

Impact of Selfie-Related Behaviors in Social Media on Body Image

Authors: Gu Xiao, Wang Yuhui, thunderbolt, Thunderbolt

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Abstract

Social media has become an integral part of people's lives, wherein selfies represent a prevalent form of appearance-centered information. Research indicates that selfie-related behaviors are closely associated with users' body image. Such behaviors on social media encompass selfie investment, selfie manipulation, posting selfies, browsing selfies, and selfie feedback investment. Given that individuals assume dual roles as both information publishers and receivers on social media, selfie investment, selfie manipulation, and posting selfies can be classified as proactive selfie behaviors of publishers, whereas browsing selfies and selfie feedback investment can be classified as reactive selfie behaviors of receivers. Concurrently, the influence of selfie-related behaviors on body image can be analyzed from both proactive and reactive perspectives, with the underlying processes decomposed into body surveillance, standard internalization, and appearance comparison. Furthermore, factors that may affect the relationship between selfie-related behaviors and body image, as well as the mediating processes, can be identified across three levels: individual, interpersonal, and environmental. Future research could further investigate the impact of selfie-related behaviors on body image by diversifying participant sampling, optimizing research designs, scrutinizing selfie behaviors in greater detail, and attending to moderating variables and environmental factors, while also theoretically examining the process of self-construction in cyberspace.

Full Text

Preamble

Gu Xiao¹, Wang Yuhui², Lei Li^{3*}

¹ Department of Psychology, Renmin University of China, Beijing 100872, China

² Faculty of Humanities and Social Sciences, Beijing University of Technology, Beijing 100124, China

³ School of Education, Renmin University of China, Beijing 100872, China (dr.leili@qq.com)

Abstract

Social media has become an integral part of modern life, with selfies representing a prevalent form of appearance-centered content. Research indicates that selfie-related behaviors are closely associated with users' body image. These behaviors encompass selfie investment, selfie manipulation, selfie posting, selfie viewing, and selfie feedback investment. Given that individuals simultaneously serve as both information publishers and receivers on social media, selfie investment, manipulation, and posting can be categorized as initiative behaviors of publishers, while selfie viewing and feedback investment constitute reactive behaviors of receivers. The impact of selfie-related behaviors on body image can thus be analyzed from both initiative and reactive perspectives, with the underlying processes decomposed into body surveillance, standard internalization, and appearance comparison. Factors at the individual, interpersonal, and environmental levels may influence the relationship between selfie-related behaviors and body image as well as these mediating processes. Future research should further investigate these effects by diversifying participant sampling, optimizing research designs, examining specific selfie behaviors, and exploring moderating and environmental variables, while also theoretically examining the process of self-construction in cyberspace.

Keywords: selfie-related behaviors, body image, internalization, body surveillance, social comparison

Introduction

The proliferation of social media has fueled the rise of selfies. The term “selfie,” named Oxford Dictionaries' Word of the Year in 2013, refers to self-portraits typically taken with smartphones or webcams and shared on social media platforms. Contemporary psychological research emphasizes that selfies center on the self, focusing on the face and body, and represent deliberately composed, adjusted, and ultimately published photographs. In China, WeChat Moments reaches 85.8% of Chinese internet users, making selfie enthusiasts ubiquitous in nearly everyone' s social circles.

Body image represents a crucial dimension of physical self-concept, encompassing individuals' cognitions, thoughts, beliefs, and feelings about their own bodies, characterized by subjectivity and affectivity. Researchers have consistently conceptualized body image as comprising perceptual, affective, and behavioral components. Negative body image manifests as body dissatisfaction, negative emotions, and body image disturbances, which not only diminish overall self-evaluation and life satisfaction while increasing negative emotional experiences, but also serve as reliable predictors of unhealthy management behaviors such as eating disorders and substance abuse.

