

Happiness, Loneliness, and Social Media: Perceived Intimacy Mediates the Emotional Benefits of Platform Use

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The purpose of this study is to explore the how user perceptions of social media might influence effects on psychological well-being. Social Presence Theory was used to examine Snapchat, Facebook, Instagram, Twitter and texting. Undergraduate students (N = 352) were given a survey to assess how frequently they use social media, how intimate they think each platform is, and how lonely and happy they are. Perceived intimacy was found to mediate the ameliorating effects of social media use on loneliness and happiness. Frequency of social media use initially predicted decreased loneliness

and increased happiness, but once perceived intimacy was factored in, it was a more significant predictor than frequency of use. The more one uses social media, the more he or she is likely to believe those platforms are a good way to connect with others (perceived intimacy), which then increases the likelihood that happiness and social connection result from their usage. Results and implications are discussed.

Keywords: social media, loneliness, happiness, well-being, intimacy

Platforms such as Facebook, Twitter, and Instagram have dramatically altered how individuals connect to each other and the world. Are these platforms good or bad for us? Scholars have linked social media use to both negative and positive psychological well-being outcomes. Extant research has studied the potential for addictive or problematic social media use overall (Andreassen, Pallesen, & Griffiths, 2017; Błachnio, Przepiorka, Boruch, & Bałakier, 2016; Caplan, 2007; Larose, Lin, & Eastin, 2009; Song, LaRose, Eastin, & Lin, 2004) and linked Facebook use to negative subjective well-being (Kross et al., 2013). More specifically, posting and viewing Facebook photos can stimulate narcissism (Alloway, Runac, Qureshi, & Kemp, 2014), certain platforms may induce jealousy (Utz, Muscanell, & Khalid, 2015), and individuals with low self-esteem have negative perceptions of social media (Keating, Hendy, & Can,

2016). Other scholars have highlighted the various benefits of social media use such as facilitating greater self-disclosure (Ledbetter & Mazer, 2010; Ma, Hancock, & Naaman, 2016), cultivating social support (Vitak & Ellison, 2013) and decreased loneliness (Pittman & Reich, 2016).

There is not yet a consensus as to the emotional effects of social media. How do we reconcile this contradicting scholarship which has alternately found that lonely people use more (Correa, Hinsley, & de Zúñiga, 2010; Primack et al., 2017) AND less (Pittman, 2015; Shillair, Cotten, & Tsai, 2015) social media than non-lonely individuals? Perhaps, since different people utilize social media in different ways, scholars needs to account for some of the individual differences and expectations users bring to their social media experiences. This study proposes the construct of perceived intimacy as a mediator for the positive emotional benefits of social media use. If social media are really bringing people together, there should be a corresponding increase in the emotional well-being that typically accompanies traditional, “offline” social support. However, this benefit may only occur when users believe that social media can be a good way to keep in touch with others, i.e., that they can be intimate. If indeed those who perceive social media to be intimate are the only ones who reap the emotional and social benefits of using them, this may help explain how social media use by itself has been linked to loneliness in ostensibly contradictory ways (Best, Manktelow, & Taylor, 2014; Primack et al., 2017).

LITERATURE REVIEW

To understand how mediated social connectivity might afford emotional benefits similar to traditional social connectivity, Social Presence Theory is useful in attempting to explicate what exactly we perceive when communicating with others through digital technology. Social Presence Theory (Gunawardena, 1995) posits that mediated communication is perceived as “real” in the degree to which it is perceived as both immediate and intimate. All social media now have the potential for immediacy because digital technology affords communication and feedback with little delay. On the other hand, intimacy is a much more subjective factor, likely existing in the “eye” of the beholder, and it is the main focus of this study.

