Applying the Uses and Gratifications Model to Examine Consequences of Social Media Addiction

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Abstract
The purpose of this research is to test the uses and gratifications model (U&G) with respect to addictive outcomes for young adult social media users. Two cross-sectional survey studies were completed with college students aged 18–25 years. Study 1 applied path analysis with regression to determine how individual traits, motives, and dependency related to intrusive and emotional consequences of addiction (N=373). Results indicated that, among other predictor variables, being dependent on social media for personal understanding was associated with increased emotional consequences of addiction. In Study 2, the functional alternative of interpersonal interaction and frequency of social media use were included to more fully test the U&G model with structural equation modeling (N=446). Interpersonal interaction was a significant predictor in the intrusive consequences model. Participants who reported engaging in more offline interpersonal interactions that engaged in heavy use of social media found it to be more intrusive in their lives. In addition, being dependent on social media to understand oneself mediated the relationships between various motives and emotional consequences of addiction. Taken together, results of these studies supported U&G. Contextual age variables were found to be related to motives, dependency, and addictive consequences. In addition, motives in both studies were important variables in explaining addictive consequences.

Keywords
social media addiction consequences, uses and gratifications, motives, contextual age, dependency

In 2019, 90% of US adults aged 18–29 years reported using at least one social media (SM) site (Pew Research Center, 2019). In addition, young adults represent the largest demographic of users on most of the major platforms, including Facebook, Instagram, Twitter, Snapchat, and YouTube (Pew Research Center, 2019). Research has shown that young adults are more likely to experience addictive consequences of SM use (Andreassen, Pallesen, & Griffiths, 2017; Chae, H. Kim, & Y. A. Kim, 2018). SM addiction has also been shown to have important consequences for young adults, including decreased community involvement, decreased academic performance, and increases in relationship problems (Kuss & Griffiths, 2011). Given the potential for addiction and negative consequences for young adults, it is important to investigate the ways in which this group engages with SM.

One framework that is well-suited for this investigation is the uses and gratifications (U&G). U&G is a functional perspective that focuses on the influence of individual differences in how media is chosen (Rubin, 2002). These choices then result in “need gratifications and other consequences, perhaps mostly unintended ones” (Katz, Blumler, & Gurevitch, 1974, p. 20). With respect to SM, U&G has been fruitful in aiding our understanding of how and why we use this medium, particularly in the area of discovering motives (Sundar & Limperos, 2013). However, more research is needed to understand how individual differences and SM motives relate to consequences of use.

One potential consequence of SM use is addiction. Addiction is a complex term that has been defined in many ways in several different contexts (Kim & Haridakis, 2009). According to Kim and Haridakis (2009), there have been three main ways that addiction has been conceptualized: dependency, heavy use, and “actual addiction” that relates closely to substance abuse (p. 989). In the case of the first two definitions, dependency and heavy use are not always

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indicative of negative outcomes for the user. The last definition of addiction focuses on the behavioral aspect of problematic use, defined as use that results in negative consequences for the individual. This definition has been applied to other forms of technology addiction, including the Internet (Kim & Haridakis, 2009) and video games (Griffiths, Kuss, & King, 2012).

U&G is a well-established framework that will help explain how individual differences influence media uses in relation to SM addiction. U&G has been applied to explore predictors of addiction in various media contexts, including the Internet (Kim & Haridakis, 2009), online gaming (Kuss & Griffiths, 2012), and smartphone use (Elhai, Rozgonjuk, Yildirim, Alghraibeh, & Alafnan, 2019). In addition, previous research has shown that individual differences and behavioral factors are related to addictive outcomes of SM use (Andreassen, 2015). The goal of this research is to apply the U&G model to further explore the influence of individual traits, motives, and SM use related to addictive outcomes.

To test the U&G model within this context, two studies were conducted. The following section will discuss SM addiction, outline the assumptions of U&G as they pertain to SM uses and effects, followed by a description of the methods and results for each study. Finally, a discussion of the implications for this research is offered, as well as limitations and directions for future research.

SM Addiction

In this study, we apply the definition of social networking site addiction by Andreassen and Pallesen (2014). Andreassen and Pallesen (2014) examine addiction in relation to consequences of use. The researchers state that SM addiction results from one’s strong motivation to use SM despite the consequences that result for individuals’ “other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being” (p. 4054). As per the definition by Andreassen and Pallesen (2014), SM addiction is the result of the combined effects of motivation, use, and consequences. While there are many potential consequences of addiction, we wish to focus on two specific constructs derived from previous research on technology-related addiction (Kim & Haridakis, 2009): the degree to which SM distracts users from other activities (intrusive consequences), and the extent to which SM use results in negative emotional states for the individual (emotional consequences).

Studies have shown that age can be an important factor with respect to SM addiction. Andreassen et al. (2017) surveyed over 20,000 people with an age range of 16 to 88 years and found that younger people were more likely to indicate that they felt addicted to SM than older people. Even among college students, younger participants were more likely to exhibit addictive consequences than older students (Chae et al., 2018). Given the prevalence of SM and its potential integration into users’ daily lives, young adults may be more susceptible to addictive consequences of SM use. Therefore, this study specifically examines this demographic.

The U&G Perspective

U&G is a functional approach that examines how individuals actively seek out ways to fulfill needs. U&G’s central assumptions are that (1) media users actively make choices about how to satisfy their needs, (2) individuals psychological and sociological make-up influences those choices, and (3) that media competes with other sources of need fulfillment, which may have more influence than the media when examining possible effects or consequences (Rubin, 2002). Media use is a result of individual needs and one’s desire to satisfy those needs. Based on these patterns of media use, differing consequences can result.

Rubin (1994) outlines the potential for U&G to explain consequences of media use by stating that “concepts such as needs, motives, uses, and gratifications sought are used in an equivalent manner as antecedents to behavior; effects, consequences, gratifications obtained, and outcomes appear as consequences of the behavior” (p. 424). When examining potential addictive consequences of use, previous research has shown that the antecedents of behavior identified by U&G may be influential.

SM use has been shown to have both intrusive and emotional consequences for users. Studies have shown that SM use is related to physical, psychological, and relational harms, including loss of sleep, lack of exercise, poor academic performance, depression, anxiety, and increased conflicts among friends and family (Andreassen, 2015). Previous research has also shown that individual factors such as demographics, psychological, and sociological factors can influence SM addiction (Andreassen, 2015; Chae et al., 2018; Kircaburun, Alhabash, Tosuntas, & Griffiths, 2020). In addition, U&G studies on SM have shown that motives were significant predictors of addictive outcomes (Kircaburun et al., 2020; Punyanunt-Carter, De La Cruz, & Wrench, 2017). The purpose of this research is to continue these lines of exploration to expand knowledge of how individual differences, motives, and use relate to negative consequences for SM users.

