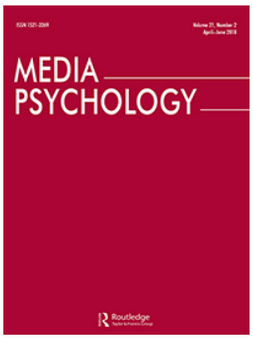

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Explaining Females' Envy Toward Social Media Influencers

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ABSTRACT

Social media influencers are online celebrities who exhibit their personal lives to many followers via social media. Media studies have analyzed influencers' display of the luxurious life to which ordinary women can only aspire. Applying a quantitative method to previous findings, this study examined the psychological process through which social media use and personality traits affect females' envy toward influencers through social comparison. Specifically, this study tested whether social media use variables (exposure to influencers' social media, interest in specific content on influencers' social media) and personality traits (public self-consciousness and self-esteem) are associated with the frequency of comparison of one's life with that of influencers, which, in turn, predict envy toward them. A two-wave online survey was conducted in South Korea (N = 1,064 at Wave 1 and 782 at Wave 2) among female smartphone users aged 20–39. A path analysis revealed that all four independent variables at Wave 1 indirectly influenced envy at Wave 2 through social comparison at Wave 1, when envy at Wave 1 was controlled for. The findings extended the scope of social comparison theory and provided a critical view of influencers' self-representation from a feminist perspective.

The age of social media has brought a new type of celebrity. Referred to as *micro-celebrity*, this new type of celebrity involves the practice of self-presentation on social media, which is accomplished by the creation of one's own online image and the use of that image to attract attention and a large number of followers (Khamis, Ang, & Welling, 2016; Marwick, 2015; T. M. Senft, 2008; T. Senft, 2013). People with micro-celebrity on social media are often called *social media influencers* (influencers). Influencers can range from would-be or unknown actresses and models, fitness trainers, friends of celebrities, and wealthy people who love luxury brands to pretty high school girls (Abidin, 2016; Marwick, 2015; Saul, 2016). Regardless of their identity, they both textually and visually exhibit their personal daily lives to a large number of followers (Abidin, 2016). Successful influencers who attract and maintain many followers have some common characteristics. They have a sense of humor and their own perspective, but, more importantly, they exhibit what followers do not have but wish to have (Saul, 2016). Influencers'

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postings mostly brag about their luxurious life through high-end fashion items, holidays in exotic locations, interactions with mainstream celebrities, and expensive dinners at famous restaurants (Abidin, 2016; Marwick, 2015). That is, influencer postings are the "catalogs of what many young people dream of having and the lifestyle they dream of living" (Marwick, 2015, p. 155).

In responding to influencers' postings, some people might get vicarious satisfaction, but such postings can also arouse a negative emotion among ordinary people who cannot achieve such a luxurious life. That negative emotion is envy. Envy is "the unpleasant emotion that can arise when we *compare* unfavorably with others" (Smith & Kim, 2007, p. 46). Envy has been an important topic in psychology because it leads to aggressive behaviors (e.g., crime, conflicts) and malicious feelings for the target of envy (Smith & Kim, 2007). By definition, envy is the result of social comparison (Festinger, 1954). Envy is produced when a person is aware of the advantageous status of another person or group of persons. In other words, envy does not exist without the target and upward comparison between the target and oneself (Smith & Kim, 2007). People experience envy especially when the comparison target is similar to them except for the desired domain (Smith, 2004). Influencers are closer to ordinary people than traditional celebrities, suggesting that ordinary people might envy influencers more than celebrities.

Based on the findings of cultural media studies implying a connection between influencers' postings and envy (e.g., Marwick, 2015), this study sought to quantitatively demonstrate the process leading to envy toward influencers. Previous studies on envy in the computer-mediated context have reported that Facebook use, especially passive use (reading rather than posting), is positively associated with envy (e.g., Krasnova, Wenninger, Widjaja, & Buxmann, 2013; Tandoc, Ferrucci, & Duffy, 2015; Verduyn et al., 2015). This study aimed to extend the findings. First, the aforementioned studies showed the effects of social media on envy but not the mechanism between social media and envy (i.e., social comparison). Second, some people are inherently inclined to social comparison and envy (Buunk & Gibbons, 2007; Smith & Kim, 2007), and thus the role of personality should be considered along with social media use. Third, the studies used cross-sectional data except for Verduyn et al. (2015), who conducted an experimental and longitudinal study. Fourth, and most important, the target of envy and the type of content that arouses envy have not been specified. The targets of envy have been mostly friends (Lin & Utz, 2015; Liu, Carcioppolo, & North, 2016) or those presented as "others" (Krasnova et al., 2013; Lim & Yang, 2015; Verduyn et al., 2015), sometimes including both friends and others (Tandoc et al., 2015).