Granovetter (1973) defined intimacy as mutual confiding or disclosure, where both parties can safely disclose information about themselves. Because use of certain social media has been linked to decreased loneliness (Pittman, 2015) as well as increased happiness (Pittman & Reich, 2016), it is assumed for this study frequency of social media use alone will predict a decrease in loneliness and an increase in happiness. However, taking things one step further, this study hypothesizes that, because lonely people use social media less frequently than others, they will also perceive them to be less intimate, i.e., less useful in connecting with other people.

H1: Loneliness predicts lower perceived intimacy of social media

On the other hand, the more frequently one uses social media, the more likely that usage is to lead to gratifications such as social interaction, entertainment or relaxation (Whiting & Williams, 2013). Happy individuals who use social media are even more likely to perceive it as intimate, or at least more useful in facilitating disclosure and self-presentation to others and the world. Therefore:

H2: Happiness predicts higher perceived intimacy of social media

Yet social media use is more complex than simple linear effects. Scholars must reconcile findings that seem contradictory. For example, on the one hand, Primack et al. (2017) found that young adults in the highest quartile (compared with those in the lowest) for social media usage were twice as likely to perceive greater social isolation. On the other hand, (Pittman & Reich, 2016) found that college students who used Instagram more frequently (compared with less frequent Instagram users) were less likely to be lonely. Granted, loneliness and social isolation differ; social isolation is the felt absence of others, whereas loneliness is the emotional distress at the discrepancy between perceived and ideal social support. So, per the Primack et al. (2017) study, it is possible that individuals could be using social media with great frequency, but that usage is empty and offers them no emotional or social benefits. What makes those individuals different from the ones in Pittman and Reich's (2016) study where high social media usage (of image-based platforms) was linked to greater feelings of social connection? Perhaps the image-based platforms afforded greater intimacy and thus greater feelings of social connection.

However, users will not perceive all social media platforms to be equally “intimate,” and these individual differences may account for differing effects on emotional well-being. Therefore, this study proposes a mediation model for explaining the ameliorating effects of social media use on loneliness and happiness. That is, while frequency of use may initially appear to lead to positive emotional outcomes—decreased loneliness and increased happiness—it is actually an indirect effect through perceived intimacy. In other words, the more one uses social media, the intimate one may perceive their usage, and that perceived intimacy with others is actually what makes one feel better.

H3: Perceived intimacy mediates the effect of social media use on loneliness

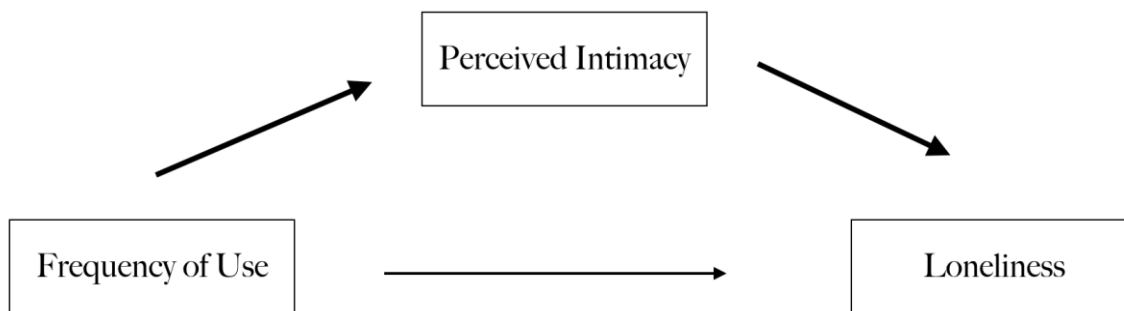


Figure 1. Proposed mediation model for frequency of use, perceived intimacy, and loneliness.