Individual Differences

U&G is a psychological perspective, which proposes that one’s individual traits are influential in how one chooses to use media (Papacharissi, 2009; Rubin, 2009). According to this framework, individuals make conscious choices related to need fulfillment. Characteristics such as one’s personality and social structure are key factors that influence one’s motives for media use (Rubin, 2009). According to Papacharissi (2009), an often-researched antecedent to media motivations has been the concept of contextual age. Contextual age is measured by
examine several factors that relate to one’s life position and sense of well-being (Rubin & Rubin, 1986).

According to Sheldon and Bryant (2016), three constructs of contextual age are most applicable to college-aged individuals: life satisfaction, interpersonal interaction, and social activity. Life satisfaction is the degree to which one feels happy with one’s life. Social activity relates to the concept that one has an active social life with friends and family. Interpersonal interaction is the degree to which we have access to important others like friends and family (Rubin & Rubin, 1986; Sheldon & Bryant, 2016).

These dimensions have been found to be related to college students’ SM use. For example, Sheldon and Bryant (2016) found that interpersonal interaction was related to the use of Instagram for coolness, creativity, and surveillance. Social activity was found to positively relate to one’s use of Instagram for documentation purposes (Sheldon & Bryant, 2016), as well as whether one views and shares YouTube videos (Haridakis & Hanson, 2009). Finally, life satisfaction was negatively related to the use of Instagram for coolness (Sheldon & Bryant, 2016). Although these studies are platform-specific, there is the potential for contextual age to be influential with respect to overall SM motives and use.

While contextual age has not been specifically tested with respect to SM addiction, there have been studies that demonstrate the potential for individual traits to be influential. For example, Hou, Xiong, Jiang, Song, & Wang (2019) found that college students with poor mental health (conceptualized using many components similar to life satisfaction) were more likely to exhibit SM addiction. In addition, Wilson, Fornasier, & White (2010) found that extroverted college students were more likely to feel addicted to SM. While extraversion does not necessitate interpersonal interaction or social activity, the potential for these two contextual age variables to function in similar ways to personality traits is notable.

Motivations for Use

According to U&G, individuals make conscious decisions on how to use media to fulfill their needs (Papacharissi, 2009; Rubin, 2009). This need fulfillment emerges as the reason for seeking out media, or one’s motivations for use. Given that the affordances of SM allow for both interpersonal and mediated interactions (Bucher & Helmond, 2017), there is the potential for users to be motivated to seek fulfillment in both interpersonal and mediated ways.

While several studies focus on identifying motives for specific platforms (Alhabash & Ma, 2017; Punyanunt-Carter et al., 2017), other studies have utilized a more global measurement that incorporates both media and interpersonal use motives (Kircaburun et al., 2020). In 2020, the average Internet user reported having nearly eight SM accounts across multiple platforms (Chaffey, 2020). While specific platforms may lead to more (or less) addictive outcomes, it is also important to examine SM use a whole.

Researchers have found that overall SM use mimics other traditional media motives related to ritualistic use such as to relieve boredom, escape, habit, and entertainment (Kircaburun et al., 2020; Quinn, 2016), as well as instrumental media uses such as information seeking (Chen & Kim, 2013; Quinn, 2016) and education (Kircaburun et al., 2020). In addition, interpersonal motives also emerged with respect to global SM use that focus on relational goals (i.e., relationship maintenance, meeting new people/seeking virtual community, sharing concern for others; Chen & Kim, 2013; Kircaburun et al., 2020; Quinn, 2016), as well as more personal motives such as to present oneself as popular (Kircaburun et al., 2020) or to advance one’s career (Quinn, 2016). Although there has not been one standard motive typology adopted for general SM use, previous research shows the potential for global SM use motivations to be useful in examining potential SM outcomes.

Research has shown that SM motives have been linked to addictive consequences of use. Chen and Kim (2013) found that the only motivations linked to problematic behavioral and emotional outcomes of SM use in their study were self-presentation and relationship building motives. Kircaburun et al. (2020) also found interpersonal motives to be important with respect to addictive consequences. They found that SM users who are motivated by relationship maintenance, meeting new people, and positive self-presentation were more likely to report problematic SM use. In addition, Sofiah, Omar, Bolong, & Osman (2011) found that communication motives (conceptualized similarly to relational motives) were significant predictors of SM addictive consequences such as spending time on Facebook that could be used elsewhere, losing sleep, and experiencing negative emotions when not using Facebook. This body of research shows the potential for interpersonal focused motives to be influential in examining the consequences of SM addiction.

However, other research has found that the traditional media motives of entertainment and passing time were more influential with respect to addictive outcomes. In their study examining Facebook, Sofiah et al. (2011) found the media motive of passing time to be the strongest predictor of addictive consequences. This finding has also been supported by the study of Kircaburun et al. (2020) on problematic SM use across platforms. The entertainment motive has also been shown to be influential with respect to Snapchat addiction (Punyanunt-Carter et al., 2017) and Facebook addiction (Sofiah et al., 2011). Interestingly, Sofiah et al. (2011) did not find support for interpersonal motives related to the likelihood of addictive outcomes. Although these studies show mixed results as to which motives are most likely to predict consequences related to addiction, they do indicate that motives and addiction are inter-related.
SM Use

As proposed by U&G, individual traits and motivations lead to media use. Media use is a multifaceted construct that can include the amount of consumption, the type and manner of content used, as well as the relationships between content and the individual (Rubin & Windahl, 1986). SM can present unique challenges when it comes to measuring use. Because SM can be accessed through both computers and smartphones, actual time spent on SM can be difficult for users to estimate. In a study comparing college students’ actual Facebook use to their estimation, Junco (2013) found that self-report estimates were significantly larger than actual time assessed through a tracking application. Other measures, such as intensity of use (Ellison, Steinfeld, & Lampe, 2007) and engagement assessments, such as number of logins and types of posts (Papacharissi & Mendelson, 2011), have also been applied to SM research.

Studies have shown a link between time spent with SM and addiction (Kuss & Griffiths, 2011). However, Andreassen (2015) cautions using time as a sole indicator of addiction, asserting that spending excessive amounts of time with a technology does not necessary mean that users are addicted. Rather, addiction is when a user continues to use SM despite experiencing negative consequences to their lives (Andreassen, 2015). While time spent may be one factor related to addiction, other measures of use may be more fruitful in explaining addictive outcomes.

