

Broadening the Scope of Social Media Effect Research on Body Image Concerns

Michael Prieler · Jounghwa Choi

Published online: 22 August 2014
© Springer Science+Business Media New York 2014

Abstract The article “Social media effects on young women’s body image concerns: Theoretical perspectives and an agenda for research” by Perloff (2014) extends the study of media effects on women’s body image concerns by including social media. His article is important because of the increasing use and unique nature of social media, and it can provide an avenue for future research. The main focus of this commentary is to critically examine the arguments of Perloff (2014) and to provide suggestions on how to extend his model. We begin by emphasizing the importance of culture on body image and provide a theoretical extension based on the theoretical construct of self-construal. Next, we propose to differentiate social media use as motivated by general social media use (e.g., socializing and entertainment) from that driven by specific needs related to body image concerns (e.g., pro-eating disorder sites). In addition, we suggest differentiating mere exposure to content from the active use of social media, such as commenting and posting. Finally, we recommend advancing the research on body image beyond the thin ideal because body dissatisfaction can be related to various body parts (e.g., breast size, skin color, and eye shape), and we recommend including participants beyond adolescence, integrating multiple methods, and conducting research on interventions. The aim of this commentary is not to provide a framework for specific cultures or social contexts, but to offer suggestions that encourage researchers to broaden the scope of research on body image concerns.

Keywords Social media · Thin ideal · Body image · Culture · Social comparison

Introduction

Perloff (2014) attempts to broaden the theoretical discussion regarding the effects of media on women’s body image concerns by extending it to social media. The four purposes of the article suggested by the author can be summarized into one sentence as follows: to present a schematic model of social media effects on women’s body image concerns with theoretical predictions based on social psychological and communication theories that capture the underlying dynamics of such processes. His article builds on existing literature by considering the unique nature of social media.

We consider Perloff’s (2014) article to be important for the following reasons. First, given the increasing use and unique nature of social media, the article addresses timely and important aspects of media effects on body image perception and their consequences. In fact, a study in the United States and Germany documented that the effects of social media could differ from those of traditional media (Schultz et al. 2011). Other scholars have also argued that traditional media may no longer exert the sole dominant power that it had before the rise of social media (Gil de Zúñiga et al. 2012; Meraz 2009). The unique nature of social media delineated by Perloff (2014), such as interactivity, user activeness, the interpersonal nature, rich modalities, and communities of like-minded individuals, also lends significance to this topic. A few recent studies in the United States, Germany, South Korea, and Australia (Chrisler et al. 2013; Ferguson et al. 2014; Haferkamp and Krämer 2011; Lee et al. 2014; Smith et al. 2013; Tiggemann and Slater 2013) have explored the effects of social media on body image concerns. Given the accumulating evidence regarding the effect of social media on individual behaviors and the

M. Prieler (✉)
School of Communication, Hallym University, Dasan Hall #507,
Hallym University Road 1, Chuncheon 200-702, South Korea
e-mail: prieler@hallym.ac.kr

J. Choi
School of Communication, Hallym University, Damheon Hall #406,
Hallym University Road 1, Chuncheon 200-702, South Korea
e-mail: jhchoi@hallym.ac.kr

unique characteristics of social media, the research agenda addressed by Perloff (2014) is worthy of further attention.

Second, we expect that the theoretically grounded research agenda generated by Perloff (2014) could serve as a practical avenue for future research. His article provides a number of specific variables that could generate theoretical predictions that can be empirically tested. As these predictions are drawn from the existing literature with theoretical and empirical support, his article could be an appropriate starting point for exploring the more or less influential factors among the potential variables and creating a model with the more influential factors.

Perloff's (2014) article is an excellent starting point; however, his suggested theoretical model also includes several limitations. Although he mentions these limitations himself, we believe that some of these limitations should be of greater interest to the future development of research on media effects on body image concerns; thus, these limitations are raised in this commentary. In other words, body image research should aim to extend beyond the study of the effects of media exposure to the thin ideal by white adolescent girls in Anglophone countries (in particular, the United States, Australia, Canada, and the UK). The main issues that we raise in this commentary (and that we believe should be part of a broader theoretical model) are the role of culture in body image (and the limitations of Perloff's focus on the United States), the role of different aspects of social media use in the process of influencing body image, and the limitations of research on body image that solely focuses on the thin ideal. Other smaller suggestions for future research related to the methodology, the age of participants, and intervention studies are also provided. It should be also acknowledged that the aim of this commentary, in general, is not to provide a framework for a specific cultural or social context, but to offer various suggestions and examples that encourage researchers to broaden the scope of research on body image concerns.

The Role of Culture

Perloff (2014) argues in his article that culture and media interact to influence body disturbances in complex ways that are beyond the scope of his article. Although it is certainly true that culture plays a complex role in body image, we believe that the role of culture is pivotal in furthering our understanding of the effects of media exposure on body image. To date, the majority of studies have focused on the Anglophone world (Levine and Harrison 2009; Tiggemann and Miller 2010), whereas relatively few studies have analyzed other regions, for example, Switzerland and China (Knauss et al. 2008; Lee et al. 2014). We will provide a short overview of studies exploring cultural differences both within countries (i.e., ethnic differences) and between countries. Subsequently, we will provide an example of a possible

theoretical extension centering on the social comparison process based on the theoretical construct of self-construal, which could be applied to different parts of the world with individualistic and collectivistic cultures.

Cultural Differences Within and Between Countries

As mentioned earlier, most previous literature on the effects of media on body image concerns has focused on Anglophone countries. Even within the United States, the focus has been on European Americans, which could lead to biased conclusions. The existing research on African American women shows that the effects of the media on their body image concerns differ from those of European American women, as many African American women report no changes in body image after exposure to largely European American models in the media (DeBraganza and Hausenblas 2010; Frisby 2004; Grabe and Hyde 2006; Schooler et al. 2004). Such findings are in accordance with social comparison theory (Festinger 1954), which states that people make social comparisons with those who are similar to themselves, and research has shown that African Americans identify strongly with African American models (David et al. 2002). By contrast, the findings related to media effects on Latinos and Asian Americans have been mixed (Grabe and Hyde 2006; Schooler and Lowry 2011; Warren et al. 2010).

The effects of media on body image are also inconclusive in the studies conducted outside of the United States and Anglophone countries. Although one of the most frequently referenced studies on body image investigated the effects of the introduction of television in Fiji (Becker 2004; Becker et al. 2002), surprisingly few studies have been conducted outside of the Anglophone world. Some studies have indicated that the media has an effect on body image concerns in places such as Estonia (Tiggemann and Rützel 2001), Switzerland (Knauss et al. 2008), South Korea (Lee et al. 2014), China (Chen and Jackson 2012), Hong Kong (Prendergast et al. 2002), and Singapore (Chia 2007), whereas other studies in Iran (Akiba 1998) and Italy (Tiggemann et al. 2005) did not report such an effect. In Italy, magazine consumption was not found to predict body dissatisfaction and disordered eating for Italian women, although the same study found that reading magazines predicted body dissatisfaction in Australian women. Studies on Singapore show results that differ from the findings for African Americans in the United States, indicating that Singaporeans are influenced regardless of the race/ethnicity of the models (Chia 2007; Chia and Wen 2010). To explain this difference, the authors note that majority groups fail to exhibit in-group social identification when viewing models of other racial groups. Furthermore, a study of 26 countries reports significant cross-regional differences in the ideal female figure and in body dissatisfaction (Swami

et al. 2010). Such cultural differences in terms of the ideal female figure should also be considered in social media studies.