H4: Perceived intimacy mediates the effect of social media use on happiness

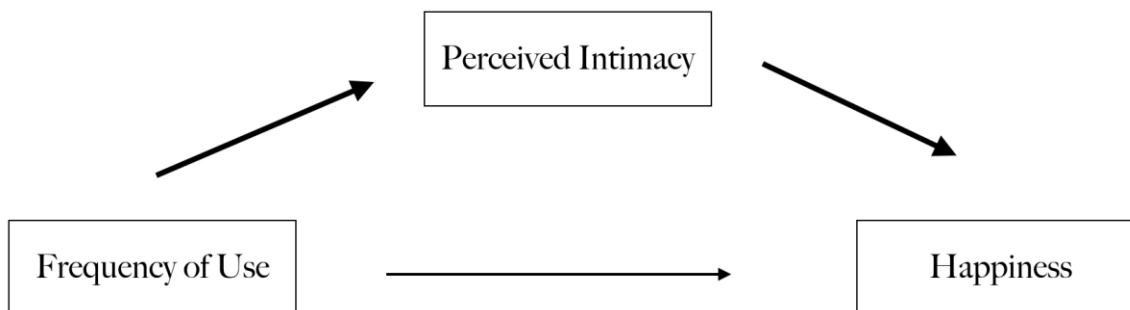


Figure 2. Proposed mediation model for frequency of use, perceived intimacy, and happiness.

All these factors will be assessed to help determine their overall role in how college students’ loneliness might influence—or be influenced by—their use of particular social media.

METHODS

Participants in this study were undergraduates ($N = 352$) at a large state institution in the Pacific Northwest. After Institutional Review Board approval was obtained, participants were recruited from four large survey courses and incentivized with extra credit and/or candy. Data were analyzed with IBM SPSS Statistics Version 24 using Hayes' (2012) PROCESS (model 4) macro.

Loneliness. Russell's (1996) 20-item revision of the UCLA loneliness scale was used to measure chronic loneliness (e.g., "How often do you feel that you lack companionship?" [1 = Never, 4 = Always]; $\alpha = .726$), $M_{\text{lonely}} = 2.08$, $SD_{\text{lonely}} = .47$.

Happiness. Lyubomirsky and Lepper's (1999) four-item subjective happiness scale was used to measure chronic happiness (e.g., "In general, I consider myself... [1 = not a very happy person, 7 = a very happy person]; $\alpha = .806$). $M_{\text{happy}} = 4.84$, $SD_{\text{happy}} = 1.12$.

Perceived Intimacy. For perceived intimacy, the participants selected from 1 (strongly disagree) to 7 (strongly agree) Likert scale for three statements: "<social media application> is a good way to stay in touch with people," "Using <social media application> helps me feel more connected to others," and "When I use <social media application> I feel close to people." These statements were adapted from Pittman and Reich's (2016) study that used Social Presence theory (Gunawardena, 1995) to examine perceived intimacy in social media; $\alpha(\text{Twitter}) = .895$, $\alpha(\text{Instagram}) = .879$, $\alpha(\text{Snapchat}) = .864$, $\alpha(\text{Texting}) = .886$, $\alpha(\text{Facebook}) = .862$.

Frequency of Use. A scale was adopted from Ledbetter and Mazer's (2013) study on Facebook communication to assess how often the participant used each platform he or she indicated having an account with: "In average week, how often do you use ____?" Participants responded on a seven-point Likert-type scale with response options ranging from 1 (Very Infrequently, fewer than 5 minutes per day) to 8 (Very Frequently, more than two hours per day), $M_{\text{frequency}} = 3.45$, $SD_{\text{frequency}} = 1.54$ Finally, an open-ended response question was asked for each platform: "What is the primary reason you use ____?"

RESULTS

A total of 373 responses were collected, but some responses ($N = 19$) were discarded for being incomplete. The remaining responses were analyzed with a final sample size of 352 students ($M_{age} = 20.78$, $SD_{age} = 1.50$; 75.4% female).