One potential use variable that may be effective in determining SM effects is dependency. Dependency has been frequently studied as an important variable in the U&G model (see Papacharissi, 2009, for a review). Dependency is conceptualized in U&G research as one’s reliance on media to achieve one’s goals (Papacharissi, 2009; Sun, Rubin, & Haridakis, 2008). While dependency and addiction have often been used interchangeably in addiction research, these two concepts are distinctly different. Addiction is a negative outcome of use, whereas dependency is an indicator of use (Rubin & Windahl, 1986).

Research has found that dependency has been linked to motives for using SM as well as individuals’ psycho-social traits. In their study of college students’ Facebook use, Ferris and Hollenbaugh (2018) found four motives that significantly predicted dependency: virtual community, exhibitionism, relationship maintenance, and passing time. This research also showed that individuals who had less social cohesion were more motivated to use Facebook to get attention, resulting in increased dependency (Ferris & Hollenbaugh, 2018). In addition, X. Han, W. Han, Qu, Li, & Zhu (2019) found that participants who were depressed and had less self-identification with respect to being a part of the LGBT (lesbian, gay, bisexual, and transgender) community were more likely to be dependent on Weibo, a Chinese SM platform.

While this research shows some potential for both social and psychological variables as well as motives to impact dependency, these relationships have not been fully explored with respect to SM addiction. Therefore, we intend to test dependency as a useful measure to discover its potential in predicting SM addictive outcomes.

It is important to view SM addiction from a theoretical standpoint. Although variable-analytic research makes a valuable contribution to our understanding of this phenomenon, U&G can provide a deeper perspective in explaining the complex nature of media use and outcomes. Therefore, two studies were designed to test the U&G model as it relates to SM addiction.

Study 1

According to the U&G framework (Rubin, 2009), social and psychological characteristics should lead individuals to be motivated to use media for specific reasons, which will result in potential consequences of that use. Contextual age has been shown to be a meaningful measure of individuality with respect to U&G research (Papacharissi, 2009). One’s contextual age is measured by three concepts: life satisfaction, social activity, and interpersonal interaction. While contextual age has not been directly measured with respect to addiction, Andreassen (2015) asserts that addiction is related to one’s family and friend networks, the need to belong, low self-esteem, and negative self-concept. These variables share some similarities to the construct of contextual age.

While studies have measured motives with respect to individual platforms, this study seeks to expand research by examining both interpersonal and mediated motives for global SM use that have been identified in previous research (Leung, 2014; Sheldon, 2008). Motives have been found to be related to SM addiction (Andreassen, 2015; Masur, Reinecke, Ziegele, & Quiring, 2014); however, much of this research is platform-specific related to Facebook addiction. Given that the average SM user has eight SM accounts (Dean, 2021), it is important to look at SM use as a global construct.

U&G states that individual traits will influence one’s need to use media, that will then lead to use (Rubin, 2009). We apply dependency, or one’s reliance on SM, as a use measure in this research. While dependency has not been used in previous research related to addiction, this construct has been found to be related to SM motives as well as individual differences (Ferris & Hollenbaugh, 2018; Han et al., 2019).

According to U&G, one’s psychological and social traits influence motives for use, which then result in consequences for the user (Papacharissi, 2009; Rubin, 2009). In this study, we examine two outcomes found in previous research related to technology addiction: intrusiveness and emotional consequences (Kim & Haridakis, 2009). Intrusive consequences result when SM use impedes on one’s life. Examples include losing sleep, loss of production, and staying on SM longer than intended. Emotional consequences of addiction occur when one’s emotional state or connection to others is
negatively influenced by SM use. Examples of this construct include being upset if one cannot use SM and reacting negatively toward others if SM use is interrupted.

Previous research on SM addiction has shown that emotional, relational, and behavioral consequences are potential outcomes of addictive use (Andreassen, 2015). Therefore, we wish to explore these outcomes within the framework of U&G in the proposed hypotheses:

H1. Contextual age, SM motives, and dependency will contribute to SM intrusive addiction consequences.

H2. Contextual age, SM motives, and dependency will contribute to SM emotional addiction consequences.

Study 1: Method

Participants. Participants included 373 college students, aged 18–24 years ($M = 19.31, SD = 1.24$), who were recruited from a subject pool of students from various majors enrolled in an introductory communication course at a large Midwestern university. The final sample was predominantly female ($n = 238, 63.8\%$) and White ($n = 315, 84.45\%$). As a criterion of participation, all members of the sample used at least one SM platform monthly. Facebook was the most common social networking site used in the sample, with 92.76% ($n = 346$) using it at least once per month. Other major SM platforms monthly. Facebook was the most common social networking site used in the sample, with 92.76% ($n = 346$) using it at least once per month. Other major SM platforms used at least monthly included Snapchat ($n = 341$), Instagram ($n = 322$), and Twitter ($n = 304$).

Procedures. This research was approved by the Institutional Review Board prior to data collection. Following informed consent, participants completed an online Qualtrics survey measuring SM dependency, SM motives, contextual age, SM addictive outcomes, and demographics. All study variables were measured on a 5-point Likert-type scale.

SM Dependency. SM dependency was measured at both the macro (global) and micro (dimensional) levels. To measure SM dependency, the Facebook dependency scale by Ferris and Hollenbaugh (2018) was modified to fit the general SM context. This 18-item measure asked participants to assess how helpful they found SM to, for example, “gain insight into why I do some of the things I do,” “stay on top of what is happening in the community,” and “unwind after a hard day or week.” Scores on the 18 items were summed and averaged to yield scores on global SM dependency ($M = 3.47, SD = 0.69, \alpha = .92$).

Research on Facebook dependency found evidence for a three-factor structure: personal understanding, entertainment, and social information dependency (Ferris & Hollenbaugh, 2018). However, this measure has not been applied to SM use in general. Therefore, an exploratory factor analysis (EFA) with Varimax rotation was conducted, retaining factors with eigenvalues of at least 1 and items loading with at least .60 on one factor and less than .40 on all others. As found in the study by Ferris and Hollenbaugh (2018), three factors emerged, explaining 68.79% of the variance. Each subscale was found to be reliable, and scores were computed for each by averaging scores on the items that cleanly loaded.

Factor 1, personal understanding dependency, is the reliance on SM to learn about how to interact with others and how that might impact the self (five items, $R^2 = .29, M = 3.00, SD = 0.90, \alpha = .85$). Factor 2, entertainment dependency, is defined as the reliance on SM to relieve boredom or to have fun (three items, $R^2 = .21, M = 4.07, SD = 0.82, \alpha = .83$). Three items loaded on the last factor, social information. This factor measures the reliance on SM to fulfill the need for learning about the community, country, and world (three items, $R^2 = .19, M = 3.81, SD = 0.82, \alpha = .79$).