Because the findings of previous research on cultural differences between and within countries for traditional media are not conclusive, we can only speculate on the effects of social media on body image disturbances in different cultural contexts. Social media could either increase or decrease the influence of culture. Social media may strengthen ethnic norms of body image rather than the body image of mainstream culture by gathering similar, like-minded people (Amichai-Hamburger 2007) and thus limiting the effect of mainstream media. Conversely, social media may exacerbate the effect of mainstream media because people often adopt images and content from mainstream media and disseminate them through social media. To fully understand the effects of social media on body image disturbances in the context of culture, we suggest it is necessary to understand and consider (a) how ethnicity influences the formation of one's social media network, (b) how diverse the members of one's social network are, (c) to what extent social norms that are pervasive in the mainstream media are shared by the members of a social network, (d) how do individuals present their social or ethnic identities, and (e) how much global versus local content is shared.

Self-Construal, Body Image, and Social Media

A potential key variable underlying cultural differences arising from ethnicity or nationality is self-construal. The concept of self-construal is important to the issue of body image disturbances because it is expected to operate in the process of social comparison, which is one of the major processes that contribute to the media effect on body image concerns (Gilbert et al. 2005; Levine and Harrison 2009; López-Guimerá et al. 2010). While the majority of studies on self-construal focused on East Asia and the United States, this concept can be also applied to other individualistic and collectivistic cultures around the world (Hofstede 2001).

Self-construal refers to “how individuals define and make meaning of the self” (Cross et al. 2011, p.143). People from individualistic cultures, such as the United States, tend to view the self as an independent entity (Markus and Kitayama 1991) and tend to focus on demonstrating their own uniqueness to maintain their self-esteem (Cross et al. 2011; Markus and Kitayama 1991). By contrast, people from collectivistic cultures, such as Japan, tend to construe themselves in relation to others (i.e., independent self-construal) and tend to base their self-esteem on demonstrating their ability to fit into the group (Cross et al. 2011). As a result, for people with high levels of independent self-construal, “others are a source of social comparison for confirming one's uniqueness,” whereas for

individuals with high levels of interdependent self-construal, “social comparison is used to determine whether one is fulfilling obligations within those relationships” (Cross et al. 2011, p. 143).

This difference in self-construal and the associated motivation underlying social comparison may lead young women to respond differently to social media content related to body image and thus result in different consequences. First, it is possible that individuals in collectivistic societies engage in social comparisons through social media to a greater extent than those in individualistic societies. Previous studies in the United States and the Netherlands report that people with interdependent self-construal have a greater need to conform and to be accepted by others (Verplanken et al. 2009; Wiekens and Stapel 2008) because maintaining harmonious social relationships and belonging to social groups are important parts of the self. By contrast, people with independent self-construal are motivated to be autonomous, agentic, and ideocentric (Markus and Kitayama 1991). Because interdependent selves are “more likely to have an extra individual (i.e., externally oriented) than intra individual (i.e., internally oriented) focus” (White and Lehman 2005, p. 233), people with interdependent self-construal tend to pursue social comparisons to a greater extent than those with independent self-construal. For example, White and Lehman (2005) observe that Asian Canadians tend to engage in more social comparison than do European Canadians. As Perloff (2014) notes, social media can provide a greater opportunity for social comparison by allowing interpersonal interactions. When viewing posts by one's peers and reference groups, an individual with interdependent self-construal may pay greater attention to such information and may engage in social comparisons more frequently than those with independent self-construal.

The significance of self-construal as a cultural variable related to body image disturbances becomes more clearly evident when we consider the various types of social comparison (i.e., upward vs. downward) in relation to the types of self-construal and consequences. Previous studies suggest that the type of self-construal is related to the type of social comparison. For example, White and Lehman's (2005) study in Canada suggests that people with interdependent self-construal are more likely to engage in upward comparison. What is arguably problematic about this tendency is that the body image literature has demonstrated negative consequences of upward comparison. For example, in Han's (2003) study with Korean female college students, exposure to images of thin women in magazine ads was related to a greater level of upward comparison with thin models and, in turn, body image dissatisfaction and eating disorders. Similar findings have been reported by other studies in the United States and Canada (Engeln-Maddox 2005; Jones 2001; Morrison et al. 2004). Perloff (2014) notes the negative consequences of upward social comparisons, particularly with

attractive peers via social media, not only with attractive advertising models in the mass media. Consistent with his argument, we think that the consequences of such comparisons could be further considered in relation to culture. As the literature on social psychology indicates, people with interdependent self-construal are more oriented toward upward comparison; thus, these individuals could be more vulnerable to the negative consequences of such comparison, such as body dissatisfaction, unhealthy eating behaviors, or risky cosmetic surgery. Social media may exacerbate this tendency by stimulating upward social comparisons with attractive peers.

Finally, people with interdependent self-construal may adopt body image norms or related behaviors more easily than those with independent self-construal. As Perloff (2014) argues, social media allows for the formation of communities of like-minded individuals. In such communities, opinions and group norms are likely to exert a strong influence on members, presumably among interdependent individuals in particular. The existing literature suggests that interdependent individuals are more likely to assimilate with others (Stapel and Koomen 2001) and to imitate the behaviors of others, compared with independent individuals (van Baaren et al. 2003). Social norm studies in the United States and Canada also suggest that social norms are more influential among those with high levels of group orientation (Lapinski et al. 2007) or among those for whom the collective level of self becomes salient (White and Simpson 2013). This finding indicates that the normative influence via social media could be stronger among interdependent individuals.

As discussed above, cultural factors, such as ethnicity or self-construal, are deemed influential in the process of body image disturbance via social media. To understand the effect of social media on body image disturbances fully, we suggest that scholars consider such factors.

Specifying Social Media Use

Although social media use is placed at the core of Perloff's (2014) model, limited explanation of this variable is provided. Social media use is described in terms of social media services, such as Facebook, Instagram, and pro-eating disorder sites. It is unclear how social media use could be assessed in a study. This issue is especially important given that the nature of social media use is more complex than the nature of mass media use. Even in the case of mass media, scholars agree that surveys should not only determine the frequency of consumption but also investigate the type of content to which participants are exposed as specifically as possible (Levine and Murnen 2009; Valkenburg and Peter 2013). In addition, people's use of social media is not limited to mere consumption of content; rather, people often serve as active disseminators or producers of content (T. M. Harrison and Barthel 2009).

Therefore, to fully understand the effect of social media on body image disturbances, it is necessary to specify the nature of social media use. At least two aspects must be considered.

First, it is necessary to differentiate the use of social media driven by general social media use motivations, such as socializing or entertainment (e.g., Facebook or YouTube), from use that is driven by a specific need related to body image concerns (such as pro-eating disorder sites). The types of gratifications specific to body image concerns mentioned by Perloff (2014) include reassurance of one's own physical attractiveness and escape from appearance-related personal distress. However, social media use could be driven by several other motivations, such as one's need for socializing, entertainment, self-status seeking, and information (Park et al. 2009). It is unlikely that the gratification sought from Facebook would be the same as that sought from pro-eating disorder sites. Subsequently, the effects of these two types of media use on body image disturbances and the process in which they operate would not be the same. For example, young women may use Facebook primarily for socializing and may encounter pictures of thin women posted by their peers. Depending on the women's level of self-esteem or the centrality of appearance to their self-worth, such social media content may be more or less influential in eliciting body dissatisfaction. That is, in this case, individual vulnerability factors serve as moderators of the effect of social media use on body image disturbances rather than as precedents for the gratification sought from social media. In fact, several studies in the UK and the United States have shown that the effects of media exposure on body image concerns are moderated by the vulnerability factors identified by Perloff (2014), such as global self-esteem (Aubrey 2006), and the internalization of the thin ideal (Dittmar and Howard 2004). On the other hand, those who are obsessed with the thin ideal may use social media to seek gratification specific to body image concerns and, thus, may encounter pro-eating disorder sites. Although such individuals may experience greater body dissatisfaction as a result of such sites, they may also experience positive affect as a result of the social support that they receive from like-minded people (Csipke and Horne 2007). As such, to precisely predict the effect of social media on body image, it is necessary to differentiate general social media use from social media use that is specifically related to body image concerns.