H1 stated that loneliness would predict a decrease in perceived intimacy for all social media. Perceived intimacy of social media overall ($M_{SMint} = 4.94$, $SD_{SMint} = .923$) was the average of a participant's perceived intimacy score for each platform (1 = not very intimate and 7 = very intimate) he or she used. A linear regression was calculated to predict perceived intimacy of social media based on loneliness, controlling for demographic variables. A significant regression equation was found ($F(1, 350) = 32.865$, $p < .001$, with an R^2 of .086. Participants' predicted perceived intimacy is equal to $6.115 - .589$ (Loneliness). Perceived intimacy decreased .589 for each interval on the loneliness scale (1 to 4). In other words, as loneliness increases, one is less likely to believe social media are intimate.

Similarly, H2 stated that happiness would predict an increase in perceived intimacy for all social media. A linear regression was calculated to predict perceived intimacy of social media based on happiness, controlling for demographic variables. A significant regression equation was found ($F(1, 350) = 13.954$, $p < .001$, with an R^2 of .038. Participants' predicted perceived intimacy is equal to $4.115 + .163$ (Happiness). Perceived intimacy decreased .163 for each interval on the happiness scale (1 to 7). In other words, as happiness increases, one is more likely to believe social media are intimate.

H3 stated that perceived intimacy mediates the effect of social media use on loneliness. Frequency of social media use ($M_{SMuse} = 3.95$, $SD_{SMuse} = .1.51$) is the average of how frequently used each platform (1 = fewer than 5 min/day, 8 = more than 2 hours/day). Regression analysis was used to investigate the hypothesis that perceived intimacy mediates the mitigating effects of social media use on loneliness. Results indicated that social media use was a significant predictor of perceived intimacy (of social media), $b = .171$, $SE = .031$, $p < .001$, and that perceived intimacy was in turn a significant predictor of loneliness, $b = -.130$, $SE = .027$, $p < .001$. These results support the mediational hypothesis. After controlling for the mediator (perceived intimacy), the effect of social media loneliness decreased, $b = -.041$, $SE = .016$, $p = .013$. Approximately 8% of the

variance in loneliness was accounted for by the predictors ($R^2 = .080$). The indirect effect was tested using a bootstrap estimation approach with 5000 samples (Shrout & Bolger, 2002). There was a significant indirect effect of social media use on happiness through perceived intimacy, $b = -.022$, $SE = .006$, $CI = -.035, -.012$. The mediator (perceived intimacy) could account for roughly a third of the total effect on loneliness, $P_M = .351$. Figure 3 illustrates these results.

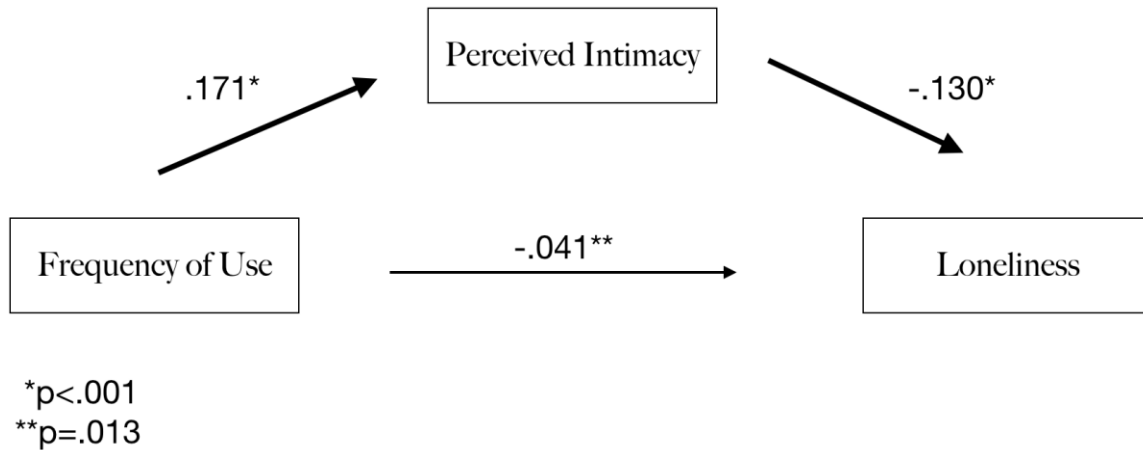


Figure 3. Results of H3: Effects of use frequency on loneliness mediated through perceived intimacy