SM Motives. As of the time of this writing, there does not exist a universal measure of motives for global SM use. Therefore, SM motives were measured with 41 items established in previous research (Leung, 2014; Sheldon, 2008). In line with existing U&G research on SM, a three-stage exploratory factor analysis (EFA) using Varimax rotation was conducted on the original item scores to reveal SM motives. After the initial EFA, nine items were dropped that did not load cleanly using the .60–.40 rule. The remaining 32 items were entered into a second EFA, following which 3 more items were dropped. The final six-factor solution included 29 items, accounting for 67.04% of the variance.

The first factor, companionship, was comprised of six items from the a priori motive of the same name and measures the use of SM to compensate for loneliness ($R^2 = .14, M = 2.72, SD = 1.01, \alpha = .89$). The six items of the leisure motive represent a combination of the entertainment and pass-time motives ($R^2 = .13, M = 4.19, SD = 0.67, \alpha = .86$). Five items loaded on the information seeking motive ($R^2 = .11, M = 3.73, SD = 0.83, \alpha = .84$). Factor 4, relationship maintenance, included four items that measured the use of SM to facilitate existing relationships ($R^2 = .10, M = 4.08, SD = 0.76, \alpha = .87$). Participants were also motivated to make use of SM for status-gaining (four items), or to be cool, fashionable, and impress people ($R^2 = .10, M = 2.73, SD = 1.03, \alpha = .86$). Finally, participants reported using SM for virtual community. The four items in this subscale tapped into the interest people have in meeting new people they would not otherwise know and interacting with them through SM ($R^2 = .09, M = 3.27, SD = 0.95, \alpha = .85$).

Contextual Age. The contextual age scale by Rubin and Rubin (1986) was used to measure this construct. Life satisfaction includes five items focusing on participant happiness (e.g., “I find a great deal of happiness in my life”; $M = 3.41, SD = 0.72, \alpha = .76$). Interpersonal interaction includes four items that measure how much offline connection individuals have with important others (e.g., “I get to see my friends as
often as I like”; $M=3.81$, $SD=0.68$, $\alpha=.69$). Social activity contains five items measuring how much individuals interact with others in social settings (e.g., “I often participate in games, sports, or activities with others”; $M=3.56$, $SD=0.75$, $\alpha=.73$).

SM Addiction Consequences. Internet addiction scale by Kim and Haridakis (2009), modified for SM, was applied in this study. As mentioned in the literature review, there are several different ways to conceptualize and measure addiction. Previous research has shown that adapting Internet measures has been a common practice as addiction measures are developed (Andreassen, 2015). Given our focus on addictive consequences and our conceptualization of addiction, this measure was viewed as most appropriate.

The original scale had 19 items loading on three dimensions. However, because this scale has been newly adapted for SM, a three-stage EFA of these study data using the same procedures as the motives scale was conducted. EFAs revealed a two-factor structure related to SM use, explaining 63.15% of the variance.

The first factor, intrusive consequences, included six items from the intrusion subscale by Kim and Haridakis (2009) (e.g., “Would be more productive without using social media”). These items relate to how intrusive SM is in one’s everyday life ($R^2=.18$, $M=3.15$, $SD=0.93$, $\alpha=.87$). Five items loaded on the second factor, emotional consequences (e.g., “I am upset”). In a combination of dimensions by Kim and Haridakis (2009) of escaping reality and attachment, these items reflected experiencing negative emotions or consequences for the self and/or others with regard to SM use ($R^2=.30$, $M=2.15$, $SD=0.93$, $\alpha=.85$).

Analytical Approach. To test the study’s hypothesis, two models (macro vs micro dependency) were compared for each outcome of SM addiction—intrusive addictive consequences (H1) and emotional addictive consequences (H2). In line with existing online addiction and U&G research (e.g., Haridakis & Rubin, 2005; Hou et al., 2019; Kim & Haridakis, 2009; Wilson et al., 2010), the models were tested using path analysis with regression. First, to identify potential indirect effects, SM motives were regressed on contextual age dimensions (see Table 1). Subsequently, the global (macro) and dimensional constructs (micro) of SM dependency were separately regressed on contextual age (step 1) and SM motives (step 2) using hierarchical linear regression (see Table 2).

To test the direct effects of predictor variables in the model, hierarchical linear regressions were then conducted for each level of dependency (macro and micro) for intrusive and emotional addiction outcomes. In accordance with U&G, contextual age was entered on the first step, SM motives on the second step, and dependency (global, dimensions) on the third step.

Study I: Results

The purpose of this study was to test the U&G model as it relates to the ways in which contextual age, SM motives, and dependency predict SM intrusive and emotional consequences of addiction. Utilizing the aforementioned path analysis with regression, four models were tested to assess the impact of contextual age, motives, dependency (micro and macro), and addictive outcomes (intrusion and emotion). These models were significant ($p<.001$), with $R^2$ ranging from .28 (personal understanding dependency) to .41 (global dependency). All four total models explained a significant amount of variance in addictive consequences (see Tables 2 and 3). Significant standardized betas were identified on the final step to determine direct predictors of SM addictive outcomes. Specific results of these tests are further described below. See Figure 1 for significant results of Study 1.

Intrusive Addiction Consequences. Hypothesis 1 proposed that contextual age, motives, and dependency will contribute to intrusive addictive consequences. When testing the influence of global dependency, three variables emerged as direct predictors of the intrusion outcome of addiction: life satisfaction, leisure, and status-gaining (see Figure 1 and Table 3). Participants who reported lower life satisfaction were motivated to use SM to entertain themselves while bored, or were motivated by fame or notoriety, felt that SM were more intrusive in their lives. There were various indirect predictors of intrusion through SM motives. Specifically, the leisure motive was predicted by life satisfaction, interpersonal
interaction, and social activity. Life satisfaction and social activity also indirectly predicted intrusion through the status-gaining motive (see Table 1).

When examining the three micro-level dimensions of dependency, the intrusion model yielded similar results as the macro dependency model. No dependency dimension was a significant predictor of intrusive consequences (see Figure 2 and Table 4).

### Study 1: Discussion

The goal of this study was to test the U&G model to discover the impact of contextual age, SM motives, and dependency in predicting SM addiction consequences. The results of this study yielded several interesting findings, which

#### Table 2. Regressing Social Media (SM) Dependency on Contextual Age and Motives.

| Predictors                     | Global SM dependency | Personal understanding dependency | Entertainment dependency | Social information dependency |
|--------------------------------|----------------------|-----------------------------------|--------------------------|------------------------------|
|                                | Std. β               | Std. β                            | Std. β                   | Std. β                       |
| **Step 1**                     |                      |                                   |                          |                              |
| Life satisfaction              | -.02                 | -.07                              | .06                      | -.05                         |
| Interpersonal interaction      | .07                  | .07                               | .11*                     | .12*                         |
| Social activity                | .05                  | .05                               | -.05                     | .01                          |
| **Step 2**                     |                      |                                   |                          |                              |
| Companionship                 | .06                  | .15*                              | .08                      | -.10                         |
| Leisure                       | .18***               | -.04                              | .62***                   | .17***                       |
| Information seeking           | .32***               | .19**                             | .03                      | .55***                       |
| Relationship maintenance      | .02                  | -.03                              | -.03                     | -.05                         |
| Status-gaining                | .05                  | .13*                              | -.05                     | -.07                         |
| Virtual community             | .13*                 | .20**                             | .01                      | -.02                         |
| Model R²                      | .41***               | .28***                            | .45***                   | .36***                       |

All betas are final standardized betas on the last step of the regression, N = 373.