Second, it is necessary to differentiate the effect of social media use through passive exposure to social media content from the effect of the active use of social media, such as commenting, disseminating, seeking information, and posting. As Perloff (2014) notes in his model, there could be a recursive relationship between social media use and body dissatisfaction. Here, the nature of social media use as a consequence of body dissatisfaction would differ from social media use as a predictor of body dissatisfaction. Returning to

the example mentioned above, young women who have previously used Facebook for socializing and who experienced an increase in body dissatisfaction as a result of exposure to images of thin women posted by their peers (the first effect) would subsequently develop different needs for social media use, such as self-enhancement. As a result, such women may engage in information seeking through social media, which may subsequently lead to dietary or behavioral changes (the second effect). In this case, the first effect occurs through exposure, whereas the second effect occurs through engagement. The consequences may differ significantly depending on the types of social media use. In this sense, exploring “self-generated media effects” (Valkenburg and Peter 2013, p. 206) is an important avenue for research on social media effects on body image concerns. Differentiating between direct and indirect self-generated media effects, as suggested by Valkenburg and Peter (2013), may provide additional insights: when a Facebook user posts a favorable photo of him/herself and is proud of the photo, direct self-generated effects apply, and when such a user receives positive feedback on his/her photo, indirect self-generated media effects apply.

Additionally, although it does not directly concern social media per se, it is necessary to consider the interplay between social media and traditional media. Perloff (2014) is correct in emphasizing the importance of social media and noting that there should be more efforts in this research direction. However, we question whether research should solely analyze social media, as traditional media and social media may actually be interrelated. A great deal of social media content originates from traditional media, such as newspapers and television, and users are also increasingly using different media simultaneously (Johnson and Kaye 2004; Nguyen and Western 2006; Westlund and Färdigh 2011). In addition, previous research has shown that different media types have different effects and underlying processes linking them to body image (Levine and Murnen 2009; López-Guimerá et al. 2010); thus researchers who focus solely on social media could neglect to consider other major media effects on body image concerns. As a result, studies should research both social media and other media simultaneously. However, to date, studies investigating the interplay between social media and traditional media are rather scarce (in Singapore, see: Skoric and Poor 2013), and few body image studies consider both types together (in Belgium and Australia, see: Tiggemann and Miller 2010; Vandenbosch and Eggermont 2012).

In sum, distinguishing the differences in social media use driven by different motivations and specifying different aspects of social media use would allow researchers to scrutinize the role of social media in the development and/or maintenance of body image disturbances and their potential consequences. A research model that delineates specific variables of social media use would be a great contribution to this effort. Furthermore, we would gain a more complete understanding of the effect of social media

on body image disturbance if we investigated this effect in conjunction with traditional media.

Body Image Beyond the Thin Ideal

Perloff's (2014) article focuses only on the thin ideal within the broader area of body image. This focus is in line with most research on the effects of media on female body image – in short, research on the effects on female body image concerns has become nearly synonymous with research on the thin ideal. However, theoretical models of media effects on body image should be more inclusive in terms of the types of body ideals because body dissatisfaction can be related to various body parts. For example, content analyses have shown that different beauty and body ideals are prevalent in the media of different cultures (Frith et al. 2005; Morris 2014; Shaw and Tan 2014). As a result, other areas of research that should be of interest may include the effects of media on cosmetic surgery (Menzel et al. 2011; Nabi and Keblusek 2014); breast size (Goodman and Walsh-Childers 2004); and skin color, such as skin whitening (Chia et al. 2012; Hunter 2011; Parameswaran 2011) and tanning (Cho and Choi 2011; Mahler et al. 2010). Some of these body concerns are highly prominent in certain parts of the world but not found in others, which again emphasizes the importance of considering culture in body image research. Depending on the beauty ideals of different cultures, other beauty features, such as eye shape, hair (color, texture, or length), height, and facial features, may be analyzed in the context of media effects on body image (Kawamura 2011; Mellor et al. 2013). Among various types of beauty ideals, the two types discussed below are especially worthy of attention because of their significance to individuals' health.

The perception of skin color ideals is an important aspect of beauty ideals because it is related to behaviors such as skin whitening and tanning, which have significant health implications. Skin whitening and bleaching play an important role in the body image of people in many parts of the world, including Africa, India, Southeast Asia, East Asia, and Latin America, and in the diasporas of people from these parts of the world (Glenn 2008). Skin whitening has existed for many centuries in many parts of the world; however, there has recently been a great increase in this practice, which may be connected with the mass marketing of images of white beauty (Hunter 2011; Parameswaran 2011). As with other issues connected to body image, skin whitening also raises health-related concerns. The heavy use of skin whitening and bleaching products can result in infectious skin disease, eczema, irritant dermatitis, acne, and higher risks of skin cancer (del Giudice and Yves 2002; Mahé et al. 2003). Surprisingly few studies have investigated skin whitening from a media effect perspective. The existing findings in Singapore indicate

that consumers are influenced by the presumed media influence of their peers and thus adopt skin whitening products (Chia et al. 2012). In some cultures, the opposite of skin whitening (namely, tanning) is important. Research on tanning in the United States shows that exposure to images of tanned men on TV is directly associated with pro-tanning attitudes and intentions (Cho and Choi 2011). Skin whitening is also directly and indirectly promoted in social media, for example, through ad campaigns as well as the promotion of a general image of beauty by celebrities. For example, Vaseline has promoted a Facebook app related to its skin whitening products, in which users are able to lighten their own images (Hunter 2011). However, social media can also play an important role in halting problematic ad campaigns, which occurred in the case of the Vaseline app and other instances of ad campaigns for skin whitening (Change.org 2010; Chomchuen 2013). Research must further explore the effects of social media on skin whitening attitudes by extending, for example, the model suggested by Perloff (2014).

The perception of body or face shape ideals is also an important aspect of beauty ideals because it is related to cosmetic surgery behavior. Cosmetic surgery can lead to serious psychological and physical consequences, such as pain, bruising, infections and psychological consequences that include depression and anxiety (Borah et al. 1999; Gabriel et al. 1997). Media effects research related to cosmetic surgery is also comparatively scant, despite the steadily increasing rates of cosmetic surgery (Delinsky 2005; Sarwer et al. 2011). The study of Nabi (2009) in the United States reports little association between viewing cosmetic surgery makeover programs and body dissatisfaction but finds a small association with the desire to undergo cosmetic surgery. Other studies confirm the role of media exposure in cosmetic surgery attitudes in such diverse places as Australia, Austria, Singapore, and the United States (Delinsky 2005; Harrison 2003; Slevac and Tiggemann 2010; Swami et al. 2008; Wen et al. 2014). One body area that is often mentioned in the context of cosmetic surgery is breast size. In the United States and some other Western cultures, the body ideal is not only about being slim but also about being curvaceous (Harrison 2003; Overstreet et al. 2010). For example, a study in the UK has shown that breast size is related to female attractiveness (Furnham et al. 1998). However, ethnic differences also emerged in this context in the United States, with European American women preferring a slender ideal with medium-sized breasts and with African American women preferring a curvier ideal with medium-sized breasts and large buttocks (Overstreet et al. 2010). Although models have thinned in recent years, their breast size has remained the same, which has led to a depiction of women with disproportionately large breasts. To fulfill the ideal of unrealistic breast sizes depicted in the media, the majority of women in the United States would need cosmetic surgery (Goodman and Walsh-Childers

2004). We know relatively little about how cosmetic surgery is presented online and in social media and what possible effects such presentation may have on the audience. However, a study of Korea (Davies and Han 2011) shows a close link between cosmetic surgery and digital technology. For example, internet reports about celebrities receiving free cosmetic surgery in return for promoting a clinic via social media, including online communities and blogs, are actively discussing and promoting cosmetic surgery (Davies and Han 2011), which may influence social media users.