Addressing all these limitations, the purpose of the current study was to investigate how social media use related to influencers and individual personality traits predict envy over time through social comparison behavior. This study involved the analysis of a two-wave panel survey conducted among young female adults (20–39 years old) in South Korea. The selection of study country and

participants was based on the following reasons. First, this study chose only female participants because, despite the lack of statistics about the gender ratio of influencers, influencers in previous studies and mass media reports (e.g., Abidin, 2016; Kang, 2015; Khamis et al., 2016; Marwick, 2015; Saul, 2016) have almost always been young women. Social comparison requires similarities between comparers and the target of comparison (Corcoran, Crusius, & Musweiler, 2011). Thus, women might be more interested in female influencers than men are.

Moreover, the topic is more meaningful to women. Female influencers' online self-presentation is based on post-feminist logic (Duffy & Hund, 2015). Post-feminism is characterized by a sensibility to see femininity as a "bodily property"; it supports sexual autonomy of women, emphasizes self-surveillance to achieve successful femininity, and values individual choice and freedom (Gill, 2007). Accordingly, influencers' postings are mostly limited to the embodiment of traditional femininity (e.g., beauty and fashion) in more self-empowering ways (Duffy & Hund, 2015). Feminist media scholars have criticized post-feminism since it undermines achievements of feminism (e.g., McRobbie, 2004). Thus, it is important to see how women are actually influenced by post-feminist culture shown in influencers' postings.

Second, regarding the place of the study, South Korea has a good environment for testing micro-celebrity issues given its almost saturated use of the Internet (99.9% of people in their 20s and 99.8% of people in their 30s; Ministry of Science, ICT, and Future Planning, 2015) and smartphone ownership (88%; Poushter, 2016). The ratio of social media use is the highest among young females, the participants of the current study. A recent report showed that the percentage of social media use is 75.6% in females in their 20s and 65.1% in females in their 30s (Kim, 2016). Moreover, recently, a lot of media buzz has been generated about influencers' private lives due to their scandals (e.g., litigation among influencers) and influencers have become a familiar topic of debate in South Korea (K. H. Lee, 2016).

Upward social comparison leads to envy

The question is whether influencers' life on social media can be the object of envy. Smith (2004) pointed out four conditions for envy: a) Envy arises when an individual and the envy target have similarities except for the desired attribute, b) the desired attribute is personally relevant for the person, c) the person is not confident about his/her ability to obtain such attribute, and d) the envied people's advantage is seen as unfair. These conditions are a good fit for the context of influencers. Influencers have more similarities with their followers than traditional celebrities; some influencers are even ordinary high school or college students. However, they have beauty or wealth that ordinary women aspire to have but find hard to acquire.

Due to the proximity between influencers and their followers, individuals might think that influencers do not deserve the advantages they enjoy. For example, the wealth of traditional celebrities such as pop stars and actors is hardly a topic of debate. Mainstream celebrities are often seen as otherworldly. However, influencers are closer to their followers than traditional celebrities. Although followers never meet influencers in person but they can peep into their lives due to the online connection. Individuals can be happy about close friends' positive postings but not about those of distant friends (Lin & Utz, 2015; Liu et al., 2016). Influencers fall somewhere between distant friends and acquaintances and traditional celebrities. According to mainstream media reports in South Korea, influencers' luxury lives are always the topic of hot debate for females in online communities. Some influencers become the target of witch hunts, with their personal information and rumors about them revealed through social media (Kang, 2015; K. H. Lee, 2016). Such revelations can be seen as hostility as a result of envy toward influencers.