* p < .05, ** p < .01, *** p < .001.

#### Emotional Addiction Consequences

Hypothesis 2 proposed that contextual age, motives, and dependency will contribute to emotional addictive consequences. Again, two models were used to test this hypothesis. When assessing the macro-level of dependency, seven predictor variables explained a significant amount of variance in the final model (see Figure 1 and Table 3). Life satisfaction, leisure, and relationship maintenance decreased emotional consequences, whereas interpersonal interaction, companionship, status-gaining, and virtual community led to increases in emotional consequences of addiction. Contextual age indirectly predicted emotional consequences through motives (see Table 1).

When testing the influence of the micro-levels of dependency, decreased life satisfaction predicted more emotional consequences of SM use, as well as lower scores on the relationship maintenance motive (see Figure 2 and Table 4). Companionship, status-gaining, and virtual community motives were additional direct positive predictors. Finally, personal understanding dependency predicted emotional consequences of addiction. Indirect predictors included contextual age dimensions, impacting emotional consequences through SM motives (see Table 1). The path analysis showed four motives indirectly predicting emotional consequences through personal understanding dependency: companionship, information seeking, status-gaining, and virtual community (see Table 2).

#### Table 3. Regressing SM Addictive Consequences on Contextual Age, Motives, and Global (Macro) Dependency.

| Predictors                     | Intrusion consequences | Emotional consequences |
|--------------------------------|------------------------|------------------------|
|                                | R²Δ Std. β             | R²Δ Std. β             |
| **Step 1**                     |                        |                        |
| Life satisfaction              | -.24***                | -.20***                |
| Interpersonal interaction      | .03                    | .11*                   |
| Social activity                | .06                    | .03                    |
| **Step 2**                     |                        |                        |
| Companionship                 | .11                    | .28***                 |
| Leisure                       | .28***                 | -.17*                  |
| Information seeking           | .09                    | -.08                   |
| Relationship maintenance      | -.06                   | -.14**                 |
| Status-gaining                | .15**                  | .30***                 |
| Virtual community             | .11                    | .20***                 |
| **Step 3**                     |                        |                        |
| Global SM dependency           | .05                    | .04                    |
| **Final model R²**             | .37***                 | .41***                 |

SM: social media.

All betas are final standardized betas on the last step of the regression, N=373.

* p < .05, ** p < .01, *** p < .001.
Figure 1. Model of significant indirect and direct predictors of social media addiction consequences (macro dependency model).
Significant predictors of each social media motive are listed in the box in parentheses. See Tables 1 to 3 for beta weights.

* p < .05. ** p < .01. *** p < .001.

Figure 2. Model of significant indirect and direct predictors of social media addiction consequences (micro dependency model).
Significant predictors of each social media motive are listed in the box in parentheses. See Tables 1 to 3 for beta weights.

* p < .05. ** p < .01. *** p < .001.
support the applicability of the U&G framework in this research context.

First, when examining the macro measure of dependency, results showed that overall reliance on SM was not a contributing factor to either measure of addictive consequences. However, when testing the micro dimensions of dependency, using SM to understand oneself was found to contribute to emotional consequences of addiction. Therefore, merely relying on SM, in general, to achieve goals does not result in addictive consequences. However, when individuals rely on SM specifically for personal understanding, there is a greater likelihood for negative emotional consequences for the user. As in past research, dependency was associated with various motives for SM use, as well as individual differences (Ferris & Hollenbaugh, 2018; Han et al., 2019).

Second, the results show that motives are potentially important precursors to SM addiction. For intrusive consequences, findings indicated that the leisure and status-gaining motives were significant predictors. When individuals sought out SM for entertainment purposes or to impress others, they were more likely to indicate that this use is taking up time that could be spent in other, perhaps more productive, ways.

When examining emotional consequences of addiction, four motives were predictors in both models: companionship, relationship maintenance, status-gaining, and virtual community. Individuals motivated to use SM to relieve loneliness, to meet new people, or to impress others are likely to feel negative emotional consequences of this use. In addition, participants who use SM to maintain existing offline relationships reported significantly less emotional consequences related to addiction.

The findings of Study 1 help clarify the link between entertainment motives and addictive consequences of SM use established in past research (Kircaburun et al., 2020; Punyanunt-Carter et al., 2017; Sofiah et al., 2011). The present study revealed that the leisure motive—a combination of entertainment and passing time—was related to intrusive consequences of addiction. However, participants motivated by leisure were not more likely to report problematic emotional consequences of SM addiction. In fact, in the macro model, leisure was associated with significantly less SM emotional addictive consequences. Therefore, people who use SM for fun and to relieve boredom are more likely to feel that this technology displaces other important activities in their lives (i.e., sleeping, studying). However, those who use SM for leisure are also statistically less likely to experience emotional harm related to that use. Future research should continue to explore the ways in which the leisure motive influences addiction and other consequences of SM use.

Finally, contextual age dimensions were useful in explaining SM addiction consequences. Two individual characteristics were significant direct predictors of addiction: life satisfaction and interpersonal interaction. Specifically, individuals who were happy with their lives were less likely to feel intrusive and emotional consequences of SM use, similar to the study by Hou et al. (2019). In addition, those individuals that spent time with friends and family were more likely to indicate that SM intrudes on their life or causes relational and emotional harm. Although this study did not directly test the degree to which people were on SM while engaging with others face-to-face, this result may point to the fact that those with many interpersonal connections may be fixated on

| Predictors                              | Intrusive consequences | Emotional consequences |
|-----------------------------------------|------------------------|------------------------|
|                                         | $R^2\Delta$            | Std. $\beta$          | $R^2\Delta$            | Std. $\beta$          |
| Step 1                                  | .12***                 | -.25***                | -.19***                |
| Life satisfaction                       |                        | -.25***                |                        |
| Interpersonal interaction               | .03                    | .12*                   | .12*                   |
| Social activity                         | .06                    | .02                    | .02                    |
| Step 2                                  | .25***                 | .09                    | .30***                 |
| Companionship                          | .09                    | .26***                 | .26***                 |
| Leisure                                 | .25***                 | -.10                   |                        |
| Information seeking                     | .11                    | -.07                   |                        |
| Relationship maintenance                | -.05                   | -.14**                 |                        |
| Status-gaining                          | .14*                   | .28***                 | .28***                 |
| Virtual community                       | .10                    | .18**                  | .18**                  |
| Step 3                                  | .01                    | .01                    | .14*                   |
| Personal understanding dependency       | .06                    |                        | .07                    |
| Entertainment dependency                | .07                    | -.09                   |                        |
| Social information dependency           | -.03                   | -.04                   |                        |
| Final model $R^2$                       | .37***                 | .42***                 |                        |

All betas are final standardized betas on the last step of the regression, $N=373$.