Other Suggestions for Future Media Effect Research on Body Image

In addition to our previous suggestions aimed to broaden the scope of body image research in relation to social media effects, we would like to mention several other areas that are also relevant to body image research in general: (1) age groups other than adolescents, (2) a greater variety of methods to be employed (including more longitudinal studies), and (3) further research on interventions.

Perloff's (2014) discussion focuses on adolescent girls, which is consistent with most research of the effects of media exposure on body image concerns. However, there should also be more research on other age groups. Few studies have analyzed media effects on preadolescent girls (in Australia, see: Clark and Tiggemann 2006; Dohnt and Tiggemann 2006) and on middle-aged or older women (in Australia and the United States, see: Hefner et al. 2014; Slevac and Tiggemann 2011; Tiggemann 2004). Even in the context of social media, researchers should not ignore older age groups because in the United States, for example, 60 % of people aged 50–64 and 79 % of people aged 30–49 use Facebook, relative to 84 % of people aged 18–29 (Pew Research Internet Project 2013). In addition, given that the older populations in societies around the world are increasing rapidly (United Nations 2012), media effects on older people would be worth investigating. Dieting and the desire to lose weight are prevalent across all ages of women, even those with normal weight status (in Canada and the UK, see: Clarke 2002; Hetherington and Burnett 1994), and many older women are dissatisfied with their body size, which may be based on a cross-generational influence of the thin ideal. Older women are judged in relation to an ideal of female beauty that emphasizes both youthfulness and thinness (Tunaley et al. 1999). Such an ideal is also reflected in the media, for example, in the United States and in Japan, where older women are strongly under-represented, play no important roles, and tend to be the least attractive and the heaviest (Lauzen and Dozier 2005; Prieler et al. 2011; Stern and Mastro 2004). These findings are in accordance with the “double standard of aging” in which society is more permissive of aging in males than in females

and in which females are thus either ignored or portrayed in less attractive roles as they age (Sontag 1997). As a result, some older women adjust their standards of attractiveness and body shape ideals. Such adjustments led to more positive body attitudes toward their own bodies (in the UK, see: Borland and Akram 2007; Hetherington and Burnett 1994). Nevertheless, the media may also have potentially negative effects. Several studies in the United States indicate that the media has a profound influence on how older people view themselves (Donlon et al. 2005; Korzenny and Neuendorf 1980; Mares and Cantor 1992), which also applies to their body image. Although older people are generally not associated with new media and social media use, the numbers are strongly changing, and older people are increasingly becoming internet and social media users. For example, in the United States, 68 % of older people (65+) use the Internet (World Internet Project 2013), and 45 % use Facebook (Pew Research Internet Project 2013), which makes them an important subject of future research in this area.

We would also like to offer methodological suggestions. While Perloff (2014) and also other scholars (López-Guimerá et al. 2010) acknowledge that both experimental research and cross-sectional surveys have strengths and limitations, surprisingly few studies have integrated several methods into one study. Such integration could also include content analysis, which can not only provide a descriptive foundation for media effects research but also provide a foundation for programmatic research by combining data with survey data or as stimuli in experiments, as larger numbers of randomly sampled messages could particularly benefit the generalizability of experimental research (Slater 2013). Content analyses of mass media in the United States and Canada have shown that overweight people are underrepresented in the media (Greenberg et al. 2003); males are portrayed as more muscular and women as slimmer than average (Spitzer et al. 1999); body shaping and weight loss are major topics, especially in female magazines (Malkin et al. 1999; Willis and Knobloch-Westerwick 2014); and overweight people are stigmatized and ridiculed (Fouts and Burggraf 2000; Himes and Thompson 2007). However, comparatively few content analyses have been conducted on the internet and on social media (Labre and Walsh-Childers 2003). When analyzing the effects of social media, it is important to first understand the nature of the content before analyzing possible effects. For example, how much of the content in social media is user generated versus imported from traditional media from each respective user's own country itself or from other countries. We have to answer these important basic questions to advance the research on media effects in social media. Another methodological issue is that most research is limited to assessing the short-term influences of media exposure (Tiggemann 2014), and there are only a few longitudinal studies (for an overview, see López-Guimerá et al. 2010); thus, longitudinal studies are

increasingly important in the future (Levine and Murnen 2009).

Finally, more research on interventions is necessary (Levine and Chapman 2011; Levine and Murnen 2009). The reason for undertaking such research on body image is to obtain a better understanding of the factors underlying the media's influence on body image concerns. However, such an understanding can be helpful only if research also tests the possible interventions that can be created as a result of such knowledge. Although numerous studies have investigated the effect of the media on body image and subsequently on body dissatisfaction, mood, and disordered eating (Levine and Harrison 2009), a comparatively small body of research has examined interventions that can be used to prevent such media effects from materializing (for an overview, see Levine and Murnen 2009). Most studies have analyzed the effect of media literacy programs in reducing body dissatisfaction and eating disorders (Halliwell et al. 2010; Irving and Berel 2001; Wade et al. 2003; Wilksch 2010; Yamamiya et al. 2005), while some studies in the United States and the Netherlands have investigated the effectiveness of warnings and information (Ata et al. 2013; Harrison and Hefner 2014; Veldhuis et al. 2014). Social media could reveal new methods of intervention, and researchers should investigate these possibilities. In fact, in other areas of health issues in the United States, interventions using social media are being actively sought, such as interventions related to healthy sexual behaviors (Bull et al. 2012; Gold et al. 2011), physical activities (Cavallo et al. 2012), and health information sharing on antibiotics (Scanfeld et al. 2010). In sum, much research still needs to be conducted to better understand interventions to minimize body image disturbances and their consequences.

Summary and Conclusion

Perloff (2014) provides a comprehensive model to explore the effects of social media on women's body image disturbances. The agenda is timely given the increasing use of social media, and his model is expected to facilitate future research by identifying key variables and underlying processes to be tested. Through this commentary, we suggest that his model could be improved by accounting for cultural factors, such as ethnicity, nationality, or self-construal; by clarifying the aspects of social media use in conjunction with the types of social media use motivation, the types of action (e.g., active engagement vs. passive exposure), and traditional media use. His model could also be improved by exploring other types of body ideals beyond the thin ideal, such as skin color ideals or body/face shape ideals. In addition, other suggestions for research topics, methodological approaches, and intervention research have been offered. As Perloff (2014) notes, the effects of the media on body image disturbances involve a

complex process. By incorporating and clarifying the factors addressed in this commentary, we aim to provide a more coherent and comprehensive picture of the roles that social media play in body image disturbances.

