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# The Influences of Social Media: Depression, Anxiety, and Self-Concept

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The Influences of Social Media:

Depression, Anxiety, and Self-Concept

(TITLE)

BY

Emily Baker

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The Influence of Social Media:  
Depression, Anxiety, and Self-Concept

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### **Abstract**

The current study examined correlations between social media use and its effects on depression, anxiety, and changes in self-concept through quantitative and qualitative data. Variables included in the analysis of Study 1 were depression, anxiety, time spent using social media, number of platforms used, perception of addiction, and type of use. Study 1 showed no significant correlations between social media used and depression or anxiety, however observational analyses of correlation tables revealed a relationship between time spent using and number of platforms used; time spent using and perception of addiction; time spent using and perception of addiction; time spent using with active use; and perception of addiction with active use. Discussed are the implications of student's perceptions of social media addiction and the active use of social media. Given the gaps in literature related to social media's effects on self-concept, study 2 was used to gain qualitative analyses of student's interrelated beliefs of social media and its impacts on the formation and maintenance of self-concept. Students also explored similarities and differences between influential factors, such as internal and external components. The respondents reported an awareness of addiction-like behaviors, and identified both protective and risk factors of social media. Pathways of risky or protective social media engagement were introduced as a further topic of study.

**Keywords:** Social media, addiction, anxiety, depression, self-concept, FoMO



## Introduction

A dearth of research exists with regard to social media and how it relates to the formation and maintenance of self-concept. Only recently has literature begun to delve deeper into the mechanisms that underlie potential harmful effects of problematic social media use. Thus far, there is conflicting evidence about how social media impacts individuals who use it. Further, self-concept has been a largely unexplored topic within the literature. As younger generations experience an increase of exposure to social media through their formative years, it is yet unclear how this exposure helps or harms their mental health and the ways they build their sense of self.

The purpose of this study is to gain more understanding of the relationships between social media use, anxiety, depression, and self-concept. Differences in the platforms used are considered in conjunction with the type of engagement (active or passive) with social media. Self-report surveys are used to determine the levels of depression and anxiety among students and the amount of SMU (Social Media Use). Qualitative questionnaires with open-ended, short-answer essay questions are used to explore connections between self-concept and SMU. While studies in the past have focused on self-concept clarity, false-self presentation, and self-objectification, the current study explores the construction or formation of self-concept in young adults related to SMU. Given the overwhelming prevalence of social media and its importance in the lives and development of children and adolescents, there exists a need for a broad empirical understanding of social media and its influence on identity development.

### Literature Review

Social media (SM), also known as Social Networking Sites (SNS) have increasingly become a source of discussion among researchers. The growing presence of SM in the lives of young adults and the effects of SM on mental health among this population has garnered negative attention in the eyes of parents and teachers (Alt, 2017). Public outcry and media outlets have also called attention to the negative outcomes believed to be associated with an overuse of social media among younger generations. Some research overestimates the negative outcomes of social media, more specifically Facebook, with a likely explanation attributed to “moral panic” and publication bias (Chow & Wan, 2016; Jasso-Medrano & Lopez-Rosalez, 2018; Jelenchick, Eickhoff, & Moreno, 2013). Steers (2016) postulates that social media has functions which decrease depression due to a sense of social capital. Yet, there is ample evidence to suggest that social media is associated with depression and other problems, such as classroom disruption, sleeping disturbances, anxiety, jealousy, and low self-esteem in young adults (Bjornsen & Archer, 2015; Fossum, Nordnes, Storemark, Bjorvatn, & Pallesan, 2014; Jenaro, Flores, Gomez-Vela, Gonzalez-Gil, & Caballo, 2007; Milyavskaya, Saffran, Hope, & Koestner, 2018; Utz, Muscanell, & Khalid, 2015; Fathi-Ashtiani, Ejei, Mohammed-Karim, & Tarkhorani, 2007; Lin, et al., 2016; Becker, Alzahabi, & Hopwood, 2013). Another concern among the public is the idea that online interactions are taking precedence over face to face interactions, and that the former are a weaker form of socialization (Becker, Alzahabi, & Hopwood, 2013). Thus, the decrease of in-person contact fostered by social media may be one of the potential underlying causes of impaired functioning in social, academic, and behavioral domains among adolescents.

Though there is still much research to be done, that which has already been published has woven a nuanced and complicated tapestry of the ways that social media impacts its users.

The overall attitude toward smartphones and social media among professionals is mixed, with many discrepancies revealed in the literature as reported by a systematic review (Best, Mankleow, & Taylor, 2014). However, studies that specify social media addiction, or problematic use, more consistently provides evidence for an association with negative outcomes. Much of the literature surrounding problematic social media use and its association with internalizing symptoms support the general belief that a dependence on communication through social networking sites is harmful toward students. Over the past decade, rates of depression and anxiety have been increasing among adolescent and young adult populations (Weinberger, Gbedemah, Martinez, & Nash, 2018). Studies that have linked these symptoms with social media and cell phone use point toward a variety of mechanisms by which these associations take place. Neuroticism, fear of missing out (also known as FoMO), “Facebook depression,” and body image comparisons are among popular topics of study (Blackwell, Leaman, Tramosch, Osborne, & Liss, 2017; Chow & Wan, 2016; Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018; Kleemans, Daalmans, Carbaat, & Anschutz, 2018; Roberts, Petnji Yaya, & Manolis, 2014; Tiggeman, Hayden, Brown, & Veldhuis, 2018).