H4 stated that perceived intimacy mediates the effect of social media use on happiness. Regression analysis was used to investigate the hypothesis that perceived intimacy mediates the mitigating effects of social media use on loneliness. Once again, social media use was a significant predictor of perceived intimacy (of social media), $b = .171$, $SE = .031$, $p < .001$, and that perceived intimacy was in turn a significant predictor of happiness, $b = .225$, $SE = .065$, $p < .001$. These results support the mediational hypothesis. Social media use was no longer a significant predictor of happiness after controlling for the mediator, perceived intimacy, $b = -.020$, $SE = .040$, $p = .620$, consistent with full mediation. Approximately 9% of the variance in loneliness was accounted for by the predictors ($R^2 = .086$). The indirect effect was tested using a bootstrap estimation approach with 5000 samples¹ (Shrout & Bolger, 2002). There was a significant indirect effect of social media use on happiness through perceived intimacy, $b = .039$, $SE = .012$, CI

= .017, .067. The mediator (perceived intimacy) could account for roughly 2/3 of the total effect on happiness, $P_M = .660$ (Figure 4).

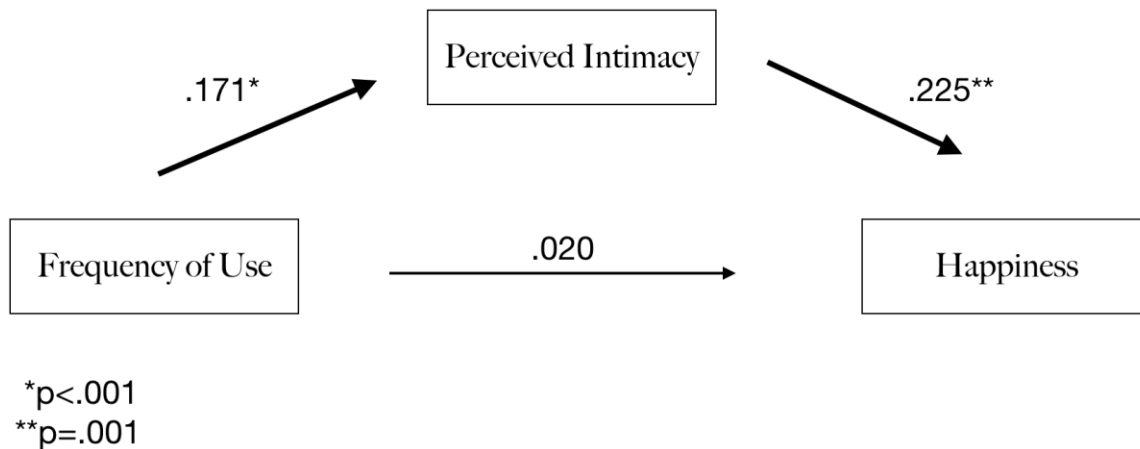


Figure 4. Results of H4: Effects of use frequency on happiness mediated through perceived intimacy

DISCUSSION

In attempting to clarify the relationships between social media use and psychological well-being, several conclusions can be drawn from this study. First and foremost, this study supports extant research that suggests social media may have some emotional benefits. Loneliness itself is an indication of a lack of desired social support (Perlman & Peplau, 1981), and H1 was based on the assumption that people who lack this social support are less likely to be using social media, particularly in any way that facilitates intimacy. If they *were* having emotionally satisfying encounters with others via social media, they might not be as lonely. This was confirmed: the lonelier an individual is, the more he or she thinks social media are *not* a good way to connect with others.