Acknowledgments The preparation of this commentary was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2012S1A3A2033480).

References

- Akiba, D. (1998). Cultural variations in body esteem: How young adults in Iran and the United States view their own appearances. *The Journal of Social Psychology, 138*, 539–540. doi:10.1080/00224549809600409.
- Amichai-Hamburger, Y. (2007). Personality, individual differences and internet use. In A. N. Joinson, K. Y. A. McKenna, T. Postmes, & U.-D. Reips (Eds.), *The Oxford handbook of internet psychology* (pp. 187–204). New York: Oxford University Press.
- Ata, R. N., Thompson, J. K., & Small, B. J. (2013). Effects of exposure to thin-ideal media images on body dissatisfaction: Testing the inclusion of a disclaimer versus warning label. *Body Image, 10*, 472–480. doi:10.1016/j.bodyim.2013.04.004.
- Aubrey, J. S. (2006). Exposure to sexually objectifying media and body self-perceptions among college women: An examination of the selective exposure hypothesis and the role of moderating variables. *Sex Roles, 55*, 159–172. doi:10.1007/s11199-006-9070-7.
- Becker, A. E. (2004). Television, disordered eating, and young women in Fiji: Negotiating body image and identity during rapid social change. *Culture, Medicine and Psychiatry, 28*, 533–559. doi:10.1007/s11013-004-1067-5.
- Becker, A. E., Burwell, R. A., Gilman, S. E., Herzog, D. B., & Hamburg, P. (2002). Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *British Journal of Psychiatry, 180*, 509–514. doi:10.1192/bjp.180.6.509.
- Borah, G., Rankin, M., & Wey, P. (1999). Psychological complications in 281 plastic surgery practices. *Plastic & Reconstructive Surgery, 104*, 1241–1246. doi:10.1097/00006534-199910000-00002.
- Borland, H., & Akram, S. (2007). Age is no barrier to wanting to look good: Women on body image, age and advertising. *Qualitative Market Research: An International Journal, 10*, 310–333. doi:10.1108/13522750710754335.
- Bull, S. S., Levine, D. K., Black, S. R., Schmiede, S. J., & Santelli, J. (2012). Social media-delivered sexual health intervention: A cluster randomized controlled trial. *American Journal of Preventive Medicine, 43*, 467–474. doi:10.1016/j.amepre.2012.07.022.
- Cavallo, D. N., Tate, D. F., Ries, A. V., Brown, J. D., DeVellis, R. F., & Ammerman, A. S. (2012). A social media-based physical activity intervention: A randomized controlled trial. *American Journal of Preventive Medicine, 43*, 527–532. doi:10.1016/j.amepre.2012.07.019.
- Change.org. (2010). Dear Facebook, please stop running racist apps. Retrieved from <https://www.change.org/petitions/dear-facebook-please-stop-running-racist-apps>.
- Chen, H., & Jackson, T. (2012). Gender and age group differences in mass media and interpersonal influences on body dissatisfaction among Chinese adolescents. *Sex Roles, 66*, 3–20. doi:10.1007/s11199-011-0056-8.
- Chia, S. C. (2007). Third-person perceptions about idealized body image and weight-loss behavior. *Journalism & Mass Communication Quarterly, 84*, 677–694. doi:10.1177/107769900708400402.
- Chia, S. C., Chay, Y. T., Cheong, P. K., Cheong, W. Y., & Lee, S. K. (2012). Fair and lovely: Building an integrated model to examine how peer influence mediates the effects of skin-lightening advertisements on college women in Singapore. *International Journal of Advertising, 31*, 189–211. doi:10.2501/IJA-31-1-189-211.
- Chia, S. C., & Wen, N. (2010). College men's third-person perceptions about idealized body image and consequent behavior. *Sex Roles, 63*, 542–555. doi:10.1007/s11199-010-9833-z.
- Cho, H., & Choi, J. (2011). Television, gender norms, and tanning attitudes and intentions of young men and women. *Communication Studies, 65*, 508–530. doi:10.1080/10510974.2011.577500.
- Chomchuen, W. (2013, October 25). Whiter-skin ad campaign spurs debate among Thais, *The Wall Street Journal*. Retrieved from <http://online.wsj.com/news/articles/SB10001424052702304799404579157422770231930>.
- Chrisler, J. C., Fung, K. T., Lopez, A. M., & Gorman, J. A. (2013). Suffering by comparison: Twitter users' reactions to the Victoria's secret fashion show. *Body Image, 10*, 648–652. doi:10.1016/j.bodyim.2013.05.001.
- Clark, L., & Tiggemann, M. (2006). Appearance culture in nine- to 12-year-old girls: Media and peer influences on body dissatisfaction. *Social Development, 15*, 628–643. doi:10.1111/j.1467-9507.2006.00361.x.
- Clarke, L. H. (2002). Older women's perceptions of ideal body weights: The tensions between health and appearance motivations for weight loss. *Ageing & Society, 22*, 751–773. doi:10.1017/S0144686X02008905.
- Cross, S. E., Hardin, E. E., & Gercek-Swing, B. (2011). The what, how, why, and where of self-construal. *Personality and Social Psychology Review, 15*, 142–179. doi:10.1177/1088868310373752.
- Csipke, E., & Horne, O. (2007). Pro-eating disorder websites: Users' opinions. *European Eating Disorders Review, 15*, 196–206. doi:10.1002/erv.789.
- David, P., Morrison, G., Johnson, M. A., & Ross, F. (2002). Body image, race, and fashion models: Social distance and social identification in third-person effects. *Communication Research, 29*, 270–294. doi:10.1177/0093650202029003003.
- Davies, G., & Han, G.-S. (2011). Korean cosmetic surgery and digital publicity: Beauty by Korean design. *Media International Australia, 141*, 146–156.
- DeBraganza, N., & Hausenblas, H. A. (2010). Media exposure of the ideal physique on women's body dissatisfaction and mood. *Journal of Black Studies, 40*, 700–716. doi:10.1177/0021934708317723.
- del Giudice, P., & Yves, P. (2002). The widespread use of skin lightening creams in Senegal: A persistent public health problem in West Africa. *International Journal of Dermatology, 41*, 69–72. doi:10.1046/j.1365-4362.2002.01335.x.
- Delinsky, S. S. (2005). Cosmetic surgery: A common and accepted form of self-improvement. *Journal of Applied Social Psychology, 35*, 2012–2028. doi:10.1111/j.1559-1816.2005.tb02207.x.
- Dittmar, H., & Howard, S. (2004). Thin-ideal internalization and social comparison tendency as moderators of media models' impact on women's body-focused anxiety. *Journal of Social and Clinical Psychology, 23*, 768–791. doi:10.1521/jscp.23.6.768.54799.
- Dohnt, H. K., & Tiggemann, M. (2006). Body image concerns in young girls: The role of peers and media prior to adolescence. *Journal of Youth and Adolescence, 35*, 141–151. doi:10.1007/s10964-005-9020-7.
- Donlon, M. M., Ashman, O., & Levy, B. R. (2005). Re-vision of older television characters: A stereotype-awareness intervention. *Journal of Social Issues, 61*, 307–319. doi:10.1111/j.1540-4560.2005.00407.x.
- Engeln-Maddox, R. (2005). Cognitive responses to idealized media images of women: The relationship of social comparison and critical processing to body image disturbance in college women. *Journal of*