*p < .05. **p < .01. ***p < .001.
engaging online even in the presence of others. We will further explore these complex relationships in Study 2.

Each of the contextual age dimensions measured in this study were significant indirect predictors, mediated through SM motives. One relationship in particular is worth noting. Individuals engaging in high amounts of social activities in their offline lives who were drawn to SM to compensate for loneliness were more likely to experience negative emotional consequences. This curious result suggests that a subset of the sample was highly sociable, and yet still lonely, resulting in negative outcomes of SM use.

In sum, this study tested the U&G model as it relates to addictive outcomes. As expected, individual traits and motives were important variables in predicting both types of addictive outcomes. Global dependency, as a measure of use, was not predictive of addictive outcomes, despite its relationship to contextual age and motives. However, relying on SM to understand oneself did contribute to the model with respect to emotional consequences of addiction.

To further explore the U&G model as it pertains to addictive outcomes, a second study was conducted. Study 2 explores how interpersonal interaction as a functional alternative to SM use influences the relationship between motives, SM use, and addictive consequences. The following section outlines the current model tests and presents results from the second data collection.

**Study 2**

As proposed by U&G, individuals’ media choices are related to the availability of functional alternatives (Rubin, 2002). According to the theory, media choices are influenced by the availability of alternative channels of need satisfaction. When choices are limited, use of a particular channel may increase. For example, if a person does not have a television, they might rely solely on SM to get information about the world, making the effects of SM use potentially more influential.

According to Rubin (2002), interpersonal channels tend to be more impactful when attempting to fulfill needs than the media. Specifically, Rubin (2002) cited interpersonal interaction as an important potential functional alternative for media use. Interpersonal interaction in this study is defined as offline connections with friends and family. Theoretically, those with less interpersonal interaction will need to rely on SM to engage with others and will, therefore, be potentially more likely to experience negative consequences of use. Research has shown that those people who were less involved with others in their offline lives were much more likely to use the Internet to fulfill their social needs (Papacharissi & Rubin, 2009). In addition, those who were motivated to use Facebook for social purposes were more likely to indicate they were addicted to this platform (Koc & Gulyagci, 2013). Given the theoretical significance of this particular individual variable, Study 2 will examine how interpersonal interaction mediates the relationships between media motives, use, and addictive outcomes.

One limitation from Study 1 concerned the measurement of SM use. As mentioned previously, SM scholars have often employed various measures of assessing use. Ledbetter (2009) suggested that using a perceptual assessment of use in the form of frequency is more appropriate than specific time estimates of use. In addition, several scholars have employed multiple use measures to assess this construct (Ellison et al., 2007; Papacharissi & Mendelson, 2011). In Study 1, personal understanding dependency was the only measure of dependency to impact addictive outcomes. Therefore, the current study employs both a frequency of use measure and the personal understanding dependency measure.

To this end, the following research questions (RQs) are proposed:

*RQ1.* How does interpersonal interaction mediate the relationships between SM motives, use, and intrusive consequences of addiction?

*RQ2.* How does interpersonal interaction mediate the relationships between SM motives, use, and emotional consequences of addiction?

**Study 2: Method**

**Participants.** Participants were recruited through two research subject pools across all campuses of a large Midwestern university system. To participate in the study, students needed to be 18–24 years old and use SM at least once per month. There were 446 usable surveys collected. Participants were predominantly female (n = 285, 63.9%) and White (n = 371, 83.2%), and on average, 19.42 years old (SD = 1.34). As found in the previous study, the most commonly used SM included Snapchat (417 monthly users, 93.5%), Instagram (392 monthly users, 87.9%), Facebook (346 monthly users, 77.6%), and Twitter (317 monthly users, 71.1%).

**Procedures.** As in Study 1, an online survey was approved through the Institutional Review Board prior to distribution. Following informed consent, students completed measures of personal understanding dependency, SM motives, interpersonal interaction, SM frequency of use, SM addiction consequences, and demographic/descriptive items. These measures were identical to those used in Study 1. The reliability of the measures was tested through confirmatory factor analysis, reported below.

**Personal Understanding Dependency.** Personal understanding dependency was measured with the same five items that were retained following the EFA in the first study (M = 3.05, SD = 0.85).

**Social Media Motives.** The six motives from Study 1 were applied in the current study. Companionship was measured
with six items ($M = 2.88, SD = 1.08$), leisure with six items ($M = 4.29, SD = 0.47$), information seeking with five items ($M = 3.77, SD = 0.78$), relationship maintenance with four items ($M = 4.33, SD = 0.65$), status-gaining with four items ($M = 2.69, SD = 1.00$), and virtual community with four items ($M = 3.48, SD = 1.00$), for a total of 29 items.

**Interpersonal Interaction.** The interpersonal interaction scale by Rubin and Rubin (1986) utilized in Study 1 was applied to determine one’s offline connections to others as a functional alternative to SM use. To increase the variability in scores and correct for a restriction of range in the data for this measure, the five items were added (after reverse-coding one item) rather than averaged, resulting in a range of 0–25 ($M = 16.88, SD = 2.59$).

**Social Media Frequency of Use.** The frequency with which SM is used was assessed with one item, measured on a 5-point Likert-type scale (1 = very rarely, 5 = very frequently; $M = 4.45, SD = 0.82$). “Never” (0) was an option for this item, used to screen out four participants who did not meet a study criterion.

**Social Media Addiction Consequences.** The 11 items retained in Study 1 were used to measure intrusive consequences (six items; $M = 3.25, SD = 0.86$) and emotional consequences of addiction (five items; $M = 2.06, SD = 0.83$).

### Analytical Approach

The RQs were addressed by testing two structural equation models (Model 1 and Model 2) computed with the Mplus 8 statistical package using the maximum-likelihood method. This statistical process was applied to confirm the U&G model, as well as to further examine the role of interpersonal interaction as a mediating factor in addiction outcomes. All independent and dependent latent variables were included in a measurement model to establish a confirmatory factor analysis. The CFA indicated that all factors loaded as expected. As suggested by Hu and Bentler (1999), model fit for the structural equation models was established using chi-square, the comparative fit index (CFI), root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR).