To notice other people's advantages and feel envy, individuals must engage in a social comparison process. Social comparison theory (Festinger, 1954) posits that individuals evaluate their relative standing through social comparison of their abilities and opinions with those of others. Social comparison can be either upward or downward. Downward comparison with inferior people can help individuals maintain positive views of the self. Upward comparison with superior people can serve as a means for self-improvement because individuals, motivated by superior models, try to make progress. However, upward comparison might also be detrimental because one's positive self-image can be threatened (see Corcoran et al., 2011). When social comparison results in a poor self-image, individuals envy those who have something lacking in themselves; upward comparison leads to envy toward the comparison target (Smith & Kim, 2007). Lim and Yang (2015) showed that social comparison is positively associated with envy. However, their comparison items (e.g., "I felt unhappy/poor/depressed/miserable when comparing myself with others on an social networking service"; p. 309) were more about the results of comparison than the comparison behavior itself, in which this study was interested. Thus, the following hypothesis was advanced.

H1: Comparison of one's life with that of influencers' at Wave 1 (W1) positively predicts envy toward influencers' life at Wave 2 (W2).

Predictors of social comparison with influencers

To make a social comparison, individuals need information about others and to relate that information to themselves (Corcoran et al., 2011). In other words, individuals must be exposed to comparison-related information and willing to make a connection between the information and the self. Then a) more exposure

to influencers and b) a greater individual tendency to compare the self with influencers should lead to more frequent social comparison.

Exposure to comparison-related information

Anticipating effects of exposure to influencers on social comparison, this study considered both quantitative and qualitative aspects of such exposure. First, as a quantitative aspect, frequent exposure to influencers' social media might be linked to more frequent comparison. Previous studies on body image have shown that exposure to idealized images from the media leads females to engage in a social comparison process, which causes body dissatisfaction (Levine & Harrison, 2009). As more exposure causes greater body dissatisfaction (Grabe, Ward, & Hyde, 2008), it is logical to expect that more exposure is associated with more frequent social comparison. Other studies more directly indicated the relationship between information exposure and social comparison in the computer-mediated context. For example, the intensity of Facebook use is positively related to the frequency of social comparison (S. Y. Lee, 2014). Mothers' use of online information about child-rearing is positively associated with social comparison orientation (i.e., a tendency to engage in social comparison) and competition (i.e., one result of social comparison) among mothers (Chae, 2015). Thus, exposure to the luxurious life of influencers can provide more opportunity for individuals to engage in comparison between the self and influencers.

Second, regarding the qualitative aspects of exposure, the content of postings was divided into two broad categories: postings about a specific interest and postings about daily life (Abidin, 2016; Duffy & Hund, 2015; Marwick, 2015). Some influencers have in-depth knowledge about certain domains, such as fashion, cosmetics, interior design, food, and travel, and their social media provide information about such topics. Other influencers focus on displaying their daily life (e.g., shopping at luxury brand stores, interacting with friends at fancy restaurants, spending leisure time at expensive hotels or resorts) and are often referred to as *lifestyle bloggers* (Abidin, 2016). In Korean mass media, the former are sometimes labeled as *power bloggers* and the latter as *luxury bloggers* (e.g., Kang, 2015), although these are not official terms. The postings about daily life can include information, but the purpose is to exhibit the blogger's personal life. According to uses and gratification theory, individuals choose media with their own goals and motivations, and such differences lead to different media effects (Blumler & Katz, 1974). Individuals with specific interests look for influencers who can provide practical information relevant for them and it is less likely that such practical information brings about social comparison.

On the other hand, individuals interested in influencers' lives may be more prone to social comparison. For example, females engage in social comparison with the thin body in the media—although such comparison is inappropriate—just as they do with peers because such body is the ideal that they admire (Jones,

2001). However, practical information to get that thin body (e.g., diet information, exercise information) itself does not entail social comparison; the target of comparison is not clear. Likewise, interest in the fancy lives of influencers might be related to social comparison because such life is the ideal that young females want, but interest in specific information that influencers provide might not be. Thus, the following hypotheses were developed. Of note, all these associations were cross-sectionally tested (all W1 data) because social comparison almost automatically occurs (Gilbert, Giesler, & Morris, 1995).