- Social and Clinical Psychology*, 24, 1114–1138. doi:10.1521/jscp.2005.24.8.1114.
- Ferguson, C., Muñoz, M., Garza, A., & Galindo, M. (2014). Concurrent and prospective analyses of peer, television and social media influences on body dissatisfaction, eating disorder symptoms and life satisfaction in adolescent girls. *Journal of Youth and Adolescence*, 43, 1–14. doi:10.1007/s10964-012-9898-9.
- Festinger, L. (1954). The theory of social comparison processes. *Human Relations*, 7, 117–140. doi:10.1177/001872675400700202.
- Fouts, G., & Burggraf, K. (2000). Television situation comedies: Female weight, male negative comments, and audience reactions. *Sex Roles*, 42, 925–932. doi:10.1023/A:1007054618340.
- Frisby, C. M. (2004). Does race matter? Effects of idealized images on African American women's perceptions of body esteem. *Journal of Black Studies*, 34, 323–347. doi:10.1177/0021934703258989.
- Frith, K. T., Shaw, P., & Cheng, H. (2005). The construction of beauty: A cross-cultural analysis of women's magazine advertising. *Journal of Communication*, 55(1), 56–70. doi:10.1111/j.1460-2466.2005.tb02658.x.
- Furnham, A., Dias, M., & McClelland, A. (1998). The role of body weight, waist-to-hip ratio, and breast size in judgments of female attractiveness. *Sex Roles*, 39, 311–326. doi:10.1023/A:1018810723493.
- Gabriel, S. E., Woods, J. E., O'Fallon, W. M., Beard, C. M., Kurland, L. T., & Melton, L. J. I. (1997). Complications leading to surgery after breast implantation. *The New England Journal of Medicine*, 336, 677–682. doi:10.1056/NEJM199703063361001.
- Gil de Zúñiga, H., Jung, N., & Valenzuela, S. (2012). Social media use for news and individuals' social capital, civic engagement and political participation. *Journal of Computer-Mediated Communication*, 17, 319–336. doi:10.1111/j.1083-6101.2012.01574.x.
- Gilbert, S. C., Keery, H., & Thompson, J. K. (2005). The media's role in body image and eating disorders. In E. Cole & J. H. Daniel (Eds.), *Featuring females: Feminist analyses of media* (pp. 41–56). Washington: American Psychological Association.
- Glenn, E. N. (2008). Yearning for lightness: Transnational circuits in the marketing and consumption of skin lighteners. *Gender & Society*, 22, 281–302. doi:10.1177/0891243208316089.
- Gold, J., Pedrana, A., Sacks-Davis, R., Hellard, M., Chang, S., & Howard, S. (2011). A systematic examination of the use of online social networking sites for sexual health promotion. *BMC Public Health*, 11, 583. doi:10.1186/1471-2458-11-583.
- Goodman, J. R., & Walsh-Childers, K. (2004). Sculpting the female breast: How college women negotiate the media's ideal breast image. *Journalism & Mass Communication Quarterly*, 81, 657–674. doi:10.1177/107769900408100312.
- Grabe, S., & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin*, 132, 622–640. doi:10.1037/0033-2909.132.4.622.
- Greenberg, B. S., Eastin, M., Hofschire, L., Lachlan, K., & Brownell, K. D. (2003). Portrayals of overweight and obese individuals on commercial television. *American Journal of Public Health*, 93, 1342–1348. doi:10.2105/AJPH.93.8.1342.
- Haferkamp, N., & Krämer, N. C. (2011). Social comparison 2.0: Examining the effects of online profiles on social-networking sites. *Cyberpsychology, Behavior and Social Networking*, 14, 309–314. doi:10.1089/cyber.2010.0120.
- Halliwell, E., Easun, A., & Harcourt, D. (2010). Body dissatisfaction: Can a short media literacy message reduce negative media exposure effects amongst adolescent girls? *British Journal of Health Psychology*, 16, 396–403. doi:10.1348/135910710X515714.
- Han, M. (2003). Body image dissatisfaction and eating disturbance among Korean college female students: Relationships to media exposure, upward comparison, and perceived reality. *Communication Studies*, 54, 65–78. doi:10.1080/10510970309363266.
- Harrison, K. (2003). Television viewers' ideal body proportions: The case of the curvaceously thin woman. *Sex Roles*, 48, 255–264. doi:10.1023/A:1022825421647.
- Harrison, K., & Hefner, V. (2014). Virtually perfect: Image retouching and adolescent body image. *Media Psychology*, 17, 134–153. doi:10.1080/15213269.2013.770354.
- Harrison, T. M., & Barthel, B. (2009). Wielding new media in Web 2.0: Exploring the history of engagement with the collaborative construction of media products. *New Media & Society*, 11, 155–178. doi:10.1177/1461444808099580.
- Hefner, V., Woodward, K., Figge, L., Bevan, J. L., Santora, N., & Baloch, S. (2014). The influence of television and film viewing on midlife women's body image, disordered eating, and food choice. *Media Psychology*, 17, 185–207. doi:10.1080/15213269.2013.838903.
- Hetherington, M. M., & Burnett, L. (1994). Ageing and the pursuit of slimness: Dietary restraint and weight satisfaction in elderly women. *British Journal of Clinical Psychology*, 33, 391–400. doi:10.1111/j.2044-8260.1994.tb01135.x.
- Himes, S. M., & Thompson, J. K. (2007). Fat stigmatization in television shows and movies: A content analysis. *Obesity*, 15, 712–718. doi:10.1038/oby.2007.635.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). London: Sage.
- Hunter, M. L. (2011). Buying racial capital: Skin-bleaching and cosmetic surgery in a globalized world. *The Journal of Pan African Studies*, 4(4), 142–164.
- Irving, L. M., & Berel, S. R. (2001). Comparison of media-literacy programs to strengthen college women's resistance to media images. *Psychology of Women Quarterly*, 25, 103–111. doi:10.1111/1471-6402.00012.
- Johnson, T. J., & Kaye, B. K. (2004). Wag the blog: How reliance on traditional media and the internet influence credibility perceptions of weblogs among blog users. *Journalism & Mass Communication Quarterly*, 81, 622–642. doi:10.1177/107769900408100310.
- Jones, D. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles*, 45, 645–664. doi:10.1023/a:1014815725852.
- Kawamura, K. Y. (2011). Asian American body images. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2nd ed., pp. 229–236). New York: The Guilford Press.
- Knauss, C., Paxton, S. J., & Askaker, F. D. (2008). Body dissatisfaction in adolescent boys and girls: Objectified body consciousness, internalization of the media and body ideal and perceived pressure from media. *Sex Roles*, 59, 633–643. doi:10.1007/s11199-008-9474-7.
- Korzenny, F., & Neuendorf, K. (1980). Television viewing and self-concept of the elderly. *Journal of Communication*, 30(1), 71–80. doi:10.1111/j.1460-2466.1980.tb01771.x.
- Labre, M. P., & Walsh-Childers, K. (2003). Friendly advice? Beauty messages in web sites of teen magazines. *Mass Communication & Society*, 6, 379–396. doi:10.1207/S15327825MCS0604_3.
- Lapinski, M. K., Rimal, R. N., DeVries, R., & Lee, E. L. (2007). The role of group orientation and descriptive norms on water conservation attitudes and behaviors. *Health Communication*, 22, 133–142. doi:10.1080/10410230701454049.
- Lauzen, M. M., & Dozier, D. M. (2005). Maintaining the double standard: Portrayals of age and gender in popular films. *Sex Roles*, 52, 437–446. doi:10.1007/s11199-005-3710-1.
- Lee, H.-R., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of Health Communication: International Perspectives*. Advance online publication. doi:10.1080/10810730.2014.904022.
- Levine, M. P., & Chapman, K. (2011). Media influences on body image. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of*