Recent research has begun examining how social media usage impacts body image. Studies demonstrate that appearance-focused social media use exerts stronger effects on users' body image than other types of usage. Since selfies constitute common appearance-related content on social media, investigating selfie-related behaviors provides a focused lens for understanding social media's impact on body image. For instance, research has found significant positive correlations between selfie-related behaviors and negative body image as well as eating disorders. However, no existing article has systematically examined the mechanisms through which selfie-related behaviors influence body image. This paper addresses this gap by reviewing the literature, exploring factors at individual, interpersonal, and environmental levels that moderate these relationships and processes, and offering directions for future research.

2. Selfie-Related Behaviors

Selfies on social media commonly appear in profile pictures, status updates, and information sharing. Since individuals simultaneously occupy dual roles as information publishers and receivers, we can classify selfie-related behaviors accordingly to clarify their distinct nature.

Drawing on Goffman's impression management theory, people seek to control their image and identity-related information in social contexts, and posting selfies serves as an efficient method for self-expression and impression management. Research on motivations for posting selfies indicates that individuals care about others' opinions in social networks and construct impressions by presenting positive selves. Impression management theory further distinguishes between "front-stage performance" and "back-stage preparation," a framework applicable to selfies. Posting selfies on social media is not a singular behavior but a continuous process comprising multiple actions. Beyond the front-stage act of posting, back-stage preparation includes selecting and editing selfies before publication. McLean et al. (2015) proposed the construct of photo investment and its behavioral counterpart—photo manipulation—to characterize pre-posting activities. Photo investment reflects individuals' concern with photo quality, how photos depict them, and the effort expended in selecting photos for posting, while photo manipulation refers to altering photo elements—such as physical features—through software editing before publication, typically measured directly as selfie editing behavior.

Beyond uploading selfies as publishers, users also serve as receivers who browse others' selfies and feedback on their own posts. Selfie viewing involves browsing selfies posted by others (e.g., celebrities, peers) and related information including likes and comments. Research shows individuals spend more time browsing than posting content on social media, with studies reporting higher frequencies of selfie viewing than posting. In addition to viewing others' selfies, individuals also attend to feedback on their own posts, a behavior researchers term selfie feedback investment. This refers to the degree of attention and investment individuals devote to feedback received on their selfies, emphasizing efforts to

acquire standards that will garner future approval. Interview studies reveal that all participants use like counts to gather audience feedback.

Based on individuals' distinct roles when engaging with selfies, we can categorize selfie investment, manipulation, and posting as initiative behaviors of publishers, while selfie viewing and feedback investment constitute reactive behaviors of receivers. Previous research has found that information publishing and browsing on social media produce different psychological effects, and similar patterns emerge in selfie contexts. For example, studies show that viewing and posting selfies correlate with body esteem in opposite directions. Therefore, examining research from both initiative and reactive perspectives facilitates comprehensive understanding of how selfie-related behaviors affect body image.

3.1 Impact of Initiative Selfie Behaviors on Body Image

While some studies find no relationship between posting frequency and body image, or even positive correlations with favorable body image, most research indicates that posting selfies positively correlates with negative body image, including weight overestimation, body dissatisfaction, and dietary restraint. Experimental studies also demonstrate negative effects, such as increased anxiety, reduced body attractiveness ratings, and heightened body dissatisfaction. Two explanations account for these inconsistent findings. First, negative body image may primarily relate to pre-posting preparation—selfie investment and manipulation—rather than posting itself. Second, after posting carefully selected selfies, individuals may receive positive feedback that enhances body image, creating a positive correlation.

Extensive research shows that selfie manipulation and investment positively correlate with negative body image, including body dissatisfaction and drive for thinness. Two mechanisms may underlie this phenomenon. First, motivations for editing selfies relate to body image. Individuals edit selfies to achieve ideal online self-presentation and avoid negative evaluation, with experimental research showing that concerns about others' judgments and motivations to appear better than one's authentic self predict post-editing body dissatisfaction. Second, according to self-discrepancy theory, perceiving gaps between multiple selves (ideal, ought, and actual) triggers adverse emotional and behavioral consequences. Questionnaire studies reveal that editing selfies creates feelings of deception, indicating awareness of the gap between ideal and actual appearance, which may consequently heighten body image concerns.