Even though some people may receive social benefits from using social media, an individual's belief that social media are not intimate appear to reduce these benefits. The support of H1 (loneliness predicts decreased in perceived intimacy of social media) confirms this power of belief. People who use social media and feel meaningful connection with others (low loneliness) perceive that social media are actually intimate and thus a good way to stay in touch; people who use social media and do not feel meaningful connection with others (high loneliness) perceive that social media are not intimate. It is this latter group of individuals for whom social media use may be problematic. They appear to be less likely to use social media in ways that can potentially ameliorate

loneliness. This may be similar to the feedback loops scholars have found with avoidance of social contact and loneliness (Cacioppo, 1998) perception of social threats (Rokach & Neto, 2000). Once someone believes social media are not a good way to connect with others, it appears as though that belief becomes a self-fulfilling prophecy.

Similarly, H2 dealt with this concept but from an opposite (positive) perspective. Happiness is not quite the antithesis of loneliness, but it is expected that happy individuals are not lonely, and vice versa. The two were indeed negatively correlated in this study, $r = -.572$, $p < .001$. Therefore, H2 proposed that emotionally happy individuals would think of social media as more intimate, since they are likely to have satisfying social networks and also likely (as college students in particular) to use social media in maintaining those relationships. This was confirmed: the happier an individual is, the more he or she is likely to think social media are a good way to connect with others.

H3 and H4 extends these findings, proposing that perceived intimacy would supersede social media use itself as a predictor of loneliness and happiness, respectively. For H3, frequency of social media use was a significant (negative) predictor of loneliness, but once perceived intimacy was entered as a mediator, those frequency effects were diminished, and intimacy was now the stronger predictor. This indicates partial mediation, because frequency still had some direct effect on loneliness.

H4 found a more robust mediation of intimacy with happiness. Frequency of social media use was a significant predictor of happiness, but once perceived intimacy was entered as a mediator, those frequency effects went away completely. This indicates full mediation, because any influence frequency of use has on happiness was revealed to be an indirect effect through perceived intimacy. That is, the more frequently one uses social media, the more likely he or she is to perceive using them as being intimate, and that perception is what contributes to happiness.

The power of perception here is paramount. Loneliness is already linked to many problematic factors, such as inhibition in self-disclosure (Solano, Batten, & Parish, 1982) and hindering development of social skills (Jones, Hobbs, & Hockenbury, 1982), that inhibit one's ability to fight it. Social media offer easy and accessible means for connecting with others, so for lonely individuals to *not* utilize that potential intimacy is a missed opportunity to receive the emotional support that humans desperately need. As social

creatures, we need this connection with others, and there are physical dangers when we do not have it (Cacioppo & Patrick, 2008; Heinrich & Gullone, 2006; Peplau, 1982). Yet for the people who believe social media *are* a good way to connect with others, that belief becomes reality in the sense that they receive real psychological benefits.

Social Presence theory offers us a perspective into what factors might help make digital technologies such as social media seem “real” to users. The potential for immediacy and apparent intimacy of social media mean that (at least for college students) using them appears to offer at least some of the psychological benefits that typically accompany traditional, “offline” relationships. These benefits are not trivial, and if social media can truly contribute to emotional support people who use them, then people need to be made aware of this connective potential.

CONCLUSION

Whether or not someone perceives social media to be intimate is actually a better predictor of loneliness and happiness than frequency of use. This study suggests a condition or caveat of the emotional benefits of social media: they do appear to have potential for reducing loneliness and increasing happiness, but only in the degree to which their use is perceived as intimate. Most social media were designed to facilitate some kind of social connection, and the users who “feel” that connection are more likely to reap the psychological benefits of their use. This likely varies by individual and platform, but still provides an additional nuance to existing literature on social media and loneliness (Park et al., 2015; Pittman, 2015; Pittman & Reich, 2016).

This study was limited by only including college students, and future studies should examine other demographics, particularly for older adults for whom social media are not as essential to daily life. Similarly, this study was cross-sectional in nature and only captured users’ responses at a single moment, and future studies should include longitudinal data that captures users’ emotions and social media engagement over a period of time.

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