H2: At W1, exposure to influencers' social media is positively associated with comparison of one's life to that of influencers.

H3: At W1, interest in influencers' postings about their daily life (but not the postings providing specific information) is positively associated with comparison of one's life to that of influencers.

Individual characteristics

Some people are more likely to engage in social comparison due to their personality traits. Generally, those who a) are highly conscious about the self, b) are interested in others' opinions, and c) have a negative self-view tend to engage in more social comparison (see Buunk & Gibbons, 2007). To include these characteristics, this study considered two personality traits. One is public self-consciousness (Fenigstein, Scheier, & Buss, 1975), which may be related to both the first and second characteristics of typical comparers mentioned above. Public self-consciousness is a tendency to focus on oneself as a social object (Fenigstein, 1979). Individuals with high public self-consciousness are highly aware of themselves and care what others think of them. To evaluate the self, they engage in social comparison. Studies have shown that public self-consciousness is a strong predictor of an individual's tendency toward social comparison (Buunk & Gibbons, 2007). People with high public self-consciousness are likely to compare themselves to others, including influencers.

The second personality that can influence social comparison behavior is self-esteem, which shows how a person evaluates the self. Individuals who are insecure about the self tend to more frequently engage in social comparison. One example that can represent a negative self-image is low self-esteem (Buunk & Gibbons, 2007). Previous studies have reported a negative association between self-esteem and a tendency to engage in social comparison (Gibbons & Buunk, 1999). When people with a deflated view of themselves are exposed to the glamorous lives of influencers, they are more likely to compare themselves to the influencers, compared to people with a positive view of themselves.

H4: At W1, public self-consciousness is positively associated with comparison of one's life with that of influencers.

H5: At W1, self-esteem is negatively associated with comparison of one's life with that of influencers.

Indirect effects

Previous studies have not demonstrated the mechanism through which social media use and personality is linked to envy through social comparison. For example, studies have reported a positive association between Facebook use and envy (Chou & Edge, 2012) and also shown that envy mediates the relationship between social media use and life satisfaction or depression (Krasnova et al., 2013; Tandoc et al., 2015; Verduyn et al., 2015). These studies were interested in envy as a mechanism to other negative emotions, not a mechanism to envy. On the other hand, the aim of the current study was to show the mechanism leading to envy through social comparison. Because the longitudinal impact of Facebook use on envy has been established (Verduyn et al., 2015), this study tested whether this relationship is mediated by the frequency of social comparison behavior and valid in the context of influencers. Regarding personality, Appel, Crusius, and Gerlach (2015) demonstrated that people with higher levels of depression feel more envious through upward comparison than those with less depression. Low self-esteem and low life satisfaction are strongly associated with depression (Koivumaa-Honkanen, Kaprio, Honkanen, Viinamäki, & Koskenvuo, 2004; Sowislo & Orth, 2013) and, thus, low self-esteem might lead to envy through a similar process. Public self-consciousness is positively associated with both envy (Schroeder & Dugal, 1995) and social comparison tendency (Buunk & Gibbons, 2007). Thus, this study tested whether social comparison behavior mediates the association between public self-consciousness and envy.

H6: Social comparison with influencers at W1 mediates the relationship between the aforementioned independent variables at W1 and envy toward influencers' life at W2.

In summary, the current study hypothesized that those who frequently see influencers' postings and those who have interest in influencers' everyday life postings would compare their lives to those of influencers and such comparison would be associated with envy. Similarly, those with high public self-consciousness and low self-esteem would engage in social comparison with influencers, which, in turn, predicts envy.