In summary, the relationship between initiative selfie behaviors and body image is complex. Pre-posting preparation behaviors, including selfie investment and editing, negatively impact body image. The effect of posting itself remains controversial and requires further research to clarify. Future studies should distinguish between posting edited versus unedited selfies and explore psychological mechanisms through which posting might positively affect body image. Additionally, causal relationships remain disputed, with some research suggest-

ing positive body image increases posting behavior while negative body image increases editing behavior. Longitudinal studies are needed to establish causal directionality.

3.2 Impact of Reactive Selfie Behaviors on Body Image

Selfie viewing represents a typical reactive behavior. Cross-sectional research demonstrates positive correlations between viewing frequency and negative body image, including body dissatisfaction and low body esteem. Experimental studies show that browsing appearance-related photos on social media—regardless of whether subjects are celebrities or engaged in fitness activities—reduces body satisfaction. Further analysis reveals that the more attractive the viewed images, the stronger the negative impact. Specifically, viewing edited selfies directly leads to poorer body image, and facial satisfaction is higher after viewing makeup-free selfies compared to made-up versions of the same person.

Another reactive behavior involves browsing feedback on one's own selfies. Interview research indicates that individuals use feedback to judge self-presentation success, with positive feedback enhancing appearance confidence while negative feedback (e.g., few likes) is interpreted as criticism of one's appearance. Selfie feedback thus significantly impacts body image. Studies show that frequency of receiving appearance-related evaluations after posting selfies correlates positively with self-objectification and dieting behavior. Positive feedback may reinforce appearance control behaviors, while negative feedback may lower bodily self-evaluation and increase body surveillance. Unfortunately, received evaluations often prove less positive than anticipated, especially when filters and editing create excessive self-presentation that reduces positive ratings. Research demonstrates that viewers' judgments of editing extent correlate negatively with their evaluations of posters, and filtered selfies receive fewer likes.

Collectively, research supports the negative impact of reactive behaviors—viewing selfies and audience feedback—on body image. Notably, feedback in selfie contexts has unique characteristics, particularly potential discrepancies between expected and actual audience responses. Future research should examine audience evaluation criteria, identify which selfies receive better reviews, and compare attitudes toward selfies across different user roles to guide behavioral adjustments.

4.1 Body Surveillance

Fredrickson and Roberts (1997) proposed objectification theory within Western sociocultural contexts, positing that women experience “sexual objectification” through the “sexual gaze,” eventually internalizing observers' perspectives and viewing their own bodies as objects—self-objectification. Self-objectification reduces flow experiences and leads to depression, anxiety, and eating disorders. Body surveillance constitutes the primary behavioral manifestation of self-objectification. While early research applied objectification theory primar-

ily to women' s mental health, subsequent work expanded to male populations. Extensive empirical evidence demonstrates positive correlations between self-objectification and negative body image.

Selfies provide direct opportunities to scrutinize and display one' s appearance, with initiative behaviors encouraging body surveillance and consequently harming body image. Yellowlees et al. (2019) suggest that taking selfies has become a new method for examining one' s body. Research indicates many women maintain continuous awareness of “appearing attractive on social media.” As selfie publishers, individuals may spend more time and energy on initiative behaviors, further encouraging body surveillance. Studies show positive correlations between number of selfies taken before posting, posting frequency, editing frequency, and body surveillance levels. Heightened self-objectification from selfie behaviors subsequently affects body image. Questionnaire analyses reveal that posting frequency increases eating control behaviors through a chain mediation of receiving more appearance-related comments and higher self-objectification. Research also finds that selfie feedback investment correlates significantly with drive for thinness, with body surveillance mediating this relationship.