- science, practice, and prevention* (2nd ed., pp. 101–109). New York: The Guilford Press.
- Levine, M. P., & Harrison, K. (2009). Effects of media on eating disorders and body image. In J. Bryant & M. B. Oliver (Eds.), *Media effects: Advances in theory and research* (3rd ed., pp. 490–516). New York: Routledge.
- Levine, M. P., & Mumen, S. K. (2009). “Everybody knows that mass media are/are not [pick one] a cause of eating disorders”: A critical review of evidence for a causal link between media, negative body image, and disordered eating in females. *Journal of Social and Clinical Psychology*, 28, 9–42. doi:10.1521/jscp.2009.28.1.9.
- López-Guimerá, G., Levine, M. P., Sánchez-Carracedo, D., & Fauquet, J. (2010). Influence of mass media on body image and eating disordered attitudes and behaviors in females: A review of effects and processes. *Media Psychology*, 13, 387–416. doi:10.1080/15213269.2010.525737.
- Mahé, A., Ly, F., Aymard, G., & Dangou, J. M. (2003). Skin diseases associated with the cosmetic use of bleaching products in women from Dakar, Senegal. *British Journal of Dermatology*, 148, 493–500. doi:10.1046/j.1365-2133.2003.05161.x.
- Mahler, H. I. M., Beckerley, S. E., & Vogel, M. T. (2010). Effects of media images on attitudes toward tanning. *Basic and Applied Social Psychology*, 32, 118–127. doi:10.1080/01973531003738296.
- Malkin, A. R., Wornian, K., & Chrisler, J. C. (1999). Women and weight: Gendered messages on magazine covers. *Sex Roles*, 40, 647–655. doi:10.1023/A:1018848324264.
- Mares, M.-L., & Cantor, J. (1992). Elderly viewers’ responses to televised portrayals of old age: Empathy and mood management versus social comparison. *Communication Research*, 19, 459–478. doi:10.1177/009365092019004004.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253. doi:10.1037//0033-295X.98.2.224.
- Mellor, D., Waterhouse, M., Mamat, H. H. B., Xu, X., Cochrane, J., & McCabe, M. (2013). Which body features are associated with female adolescents’ body dissatisfaction? A cross-cultural study in Australia, China and Malaysia. *Body Image*, 10, 54–61. doi:10.1016/j.bodyim.2012.10.002.
- Menzel, J. E., Sperry, S. L., Small, B., Thompson, J. K., Sarwer, D. B., & Cash, T. F. (2011). Internalization of appearance ideals and cosmetic surgery attitudes: A test of the tripartite influence model of body image. *Sex Roles*, 65, 469–477. doi:10.1007/s11199-011-9983-7.
- Meraz, S. (2009). Is there an elite hold? Traditional media to social media agenda setting influence in blog networks. *Journal of Computer-Mediated Communication*, 14, 682–707. doi:10.1111/j.1083-6101.2009.01458.x.
- Morris, P. K. (2014). Comparing portrayals of beauty in outdoor advertisements across six cultures: Bulgaria, Hong Kong, Japan, Poland, South Korea, and Turkey. *Asian Journal of Communication*, 24, 242–261. doi:10.1080/01292986.2014.885535.
- Morrison, T. G., Kalin, R., & Morrison, M. A. (2004). Body-image evaluation and body-image investment among adolescents: A test of sociocultural and social comparison theories. *Adolescence*, 39, 571–572.
- Nabi, R. L. (2009). Cosmetic surgery makeover programs and intentions to undergo cosmetic enhancements: A consideration of three models of media effects. *Human Communication Research*, 35, 1–27. doi:10.1111/j.1468-2958.2008.01336.x.
- Nabi, R. L., & Keblusek, L. (2014). Inspired by hope, motivated by envy: Comparing the effects of discrete emotions in the process of social comparison to media figures. *Media Psychology*, 17, 208–234. doi:10.1080/15213269.2013.878663.
- Nguyen, A., & Western, M. (2006). The complementary relationship between the Internet and traditional mass media: The case of online news and information. *Information Research: An International Electronic Journal*, 11(3), 1–18.
- Overstreet, N. M., Quinn, D. M., & Agocha, V. B. (2010). Beyond thinness: The influence of a curvaceous body ideal on body dissatisfaction in black and white women. *Sex Roles*, 63, 91–103. doi:10.1007/s11199-010-9792-4.
- Parameswaran, R. (2011). E-race-ing color: Gender and transnational visual economies of beauty in India. In R. S. Hedge (Ed.), *Circuits of visibility: Gender and transnational media cultures* (pp. 68–86). New York: New York University Press.
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior*, 12, 729–733. doi:10.1089/cpb.2009.0003.
- Perloff, R. M. (2014). Social media effects on young women’s body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles, this issue*. doi:10.1007/s11199-014-0384-6.
- Pew Research Internet Project. (2013). Social media update 2013. Retrieved from <http://www.pewinternet.org/2013/12/30/social-media-update-2013/>.
- Prendergast, G., Yan, L. K., & West, D. C. (2002). Role portrayal in advertising and editorial content, and eating disorders: An Asian perspective. *International Journal of Advertising*, 21, 237–258.
- Prieler, M., Kohlbacher, F., Hagiwara, S., & Arima, A. (2011). Gender representation of older people in Japanese television advertisements. *Sex Roles*, 64, 405–415. doi:10.1007/s11199-010-9923-y.
- Sarwer, D. B., Crerand, C. E., & Magee, L. (2011). Cosmetic surgery and changes in body image. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2nd ed., pp. 394–403). New York: The Guilford Press.
- Scanfeld, D., Scanfeld, V., & Larson, E. L. (2010). Dissemination of health information through social networks: Twitter and antibiotics. *American Journal of Infection Control*, 38, 182–188. doi:10.1016/j.ajic.2009.11.004.
- Schooler, D., & Lowry, L. S. (2011). Hispanic/Latino body images. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2nd ed., pp. 237–243). New York: The Guilford Press.
- Schooler, D., Ward, L. M., Merriwether, A., & Caruthers, A. (2004). Who’s that girl: Television’s role in the body image development of young white and black women. *Psychology of Women Quarterly*, 28, 38–47. doi:10.1111/j.1471-6402.2004.00121.x.
- Schultz, F., Utz, S., & Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public Relations Review*, 37, 20–27. doi:10.1016/j.pubrev.2010.12.001.
- Shaw, P., & Tan, Y. (2014). Race and masculinity: A comparison of Asian and Western models in men’s lifestyle magazine advertisements. *Journalism & Mass Communication Quarterly*, 9, 118–138. doi:10.1177/1077699013514410.
- Skoric, M. M., & Poor, N. (2013). Youth engagement in Singapore: The interplay of social and traditional media. *Journal of Broadcasting & Electronic Media*, 57, 187–204. doi:10.1080/08838151.2013.787076.
- Slater, M. D. (2013). Content analysis as a foundation for programmatic research in communication. *Communication Methods and Measures*, 7, 85–93. doi:10.1080/19312458.2013.789836.
- Slevec, J., & Tiggemann, M. (2010). Attitudes toward cosmetic surgery in middle-aged women: Body image, aging anxiety, and the media. *Psychology of Women Quarterly*, 34, 65–74. doi:10.1111/j.1471-6402.2009.01542.x.
- Slevec, J., & Tiggemann, M. (2011). Media exposure, body dissatisfaction, and disordered eating in middle-aged women: A test of the sociocultural model of disordered eating. *Psychology of Women Quarterly*, 35, 617–627. doi:10.1177/0361684311420249.
- Smith, A. R., Hames, J. L., & Joiner, T. E. J. (2013). Status update: Maladaptive facebook usage predicts increases in body