Methods

Participants and procedures

The current dataset is part of a larger project about selfies and social media. Thus, this study shared the same sample characteristics (e.g., sociodemographics) with other studies from the same project but each study had a distinct topic and purpose (e.g., Chae, 2017). For the project, an online survey company located in South Korea conducted a two-wave longitudinal panel survey. Participation was limited to women aged 20–39 with smartphones because smartphone ownership is important for the use of social media. The company had 1,148,766 online panels and women aged 20–39 numbered 453,298. The company randomly chose 7,625 among the females in that age group. The number of panel members who were invited was 7,424 and those who opened the e-mail numbered 2,355. Panel members who agreed to participate proceeded to the online questionnaire and 1,064 completed the W1 survey in March 2016. A month later, those who completed the W1 survey were invited to complete the W2 survey and 782 panel members participated. The completion rate was 14% and the attrition rate was 27%. Both were calculated based on the formula that Callegaro and DiSogra (2008) suggested for opt-in online panels. Detailed online surveys often result in a low completion rate (10–25%; Sauermann & Roach, 2013), and the completion rate of this survey was moderate. Overall, participants were 29.3 years old and most were employed and not married. For descriptive statistics, see Table 1.

Measures

Exposure to influencers' social media (Independent Variable 1; IV1). Participants reported how often in the past 30 days they had seen the social media of influencers based on a 5-point scale (1 = *never* to 5 = *every day*). To see the actual frequency of the behavior per week, the responses were transformed. For example, response 1 was recoded as 0 and response 2 (*once per week*) was recoded as 1.

Interest in Specific Content (IV2). Participants indicated whether they were interested in specific content, including food, travel, fashion, cosmetics, interior design, and daily life, posted by influencers based on a 5-point scale (1 = *not at all interested* to 5 = *extremely interested*). These five variables were not averaged and were used independently.

Public Self-Consciousness (IV3). Fenigstein et al.'s (1975) 7-item scale was used. Items included "I'm self-conscious about the way I look" and "I usually worry about making a good impression" (1 = *strongly disagree* to 5 = *strongly agree*; α = .83 at W1).

Table 1. Descriptive Statistics.

	Wave 1
	M (SD) or %
Age	29.30 (5.32)
Marital status (single = 1)	69.6%
Employment status (employed=1)	66.4%
Education years	14.86 (1.76)
Monthly income (KRW)	4,313,000 (2,457,700)
General media use (the average hour of print media, TV, and the Internet use)	1.17 (.32)
Exposure to Influencers' social media (frequency per week)	1.99 (2.12)
Interest in food posting	3.09 (1.07)
Interest in fashion posting	2.91 (1.07)
Interest in travel posting	3.24 (1.08)
Interest in interior design posting	2.78 (1.12)
Interest in cosmetics posting	3.10 (1.10)
Interest in daily life posting	2.49 (1.12)
Social media use (the average use of eight social media platform)	1.91 (1.46)
Life satisfaction	3.07 (.72)
Self-esteem	3.36 (.59)
Public self-consciousness	3.62 (.58)
The frequency of social comparison with influencers	2.04 (1.07)
Envy toward influencers	2.43 (1.05) at Wave 1 2.41 (1.03) at Wave 2

Note: N = 1,064 at Wave 1, 782 at Wave 2.

Self-Esteem (IV4). Participants responded to 10 items from Rosenberg's (1979) self-esteem scale. Items included "I feel that I have a number of good qualities" and "All in all, I am inclined to feel that I am a failure." Negatively stated items were reverse-coded so that higher scores represented higher self-esteem (1 = *strongly disagree* to 5 = *strongly agree*; α = .85 at W1).

Comparison of life with influencers (the Mediator). The frequency of comparison with influencers was measured by asking how often participants had compared their life to that of influencers' in the past 30 days, based on a 5-point scale (1 = *never* to 5 = *always*).

Envy (the Dependent Variable; DV). The degree to which participants envied influencers' life was measured by three items adapted from Appel et al. (2015): "I envy the influencers' life shown on social media," "My life is inferior to influencers' life shown on social media," and "I wish to live like influencers on social media." The items were based on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*) and internal consistency was high (α = .93 at W1 and .94 at W2).

Controls. Three types of controls were included. First, sociodemographic variables were included to see the effects of exposure and personality regardless of sociodemographic differences. Participants reported their age, employment status (1 = *employed*, 0 = *else*), marital status (1= *single*, 0 = *else*), education (1 = *elementary school* to 6 = *postgraduate*), monthly income (1 = *KRW 0–2,990,000*

to 6 = *more than KRW 7,000,000*), and general media use. KRW 2,990,000 corresponds to USD $2,700 (USD 1 = KRW 1,100). Income and education were recoded. For example, education was recoded as the number of education years; response 5 (*college graduate*) was recoded as 16. Income was recoded as the mean value of each interval (e.g., 1 = KRW 1,500,000).