4.2 Standard Internalization

Sociocultural theory posits that media, peers, and family transmit messages about appearance importance and pressure individuals to conform to unrealistic ideal appearance standards. Current sociocultural ideals, particularly for women, emphasize maintaining a slim, youthful physique. In China, social media trends like “A4 waist” and “collarbone coin challenge” illustrate the “thin-is-beautiful” phenomenon. The tripartite influence model, derived from sociocultural theory, suggests that exposure to media information leads individuals to internalize societal ideals (e.g., thin or muscular builds), making these unrealistic standards the basis for self-evaluation and prompting frequent appearance comparisons that damage body image.

Given that social media environments combine ideal body portrayals with peer influence, individuals more easily internalize these standards, with reactive behaviors facilitating this internalization process and negatively affecting body image. Beyond internalizing ideals through viewing selfies, individuals also acquire and internalize societal standards from selfie feedback. Research shows that attractive, objectified photos receive more likes and comments, prompting individuals to conform to these standards to obtain better evaluations. For individuals, internalizing societal ideals creates awareness of discrepancies between current appearance and societal/self-ideals, leading to body dissatisfaction. Survey research with 1,496 Chinese adolescents demonstrates that internalization of general attractiveness mediates the positive relationship between selfie viewing and facial dissatisfaction. Experimental studies find that viewing comments about others' appearance increases body dissatisfaction, indicating that online appearance-focused communication strengthens ideal internalization and negatively impacts body image.

4.3 Appearance Comparison

Festinger's (1954) social comparison theory distinguishes between upward and downward comparisons, noting that people prefer comparing themselves to similar others (e.g., same age, gender). Unlike mass media dominated by celebrities and models, social media features more comparable ordinary individuals. Ecological momentary assessment research shows women engage in more frequent appearance comparisons on social media than with traditional media ideals, predominantly upward comparisons. Since individuals often post selfies seeking attention and validation, social media becomes saturated with beautified photos of ordinary people, potentially damaging body image through increased upward appearance comparisons.

Appearance comparison permeates all selfie-related behaviors. Empirical studies demonstrate its mediating role between selfie viewing and negative body image, mediating both positive relationships with facial dissatisfaction and negative relationships with body esteem. Beyond comparing specific images, individuals also compare received feedback. In selfie contexts, audience feedback (likes and comments) reflects recognition, popularity, and attractiveness. Individuals compare their feedback with others' to gauge social approval and adjust behavior. Interestingly, one study found that viewing idealized images with high likes produced greater appearance comparison than the same images with few likes, while the opposite effect occurred for ordinary images, suggesting feedback impact varies by content.

Appearance comparison also relates closely to selfie manipulation. On one hand, individuals high in appearance comparison may edit more selfies to improve body image. Longitudinal research shows social comparison levels predict photo editing frequency one month later, and selfie editing can enhance appearance presentation to reduce negative effects from comparing with others' ideals, suggesting social comparison may motivate self-protective editing. On the other hand, editing selfies may prompt further appearance comparison, affecting body image. Questionnaire research reveals that peer appearance comparison mediates the relationship between selfie editing and negative body esteem, highlighting the need to consider social comparison's ongoing role in how selfie behaviors affect body image.

4.4 Process Integration

Examining the processes through which selfie-related behaviors affect body image reveals close interconnections among behaviors. Although the continuity across different behaviors makes absolute boundaries between psychological processes somewhat blurred, distinct pathways emerge based on whether individuals act as publishers or receivers. By summarizing characteristics of various selfie behaviors and analyzing their specific effects, we can construct a diagram of primary processes (see [Figure 1: see original paper]). Two main theories explain these processes: objectification theory and social comparison theory,

both widely applied in previous research on traditional media' s impact on body image.