### Study 2: Results

Utilizing the analytical approach outlined above, both models demonstrated acceptable fit. In response to RQ1, Model 1 (intrusive consequences) reported chi-square ($560) = 1,204.30, p < .001, CFI = .916, RMSEA = .051, 90% confidence interval (CI) = [.047, .055], and SRMR = .059 (see Table 5). Testing RQ2, Model 2 (emotional consequences) was similar in its fit to the data, chi-square ($743) = 1,649.21, p < .001, CFI = .894, RMSEA = .052, 90% CI = [.049, .056], and SRMR = .080 (see Table 6). Specific results of each model are outlined below and visually depicted in Figures 3 and 4.

**RQ1: Intrusive Consequences of Addiction.** Model 1 investigated how SM use and interpersonal activity mediated the relationship between motives and intrusive consequences. Direct predictors of intrusive consequences in this model were the companionship, leisure, and relationship maintenance motives along with frequency of SM use and interpersonal interaction.

When examining indirect effects, interpersonal interaction played no significant mediating role on its own between motivations and intrusive consequences. Instead, the only significant indirect effects that included interpersonal interaction also included frequency of SM use. Interestingly, those who were motivated by companionship experienced lower levels of intrusive consequences when considering both interpersonal interaction and frequency of SM use ($\beta = .015, p = .013$). The other instance where interpersonal interaction played a mediating role was in the path considering the influence of leisure motivations on intrusive consequences of addiction through both interpersonal interaction and SM use ($\beta = .015, p = .013$).

Frequency of SM use was only predicted directly by the motivation for leisure activity. As a result, Model 1 reported a significant indirect effect from leisure to intrusive

### Table 5. Structural Equation Model 1 Results, Intrusive Consequences of SM Addiction Model ($N = 446$).

|                        | Std. β | SE  | Est./SE | p-value |
|------------------------|--------|-----|---------|---------|
| **Intrusive consequences** |        |     |         |         |
| Companionship          | .196   | .060| 3.275   | .001    |
| Leisure                | .407   | .080| 5.115   | .000    |
| Information seeking    | .039   | .075| 0.517   | .605    |
| Status gaining          | .109   | .063| 1.735   | .083    |
| Relationship maintenance| −.190  | .079| −2.404  | .016    |
| Virtual communication   | .109   | .069| 1.579   | .114    |
| Interpersonal interaction| −.105  | .051| −2.070  | .038    |
| Social media use        | .279   | .051| 5.486   | .000    |
| **Interpersonal interaction** |        |     |         |         |
| Companionship          | −.271  | .056| −4.811  | .000    |
| Leisure                | .329   | .074| 4.474   | .000    |
| Information seeking    | .013   | .074| 0.182   | .856    |
| Status gaining          | .078   | .062| 1.267   | .205    |
| Relationship maintenance| .075   | .074| 1.008   | .313    |
| Virtual communication   | .000   | .068| 0.005   | .996    |
| Social media use        | .054   | .056| 0.961   | .336    |
| Leisure                | .266   | .073| 3.646   | .000    |
| Information seeking    | .073   | .070| 1.044   | .297    |
| Status gaining          | .089   | .059| 1.519   | .129    |
| Relationship maintenance| .075   | .074| 1.008   | .313    |
| Virtual communication   | .076   | .065| 1.170   | .242    |
| Interpersonal interaction| .165   | .047| 3.516   | .000    |

SM: social media; SE: standard error.
consequences via frequency of SM use ($\beta = .074$, $p = .001$). These results indicate that the frequency of SM use appears to play a significant role in mediating relationships between motivations and intrusive consequences of addiction, as it is present in all significant mediations.

RQ2: Emotional Consequences. Model 2 included the same motives as Model 1. In addition to replacing intrusive consequences with emotional consequences, personal understanding dependency was included as a third potential mediator (see Figure 4). Model 2 results indicated that only personal understanding dependency played a significant mediating role between motivations and emotional consequences of addiction. Participants’ dependency on personal understanding fully mediated the significant relationships between companionship ($\beta = .036$, $p = .047$), information seeking ($\beta = .111$, $p = .002$), relationship maintenance ($\beta = .078$, $p = .001$), virtual community ($\beta = .075$, $p = .002$) and emotional consequences.

Direct effects of note in Model 2 include the significant effect SM use has on emotional consequences and the effect leisure motivations have on SM use. In fact, when considering all possible indirect effects from the leisure motivation to emotional consequences, the sum of the indirect effects was significant overall ($\beta = .075$, $p = .033$). However, there were no individual indirect paths that stood out as significant on their own.

Study 2: Discussion

To examine the impact of functional alternatives, interpersonal interaction was added to a structural equation model

Table 6. Structural Equation Model 2 Results, Intrusive Consequences of SM Addiction Model ($N=446$).

|                      | Std. $\beta$ | SE  | Est./SE | $p$-value |
|----------------------|--------------|-----|---------|-----------|
| **Emotional consequences** |              |     |         |           |
| Personal understanding | .349         | .056| 6.276   | .000      |
| Social media use      | .115         | .053| 2.187   | .029      |
| **Personal understanding** |              |     |         |           |
| Companionship         | .135         | .062| 2.175   | .030      |
| Information seeking   | .299         | .078| 3.826   | .000      |
| Virtual communication  | .259         | .072| 3.628   | .000      |
| Status gaining         | .113         | .065| 1.732   | .083      |
| Leisure                | .107         | .083| 1.283   | .199      |
| Relationship maintenance | -.174      | .081| -2.147  | .032      |
| Social media use       | .057         | .053| 1.063   | .288      |
| Interpersonal interaction | -.056      | .052| -1.060  | .289      |
| **Interpersonal interaction** |            |     |         |           |
| Companionship         | -.271        | .056| -4.802  | .000      |
| Leisure                | .329         | .073| 4.483   | .000      |
| Information seeking   | .014         | .074| 0.184   | .854      |
| Status gaining         | .079         | .069| 1.273   | .205      |
| Relationship maintenance | .203        | .077| 2.638   | .008      |
| Virtual community      | .001         | .069| 0.008   | .993      |
| Social media use       | .055         | .056| 0.965   | .334      |
| Leisure                | .263         | .073| 3.607   | .000      |
| Information seeking   | .075         | .071| 1.053   | .292      |
| Status gaining         | .090         | .059| 1.525   | .127      |
| Relationship maintenance | .076        | .074| 1.026   | .305      |
| Virtual communication  | .075         | .065| 1.153   | .292      |
| Interpersonal interaction | .165        | .047| 3.520   | .000      |

SM: social media. SE: standard error.
that is capable of accounting for the mediating potential between the effects of motives on use and addictive consequences. Interestingly, interpersonal interaction and SM use mediated the relationships between specific motives and intrusive consequences of addiction. For example, participants who were motivated by leisure, had more offline interpersonal ties, and heavier use of SM reported more intrusive consequences of addiction. By itself, interpersonal interaction was a direct predictor of intrusive consequences, such that participants with more opportunities for interaction offline were less likely to feel that SM was intruding into their lives. However, when including SM use in the model, results showed that those who reported more offline communication with others were more frequent users of SM, which led to more intrusive consequences.