Second, general media use and social media use were controlled for because media consumption is associated with social comparison orientation (Chae, 2015). General media use was assessed by three items asking the amount of time spent on reading print media, watching television, and using the Internet on an average weekday (1 = *never* to 5 = *more than two hours*). Social media use (blog, online communities, Facebook, Instagram, Twitter, LinkedIn, Band, and Kakao Story) was measured by asking how often participants used each medium on an average weekday based on a 7-point scale (1 = *never* to 7 = *more than 10 times a day*). Band and Kakao Story are social media platforms especially popular in South Korea. In contrast, Pinterest and Flickr are not popular and this study did not include them. Both general and social media use were also transformed to indicate the time spent or a frequency of behavior per day. For example, general media use 1 (*never*) was recoded as 0. Social media use 3 (*once a day*) was recoded as 1. Then all items were averaged to create an index.

Third, life satisfaction was controlled for because it is associated with self-esteem (Diener & Diender, 2009) and upward social comparison (Frieswijk, Buunk, Steverink, & Slaets, 2004). It was measured by four items from Koivumaa-Honkanen et al. (2001) based on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*): "My life is interesting," "My life is happy," "Life is hard," and "I feel lonely." The last two items were reverse-coded so that higher scores represented greater satisfaction. All four items were averaged (α = .79 at W1). For means and standard deviations of all variables, see Table 1.

Results

A path analysis was conducted using *Mplus 7.11*. To handle missing values across W1 and W2, this study adopted the full information maximum likelihood method. To test Hypothesis 1 (the effect of social comparison frequency on envy), envy at W2 was regressed on social comparison with influencers at W1, all IVs, and envy at W1. Envy at W1 was included to see the effect of the IVs at W1 on envy at W2 beyond the effect of envy at W1 (Campbell & Kwak, 2011; Eveland & Thomson, 2006). Then social comparison at W1 was regressed on all IVs to test Hypothesis 2 through H5. Envy at W1 was also regressed on IVs and its residual covariance with social comparison at W1 was included. To create a concise model, only controls that had a significant bivariate relationship with each dependent variable were used. Thus, for social comparison, general media use and income were adopted. For envy, age, employment, and general media use were used. As

Hayes (2013) suggested, bootstrapping was used to test the indirect effects (Hypothesis 6).

Hu and Bentler (1999) suggested criteria for a good model: root mean square error of approximation (RMSEA) of ≤.06, a comparative fit index (CFI) of ≥.95, and a standardized root mean square residual (SRMR) < than .08. The model perfectly fit the data: χ^2 (4) = 6.794, p > .05, RMSEA = .026, CFI = .998, and SRMR = .006. As expected, social comparison at W1 predicted envy at W2 over and above envy at W1, supporting Hypothesis 1. All IVs significantly predicted social comparison behavior (the mediator), supporting Hypotheses 2–5. As expected, among five types of interest in specific information (food, travel, fashion, cosmetics, and interior design), none predicted social comparison behavior. Among controls, social media use, life satisfaction, and income significantly predicted comparison frequency. Self-esteem and life satisfaction predicted envy at W2 both directly without social comparison and indirectly through social comparison. No other variables directly influenced envy at W2. The bootstrapped confidence interval (5,000 resample; bias corrected) indicated that exposure to influencers' social media (95% CI: .004, .018), interest in influencers' daily life (95% CI: .007, .034), public self-consciousness (95% CI: .016, .070), and self-esteem (95% CI: -.066, –.013) exerted indirect effects on envy at W2 through social comparison with influencers. For unstandardized coefficients and standard errors, see Figure 1.