Objectification theory has evolved considerably. Vandenbosch and Eggermont (2012) developed and validated a multidimensional self-objectification model including media ideal internalization and body surveillance. This model proposes that internalizing ideal appearances through media leads individuals to value appearance over competence while generating body surveillance. These components correspond to processes through which selfie behaviors affect body image. For individuals as selfie publishers, the motivation to seek attention and positive evaluation drives selfie use as an impression management tool, focusing attention on self-presentation. Throughout the process of enhancing self-image through selfie investment and manipulation before posting, individuals continuously monitor and adjust their bodies from an observer' s perspective via the camera, making body surveillance the primary pathway through which initiative behaviors affect body image. As receivers engaging in reactive behaviors, individuals absorb large amounts of information from browsing others' selfies and audience feedback, gradually internalizing media and peer aesthetic standards. Notably, while receivers also imagine their own appearance, they primarily compare it with others' selfies rather than monitoring it with explicit self-adjustment behaviors. In initiative behaviors, individuals apply these standards rather than internalizing them.

Based on social comparison theory, individuals prefer comparing themselves to similar others, but beautified selfies on social media transform these comparisons into upward social comparisons. Across all selfie-related behaviors, whether as publishers or receivers, individuals undergo psychological processes of appearance comparison, making selfie behaviors particularly likely to adversely affect body image through social comparison, especially upward comparison.

5.1 Individual Factors

Extensive research shows women are more prone to negative body image and engage in selfie-related behaviors more frequently than men, leading most studies to focus on women. Although meta-analyses find gender doesn' t moderate the relationship between social media use and body image, results on gender differences in selfie-specific research remain inconsistent. Some studies find no gender differences in how selfie behaviors relate to body image, while others show men experience less body image disturbance than women after viewing attractive same-gender photos.

Age may also influence the relationship between selfie behaviors and body image. Survey research indicates selfie frequency decreases with age, with adolescents posting most frequently. Selfie-provided self-presentation opportunities and concerns about others' evaluations significantly impact adolescent identity development and self-esteem. The "imaginary audience" represents a prominent adolescent characteristic, amplified by social media' s potential for large audi-

ences. Research shows adolescents with higher imaginary audience ideation show stronger positive correlations between selfie behavior and self-objectification. Since adolescent girls highly concerned with body and eating issues seek confirmation of their attractiveness through appearance-focused activities like selfies, future research should particularly 关注 adolescents with pre-existing negative body image.

Media literacy—the ability to resist media influence and prevent internalization of thin ideals and appearance comparison—buffers against traditional media’ s impact on body image. Interview research shows that after recognizing discrepancies between online presentation and actual self, adolescents reduce selfie editing and encourage authentic presentation. Studies also find that stronger beliefs that photos are edited correlate with lower ideal internalization. Conversely, when adolescents cannot detect editing, they more easily internalize ideals and develop body dissatisfaction. These findings indicate media literacy relates to body image in social media contexts, though research remains limited. As the internet evolves, media literacy should adapt accordingly, warranting further investigation in selfie contexts.

5.2 Interpersonal Factors

According to tripartite influence theory, family and peers influence body image alongside media. Parents can protect children’ s body image through relationship quality and behavioral regulation. Research shows that secure relationships reduce the perceived need to gain approval through conforming to ideal appearance standards. Survey research demonstrates that positive mother-adolescent relationships attenuate social media’ s impact on young women’ s body image. Parental regulation also helps reduce social media’ s detrimental effects. Studies find that greater parental control over pre-adolescents’ social media time correlates with higher appearance satisfaction, mediated by reduced browsing and social comparison.

Peers are crucial in shaping beauty standards and internalizing ideal media images, particularly for adolescents. In selfie contexts, peers affect body image primarily as comparison targets and feedback providers. Research shows that seeing attractive peers gain popularity on social media motivates individuals to conceal flaws when presenting themselves and directly associates like counts with peers’ appearance evaluations. Current research examining interpersonal factors’ role in the selfie-body image relationship remains limited. Given selfies’ close ties to self-presentation and social comparison, peer influence cannot be underestimated, and parental and school guidance on healthy selfie behaviors and body image warrants deeper investigation, especially for adolescents.