- dissatisfaction and bulimic symptoms. *Journal of Affective Disorders*, 149, 235–240. doi:10.1016/j.jad.2013.01.032.
- Sontag, S. (1997). The double standard of aging. In M. Pearsall (Ed.), *The other within us: Feminist explorations of women and aging* (pp. 19–24). Boulder: Westview Press.
- Spitzer, B. L., Henderson, K. A., & Zivian, M. T. (1999). Gender differences in population versus media body sizes: A comparison over four decades. *Sex Roles*, 40, 545–565. doi:10.1023/A:1018836029738.
- Stapel, D. A., & Koomen, W. (2001). I, we, and the effects of others on me: How self-construal level moderates social comparison effects. *Journal of Personality and Social Psychology*, 80, 766–781. doi:10.1037/0022-3514.80.5.766.
- Stern, S. R., & Mastro, D. E. (2004). Gender portrayals across the life span: A content analytic look at broadcast commercials. *Mass Communication & Society*, 7, 215–236. doi:10.1207/s15327825mcs0702_5.
- Swami, V., Arceche, A., Chamorro-Premuzic, T., Furnham, A., Stieger, S., Haubner, T., et al. (2008). Looking good: Factors affecting the likelihood of having cosmetic surgery. *European Journal of Plastic Surgery*, 30, 211–218. doi:10.1007/s00238-007-0185-z.
- Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D., et al. (2010). The attractive female body weight and female body dissatisfaction in 26 countries across 10 world regions: Results of the international body project I. *Personality and Social Psychology Bulletin*, 36, 309–325. doi:10.1177/0146167209359702.
- Tiggemann, M. (2004). Body image across the adult life span: Stability and change. *Body Image*, 1, 29–41. doi:10.1016/S1740-1445(03)00002-0.
- Tiggemann, M. (2014). The status of media effects on body image research: Commentary on articles in the themed issue on body image and media. *Media Psychology*, 17, 127–133. doi:10.1080/15213269.2014.891822.
- Tiggemann, M., & Miller, J. (2010). The internet and adolescent girls' weight satisfaction and drive for thinness. *Sex Roles*, 63, 79–90. doi:10.1007/s11199-010-9789-z.
- Tiggemann, M., & Rützel, E. (2001). A cross-cultural comparison of body dissatisfaction in Estonian and Australian young adults and its relationship with media exposure. *Journal of Cross-Cultural Psychology*, 32, 736–742. doi:10.1177/0022022101032006007.
- Tiggemann, M., & Slater, A. (2013). NetGirls: The internet, facebook, and body image concern in adolescent girls. *International Journal of Eating Disorders*, 46, 630–633. doi:10.1002/eat.22141.
- Tiggemann, M., Verri, A., & Scaravaggi, S. (2005). Body dissatisfaction, disordered eating, fashion magazines, and clothes: A cross-cultural comparison between Australian and Italian young women. *International Journal of Psychology*, 40, 293–302. doi:10.1080/00207590444000311.
- Tunaley, J. R., Walsh, S., & Nicolson, P. (1999). "I'm not bad for my age": The meaning of body size and eating in the lives of older women. *Ageing & Society*, 19, 741–759. doi:10.1017/S0144686X99007515.
- United Nations. (2012). World populations prospects: The 2012 revision. Retrieved from http://esa.un.org/wpp/wpp2012/wpp2012_1.htm.
- Valkenburg, P. M., & Peter, J. (2013). Five challenges for the future of media-effects research. *International Journal of Communication*, 7, 197–215.
- van Baaren, R. B., Maddux, W. W., Chartrand, T. L., de Bouter, C., & van Knippenberg, A. (2003). It takes two to mimic: Behavioral consequences of self-construals. *Journal of Personality and Social Psychology*, 84, 1093–1102. doi:10.1037/0022-3514.84.5.1093.
- Vandenbosch, L., & Eggermont, S. (2012). Understanding sexual objectification: A comprehensive approach toward media exposure and girls' internalization of beauty ideals, self-objectification, and body surveillance. *Journal of Communication*, 62, 869–887. doi:10.1111/j.1460-2466.2012.01667.x.
- Veldhuis, J., Konijin, E. A., & Seidell, J. C. (2014). Counteracting media's thin-body ideal for adolescent girls: Informing is more effective than warning. *Media Psychology*, 17, 154–184. doi:10.1080/15213269.2013.788327.
- Verplanken, B., Trafimow, D., Khusid, I. K., Holland, R. W., & Steentjes, G. M. (2009). Different selves, different values: Effects of self-construals on value activation and use. *European Journal of Social Psychology*, 39, 909–919. doi:10.1002/ejsp.587.
- Wade, T. D., Davidson, S., & O'Dea, J. A. (2003). A preliminary controlled evaluation of a school-based media literacy program and self-esteem program for reducing eating disorder risk factors. *International Journal of Eating Disorders*, 33, 371–383. doi:10.1002/eat.10136.
- Warren, C. S., Schoen, A., & Schafer, K. J. (2010). Media internalization and social comparison as predictors of eating pathology among Latino adolescents: The moderating effect of gender and generational status. *Sex Roles*, 63, 712–724. doi:10.1007/s11199-010-9876-1.
- Wen, N., Chia, S. C., & Hao, X. (2014). *The influence of presumed media influence on young people's attitudes toward cosmetic surgery*. Paper presented at the ICA Conference 2014, Seattle, WA, USA.
- Westlund, O., & Färdigh, M. A. (2011). Displacing and complementing effects of news sites on newspapers 1998–2009. *International Journal on Media Management*, 13, 177–194. doi:10.1080/14241277.2011.595020.
- White, K., & Lehman, D. R. (2005). Culture and social comparison seeking: The role of self-motives. *Personality and Social Psychology Bulletin*, 31, 232–242. doi:10.1177/0146167204271326.
- White, K., & Simpson, B. (2013). When do (and don't) normative appeals influence sustainable consumer behaviors? *Journal of Marketing*, 77(2), 78–95. doi:10.1509/jm.11.0278.
- Wiekens, C. J., & Stapel, D. A. (2008). I versus we: The effects of self-construal level on diversity. *Social Cognition*, 26, 368–377. doi:10.1521/soco.2008.26.3.368.
- Wilksch, S. M. (2010). Universal school-based eating disorder prevention: Benefits to both high- and low-risk participants on the core cognitive feature of eating disorders. *Clinical Psychology*, 14, 62–69. doi:10.1080/13284207.2010.500310.
- Willis, L. E., & Knobloch-Westerwick, S. (2014). Weighing women down: Messages on weight loss and body shaping in editorial content in popular women's health and fitness magazines. *Health Communication*, 29, 323–331. doi:10.1080/10410236.2012.755602.
- World Internet Project. (2013). World Internet Project Report 2013. Retrieved from http://www.worldinternetproject.net/_files/_/307_2013worldinternetreport.pdf.
- Yamamiya, Y., Cash, T. F., Melnyk, S. E., Posavac, H. D., & Posavac, S. S. (2005). Women's exposure to thin-and-beautiful media images: Body image effects of media-ideal internalization and impact-reduction interventions. *Body Image*, 2, 74–80. doi:10.1016/j.bodyim.2004.11.001.