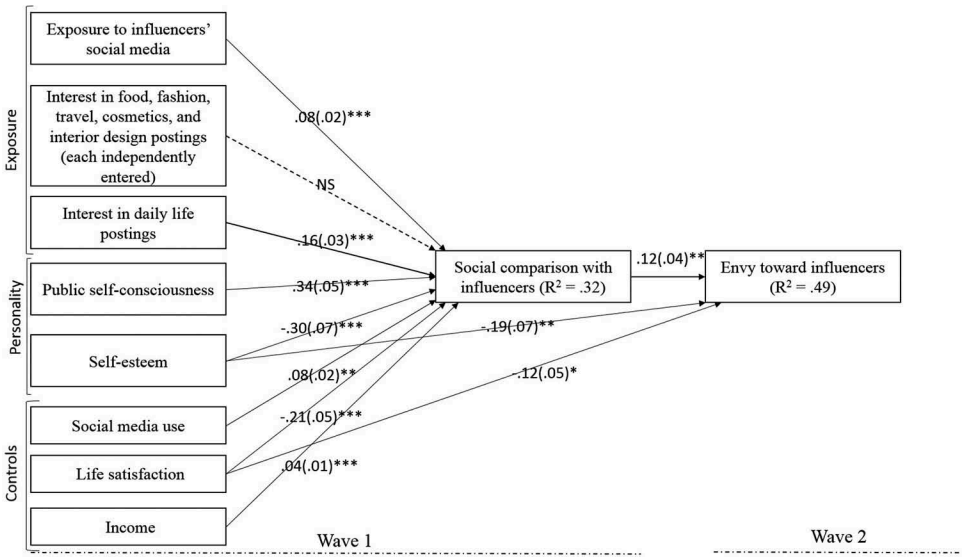

Figure 1. Results. *Notes: NS* = not significant; displayed values are unstandardized coefficients and standard errors; control variables and envy toward influencers at Wave 1 were used in the analysis but not shown in the figure; control variables were used for envy at Wave 1 and Wave 2, and social comparison at Wave 1; residual covariance between social comparison with influencers at Wave 1 and envy toward influencers at Wave 1 was .31(.02)***; interest in informational postings consists of five independent variables and all were independently used in the analysis but none of them was significant. **p < .01; ***p < .001.

Discussion

This study, using longitudinal data, examined how social media use and personality traits influence women's envy toward influencers through social comparison. All hypotheses were supported. All IVs at W1 had indirect effects on envy toward influencers at W2 through social comparison with influencers at W1, when envy at baseline was controlled for. The findings have several implications.

Regarding the role of social media exposure, those who frequently see influencers' social media and those who are interested in postings about the daily life of influencers (but not informational postings) were more likely to compare their lives to those of influencers. In turn, that comparison behavior positively predicted envy toward the influencer measured one month later. As expected, greater exposure to influencers' social media seems to provide more information that can be used as a standard of comparison. An interesting point involves the type of content. This study included interest in five types of informational postings (food, fashion, travel, cosmetics, and interior design), traditionally considered to be popular topics for females, but none was related to social comparison or envy toward influencers. As hypothesized, those who use informational postings and those who see daily life postings have different goals and objectives related to their media use. People interested in information acquisition did not compare themselves with influencers and only obtained information from them. Thus, the type of content that arouses envy among ordinary females is daily life posting. Previous cultural analyses of influences have also focused on the self-presentation of influencers in their daily life (e.g., Abidin, 2016; Marwick, 2015) and the current study quantitatively demonstrated the role of such content.

Relatedly, the effect of social media use in general (one of the controls) is also interesting. The variable was the averaged use of eight social media platforms. Influencers exist only on some of these platforms. The effect might be associated with the personality of heavy users of social media (e.g., extraversion; Correa, Hinsley, & De Zuniga, 2010). Otherwise, it might be due to greater exposure to comparison-related information in general (although not specifically about influencers). While using social media, people expose themselves to comparison-related information provided by others. Frequent exposure might have an impact on their behavior so that their general comparison behavior increases.

The role of personality traits in the current study confirmed and extended previous findings. This study suggested that individuals with high awareness of the self and others' evaluation (high public self-consciousness) and poor self-image (low self-esteem) more frequently engage in social comparison with influencers. The comparison behavior, in turn, predicts envy. The findings confirmed frequent comparers' tendency to evaluate themselves. Due to their lack of confidence about the self (self-esteem) or their consciousness about others' perception (public self-consciousness), they constantly evaluate

themselves and, in this case, upward comparison with influencers led to negative psychological outcomes such as envy.

