 2001; Shroff & Thompson, 2006; Thompson & Stice, 2001). In the present case, a high number of likes attached to idealized (thin and attractive) Instagram photos should socially reinforce the importance of the beauty ideals displayed.

Initial qualitative research has indicated that likes are a marker of peer status and popularity (Dumas et al., 2017), as well as an accepted numerical indicator of consensually determined physical beauty (Chua & Chang, 2016). Indeed, Dumas et al. (2017) have documented a number of strategies that women use to actively seek likes for their own photos in order to obtain attention and validation, such as using filters or uploading photos at a certain time of day. Further, the adolescent girls in Chua and Chang's (2016) interview study viewed the number of likes that they receive as direct evaluative feedback about both their beauty and their self-worth. The number of likes on other people's photos (which Instagram displays) can also have consequences. For example, adolescents are significantly more likely to themselves "like" a photo if that photo has received more likes from peers (Jong & Drummond, 2016; Sherman, Payton, Hernandez, Greenfield, & Dapretto, 2016).

In the present study, we were interested in the effect of number of likes attached to others' photographs on women's own body image. We reasoned that the number of likes received by a photo would be taken as a reflection of the collective opinion of other Instagram users as to the worth and attractiveness of that person, serving to endorse that image and evoking greater attention and appearance comparison, and hence resulting in greater body dissatisfaction. Indeed, adolescent girls report that they compare themselves and their appearance more to peers with a higher number of likes on social media (Chua & Chang, 2016). In addition, the number of likes itself provides another attribute on which users can make social comparisons. Chua and Chang (2016) suggest that (upward) social comparison with Instagram images that receive a greater number of likes than what the individual would normally receive can lead to decreases in perceived self-worth and body satisfaction, while (downward) comparisons with Instagram users who receive fewer likes than they normally do may preserve body satisfaction and self-esteem. Although it is possible that habitual users of Instagram would be inured to the effect of likes, the importance placed on likes illustrated above led us to further reason that the effect of number of likes on body dissatisfaction might be greater for regular Instagram users who are familiar with the platform and who are more invested themselves in the number of likes they receive. These participants may be more inclined to attend to, interpret, and react to the number of likes on viewed images.

Thus, the main aim of the present study was to experimentally examine the effect of number of likes (low/high) on Instagram images (both thin-ideal and average figures) on women's body dissatisfaction. In addition, because faces may be particularly relevant in the social media context with the rise in the posting of self-portrait photos ("selfies"; Cohen, Newton-John, & Slater, 2018), we also included a simple measure of facial dissatisfaction. Based on the existing qualitative and correlational research, we predicted that viewing a greater number of likes would negatively affect body image by arousing greater social comparison on the basis of appearance and number of likes. In addition, we predicted that the effect of likes might be moderated by Instagram involvement, such that habitual users of Instagram or those who are invested in the feedback they receive would experience relatively greater body dissatisfaction in response to viewing images with a high number of likes.

2. Method

2.1. Design

The study employed a 2 (likes condition: low, high) × 2 (image type: thin-ideal, average) between-subjects experimental design. The major dependent variables were body dissatisfaction, facial dissatisfaction, and social comparison. Instagram use and investment were tested as potential moderating variables.

2.2. Participants

Participants were 220 female undergraduate students at Flinders University aged between 18 and 30 years. The major-