5.3 Environmental Factors

As previously discussed, individuals internalize ideal images from social media selfies, so environmental changes directly affect selfie-related behaviors and their

negative consequences. Platforms can improve the social media environment in two ways. First, by encouraging diverse selfie content. Unlike traditional media, social media's user-generated content allows for more diverse and rich material. Research shows that viewing humorous selfies mocking ideal body celebrities produces higher body satisfaction than viewing original celebrity photos, indicating that humorous styles can reduce negative effects. Future research should explore more selfie themes that promote positive body image. Second, by implementing content guidelines. Experimental studies find that viewing selfies displaying healthy bodies with self-compassion slogans improves body image, suggesting platforms can cultivate positive body image through content standards and advocacy. More research should examine which environmental settings protect individuals' body image.

6. Issues and Future Directions

Existing research has examined relationships between different selfie behaviors and body image, underlying processes, and boundary conditions. However, several issues remain, and future research should advance in the following directions:

First, expand participant diversity to examine similarities and differences across populations. Currently, domestic research on selfie-body image relationships lags behind international studies. Given differences in social platforms, selfie-related software, cultural backgrounds, and aesthetic preferences across cultures, future research should investigate Chinese selfie behaviors' impact on body image and potential cross-cultural differences. Moreover, while research has focused on women and adolescents—who show higher selfie behavior frequencies and are in sensitive stages of self-concept development—social media's broad reach and varying body image developmental characteristics across age groups necessitate studying wider populations to identify similarities and differences in selfie behaviors and their consequences.

Second, conduct longitudinal research to examine developmental relationships among selfie behaviors and between behaviors and body image. Most current research employs cross-sectional designs, with few experimental, content analysis, or longitudinal studies, preventing resolution of inconsistent findings and clarification of causal directions, such as whether posting relates to positive body image or editing to negative body image. Additionally, the close relationship between selfie behaviors and environments may change over time, necessitating more longitudinal research to reveal causal and developmental relationships.

Third, examine specific selfie behaviors to understand differential impacts on body image. Current research primarily focuses on behavior frequencies without distinguishing essential differences between similar behaviors that might explain inconsistent findings. Future studies should refine selfie behavior categories, such as comparing effects of posting edited versus unedited selfies, or examining psychological processes when browsing one's own versus others' self-

ies. By investigating their impact processes and outcomes, researchers can more comprehensively reveal how selfie behaviors affect body image.

Fourth, identify moderators of initiative and reactive selfie behaviors' relationships with body image. Some factors affect both behavior types similarly—for instance, women show higher frequencies of both initiative and reactive behaviors. However, some factors affect only one type: positive relationships reduce motivation to seek validation through selfies, mitigating initiative behavior effects, while media literacy protects against media influence, reducing reactive behavior effects. Future research should clarify specific factors' targets and examine protective factors to develop interventions, especially given social media's expanding user base and selfie behaviors' significant impact on body image.

Fifth, consider environmental variables by examining how different social media contexts alter selfie-body image relationships. From an interpersonal communication perspective, platforms differ in tie strength. Strong ties involve homogeneous social networks with close relationships and strong emotional bonds (e.g., WeChat), while weak ties involve more distant connections (e.g., Weibo). Since selfies serve self-presentation and social connection needs, different platforms may elicit different behaviors and outcomes. Future research should examine these differences to provide constructive suggestions for platform features.

Sixth, synthesize findings to understand self-construction processes in cyberspace. Current research shows that the internet provides different scenes for self-construction, which differ from offline environments and from each other. Do paths and factors influencing self-construction vary significantly from offline findings? As a form of online self-presentation, selfies affect users' self-concept and development. Physical self constitutes an important dimension of self-concept, and body image serves as a key entry point for studying it. Selfie behaviors affect physical self, thereby influencing self-esteem and self-concept. Additionally, selfies contain information beyond physical appearance (e.g., interpersonal and background cues) that affects friendship quality and relationship satisfaction, further impacting self-development. Future research should therefore examine online self-presentation and self-construction, theoretically exploring how cyberspace characteristics and individual usage patterns affect self-construction processes and mechanisms.

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