Another important point is that self-esteem and life satisfaction (a control variable that is closely related to self-esteem; Diener & Diender, 2009) had direct effects on envy at W2 without social comparison. Other significant predictors had only an indirect effect on envy at W2 through social comparison at W1 or envy at W1. The findings suggested that a negative view of oneself and one's life is a strong predictor of envy. However, theoretically, envy always requires upward comparison with a target (Smith & Kim, 2007). The effect may suggest a strong statistical direct relationship but does not imply that the two variables serve as the underlying theoretical mechanism leading to envy in the lack of social comparison.

Theoretically, this study, as a quantitative media effect study, used a topic usually adopted in cultural or media studies (i.e., influencers) and thereby extended the scope of social comparison theory. Scholars have examined visual and textual online self-presentation of influencers and suggested cultural meanings of their self-presentation (Abidin, 2016; Duffy & Hund, 2015; Marwick, 2015). Based on such findings, this study has shown the impact of influencers on female adults through social comparison. Previous studies regarding social comparison and social media focused on comparison with friends, although some studies distinguished between close friends and distant friends (e.g., Lin & Utz, 2015; Liu et al., 2016). However, social comparison on social media is not limited to friends. Festinger (1954) stated that the comparison target should have a similarity to the comparer along critical dimensions. However, many later studies have shown that a more important factor is the similarity of related attributes that partly influence the critical dimension (Corcoran et al., 2011); this is identical to the conditions of envy that Smith (2004) pointed out. As mentioned, influencers occupy a unique place somewhere between our acquaintances and traditional celebrities. A popular women's magazine in South Korea reported that influencers who display their luxurious life on social media are usually housewives with very young children, but they have beauty and wealth (Kang, 2015). The participants in this study were all females in the same generation, but usually they did not possess such beauty or wealth, the critical dimensions. Due to the similarity of related attributes, ordinary women compare themselves to influencers and experience envy.

This study also has implications for women from a feminist point of view. Envy toward influencers' life can negatively affect women. However, such envy may be based on a fantasy or illusion that influencers create. Based on the post-feminist approach, influencers get visibility and achieve self-branding through highly gendered content and practices, which portray them as successful women "having it all" (Duffy & Hund, 2015). Influencers' glamorous lives on social media look effortless, but their self-presentation is based on time, energy, calculation, and management (Duffy & Hund, 2015). Influencer selfies are produced with expertise and require carefully chosen makeup, clothing, and posture, aided by lighting and photo-editing apps (Abidin, 2016). Therefore,

influencers' image of having it all is just another fantasy that provides an illusory sense of the empowerment of women. The findings of this study suggested that women feel envious toward something that does not even exist. Given that many influencers make money by engaging followers in their posts that promote brands either obviously or naturally (Abidin, 2016; Saul, 2016), women should take a more critical view of influencers' postings rather than envy their life.

Limitations and suggestions for future research

First, the sample was drawn from opt-in online panels. It is impossible to generalize the results. However, this study had a specific target—public, young women with smartphones—and thus the need for a nationally representative sample was less salient in this study. Second, some elements such as comparison with influencers and exposure to influencers' social media were measured with a single item, making them susceptible to measurement error. Third, this study also did not differentiate active use of social media and passive use of social media (Krasnova et al., 2013; Verduyn et al., 2015). However, exposure to influencers' social media was measured by asking about the frequency of seeing influencers' media, and thus it actually represents passive use. Finally, future studies should address the limitations of the current study and it would be worthwhile to replicate the findings of the current study in other countries. Influencers' strategic self-presentation on social media is similar worldwide. Future studies should also investigate the outcome of envy toward influencers or ways to relieve such negative emotion among females.

Conclusion

The current study aimed to explain why and how females feel envy toward social media influencers who show their luxurious private life on social media. The results suggested that both quantitative (frequency of exposure) and qualitative (type of content) aspects of exposure to influencers' postings are related to the frequency of social comparison behavior, which predicts envy over time. Individuals' personality also played a role. Those who care about others' perception of them and those who are not confident in themselves engaged in social comparison with influencers, which led to envy. The results not only extended the scope of social comparison theory, but also suggested that women need to critically evaluate influencers' postings from a feminist view.

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