It seems that SM is not an alternative to face-to-face interaction per se, but more of an addition to interaction. While some users access SM to make new friends, research has shown that the people we interact with most on SM are also the same people we engage with offline (Reich, Subrahmanynam, & Espinoza, 2012). For those who are highly social offline, they may feel compelled to interact with or observe friends on SM as well, which can result in intrusive consequences of SM use. Future research should continue to explore how offline lives influence SM uses that are most likely to lead to negative consequences.

When examining mediators of emotional consequences, interpersonal interaction was not found to be a significant mediating factor. Alternatively, personal understanding dependency, or the degree to which users rely on SM to express themselves, was a mediating factor. These results show that interpersonal interaction may not be a functional alternative for users who are motivated to seek companionship, information, and to meet new people, but are not motivated to maintain existing relationships. However, these motives are linked to a reliance on SM for personal understanding, which then leads to increased emotional consequences. If you are seeking greater connections to others online, then you may not have the strong ties to others offline. Therefore, interpersonal interaction may not serve as an alternative to SM use. Future research should continue to explore how offline relationship strength and availability may influence use, dependency, and addictive consequences related to SM.

According to U&G, media is one way to fulfill our needs when interpersonal connections are not available (Papacharissi & Mendelson, 2011). Therefore, the less interpersonal interactions you have offline, the more likely you are to use media as a replacement. This research found that interpersonal interaction was an additive factor, and not a replacement factor, in the U&G model. Given that SM contains many features of interpersonal communication that other forms of traditional media did not have when the theory was constructed, it is important to continue to examine the concept of functional alternatives within the U&G model when applied with SM contexts.

**General Discussion**

The goal of this research was to apply the U&G model to discover the factors that might lead individuals to feel the consequences of SM addiction. Two sets of data were
analyzed to explore the influence of individual factors (Study 1), motives, functional alternatives (Study 2), and media use in explaining two types of addictive outcomes: intrusive consequences and emotional consequences. The following outlines the key findings of this research.

First, these data support the main predictive outcomes of U&G. When examining the role of psycho-social variables in the U&G model, we examined how contextual age impacted addictive consequences (Study 1). Each component of contextual age predicted various motives for SM use. In addition, results showed that life satisfaction was important in predicting both types of addictive outcomes. Those who were unhappy in their life were more likely to feel SM were intrusive and had negative personal and relational emotional consequences for their life. These findings point to the importance of contextual age factors in explaining both motives for use and potential outcomes.

In addition to individual traits, this research shows that motives are significant and essential factors that need to be accounted for in understanding and explaining the risks of addiction. Specifically, the leisure motive emerged as an important factor in both studies with respect to intrusive consequences. Those who use SM for fun and to relieve boredom are more likely to feel that SM is taking away time from other activities that might be viewed as more productive.

With respect to emotional consequences of SM use, results showed that several interpersonally related motives were predictors. In Study 1, using SM to seek out companionship, to feel cool, and to meet new people increased emotional consequences. In Study 2, those who use SM to relieve loneliness and to seek out information, but who are less likely to use it to maintain relationships with others, were more likely to exhibit personal understanding dependency, resulting in increased emotional consequences. These results show that why one uses SM is important to consider with respect to addictive outcomes.

When examining SM use, this research also supports the propositions offered by U&G. Both use and dependency were predicted by individual traits and motives. Interestingly, results showed that dependency was not a critical factor in predicting SM addictive outcomes. This is particularly the case for the macro-level global dependency measure. Therefore, overall reliance upon SM to fulfill goals does not predict how intrusive or harmful SM is one’s emotional state.

However, these results do point to the need to examine dependency on a micro-level. Personal understanding dependency was an important factor in both model tests across two separate samples of SM users with respect to emotional consequences of SM use. When users relied on SM to understand themselves, they were likely to experience emotional and relational consequences. Future research should continue to examine the dimensions of dependency as a function of SM use to determine how reliance upon media can lead to other potential outcomes.

Overall, this research shows the potential for U&G to move beyond motive discovery and into other areas of SM effects. As Rubin (2009) and Katz et al. (1974) assert, there are consequences of media use that are a result of one’s individual make-up and media choices. This research has shown that SM is related to emotional and intrusive consequences of addiction. Future research should continue to explore other potential consequences, both positive and negative.

This study was not without limitations. This study utilized a convenience sample of college students and, therefore, they may not be generalizable to the larger population. College students may differ from other young adults, given their increased opportunities for social activity and interpersonal interaction, particularly in the case of a residential campus. Future research should consider examining a non-college student population to continue to assess how key variables impact the outcomes related to SM addiction. In addition, the results of these cross-sectional studies cannot be interpreted as a causal relationship; future longitudinal studies may further test and refine the conclusions drawn from this article.

One further potential limitation of the study is the use of global motives and addictive outcome measures. While research shows that SM users utilize multiple platforms and accounts (Chaffey, 2020), the afforded of individual platforms could be more influential in predicting addictive outcomes than a global measure might identify. There are common motives for use that can be found across platforms (see Sundar & Limperos, 2013, for a review), which lends itself to examining addictive consequences on a global level as well. However, future research should continue to explore the usefulness of both global and platform-specific indicators of addiction.

In these studies, we applied two measures of SM use: dependency and frequency of use. Studies 1 and 2 both found that personal understanding dependency was significantly related to emotional addictive consequences. In Study 2, frequency of use was also found to be positively related to both emotional and intrusive addiction. This research shows that SM use is multi-faceted, and that different measures of use may yield different results. Future research should continue to explore multiple measures of SM use. For example, some SM platforms may be more addictive than others. Including platform use measures as an additional function of use could yield some important findings with respect to addiction.

Overall, these results show that SM addiction is a complex construct that is deserving of further exploration. Communication scholars are poised with relevant theoretical frameworks to assess the multi-faceted dimensions of addiction and the factors that influence it. SM will no doubt continue to evolve, and as it does, scholars must continue to determine the potential harms, as well as positive outcomes, that can result from its use.

Declaration of Conflicting Interests

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