Some difficulties exist when conducting research related to social media use (SMU). Due to the rapidly expanding nature of technology and the functions of social media, research related to their effects on symptomology have a generally short term in which they remain relevant to the current period. Social networking sites rise and fall in

popularity over time, and because new platforms gain ground among young adults, researchers must continuously catch up to the platforms which are currently being used. Best and Taylor's (2014) systematic review of the literature is current until April of 2013; naturally, the literature has since revealed more nuanced findings in more specialized areas of social media research. However, some platforms have maintained their popularity and stability, which is why much of the current research surrounding social media focuses exclusively on these decade-old platforms such as Facebook and Twitter. Other platforms, such as Instagram and Snapchat, have been around for a few years less, but have grown so quickly and with such large influences that some studies have been able to capture the mechanisms that facilitate symptomology in young adults. These will be discussed further in a later section. Jelenchick and colleagues (2013) note the importance in differentiating the study of one platform, specifically Facebook, from the study of social media use, which includes the use of multiple platforms. In other words, these two topics of study are not synonymous and can glean different results depending on the ways the variables have been defined. Likewise, the differentiation between normal amounts of social media use and problematic use on mental health further separate the results found between studies.

The question as to why the use of social media is so common among young adults in particular is another topic of exploration within the literature. One answer is that the development of the smartphone, a device which has become pervasive among global consumers and especially young adults, has allowed for near-constant access to social media. One report indicated that roughly half of the time spent using cell phones is on social media (Khalaf, 2016). Social media has changed the way young adults interact

with others in various domains such as engaging in romance, connecting with peers, and organizing social events (Alt, 2017; Belk, 2013; Kelly, 2018). Roberts and colleagues (2014) also support the notion that a majority of cell phone use is spent engaging in social connection. Literature centered around SMU seeks to examine the potential risks that excessive social media use poses to young adults. The likelihood of this population to engage more frequently with social media highlights their vulnerability to the negative effects of social media use and addiction (Jasso-Medrano & Lopez-Rosalez, 2018; Alt, 2017).

### **Negative and Positive Associations of Social Media Use**

Depression appears to be one of the major concerns among professionals, given the associations with suicidality, the cost to society, and the effects on the overall functioning of the individuals who experience its symptoms. The recent increase in depression seen in today's youth is a target of media speculation, as is the idea that social media is at least partially at fault. However, the literature paints a complicated picture of this association. Specific aspects of social media, rather than the blatant consumption of social media itself, can predict depression in young adults who exhibit specific risk factors. For example, multitasking with social media is but one of the predictors of depression, and is characterized by the use of social media while engaging with other activities such as socialization, studying, or attending class. In a study of 318 university students, researchers found an association between multitasking with social media and depressive symptoms. Multitasking was also associated with SMU, but SMU was not significantly associated with depression in this study (Becker, Alzahabi, & Hopwood, 2013). The same results were found for anxiety. The authors concluded that multitasking

is a unique variable which may present its own risks factors in the mental health of young adults; however, the findings from this study were true only for individuals who scored high in Neuroticism.<sup>1</sup>

A study which focused on the use of multiple (7-11) platforms compared to a few (1-2) found that the number of platforms was significantly and positively associated with depression in young adults (Primack, et al., 2016). Again, the same results were found for anxious symptoms. In a Scottish sample of 467 adolescents, similar results were found in that the amount of social media used and the level of emotional attachment to social media was positively associated with insomnia, depression, anxiety, and low self-esteem (Woods & Scott, 2016). A study using a nationally representative, ethnically diverse sample which included a description of 11 different platforms, found the same relationship between overall SMU and depression (Lin, et al., 2016). Yet, in a longitudinal study which defined depression at a clinical level, no association was found between SMU and depression (Jelenchick, Eickhoff, & Moreno, 2013). These findings may indicate that depressive symptoms at a sub-clinical level may relate to social media use, or that other factors contribute to an increase in the risk of developing depression when combined with excessive SMU or the use of multiple platforms. However, Facebook use alone was not found to have an association with depression (Chow & Wan, 2016). These findings indicate that the use of multiple platforms is indeed a risk factor for depression.

Given the associations between depressive and anxious symptoms and the tendency for the two to overlap, the idea that other unique factors of social media

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<sup>1</sup> Measured by the Big Five Factor of Personality Traits. The five traits include Agreeableness, Openness, Extraversion, Neuroticism, and Conscientiousness (John, Donahue, & Kentle, 1991).

increase the risk for anxiety is also plausible. The anxiety associated with social media may be mediated by other variables; for example, the Fear of Missing Out (FoMO) has also been associated with increases in the use of social media among young adults, and has gained considerable traction as a topic of study within social media literature. FoMO has been defined as a desire to continually stay connected with friends, events, interactions, and comparisons to others through SM. It has been characterized by a sense of concern over missing out on the sharing of information, missing out on the rewarding experiences of engaging with SM, fear that others are engaging in enjoyable conversations or events without the user, or a compulsive need to maintain a presence on online platforms in order to compare oneself to one's peers (Alt, 2017; Blackwell, Leaman, Tramosch, Osborne , & Liss, 2017). Further, FoMO has been associated with deficits in the psychological functioning of young adults, and was found to mediate the use of cell phones during class in a study of 279 undergraduate students of various backgrounds (Alt, 2017). Through qualitative work, this study collected several underlying reasons that may cause many students to engage in social media during class time.

Cultural and language barriers played a role for students whose native language was not the same as their teacher (Alt, 2017). When the students felt uncomfortable asking for more clarification during class, they consulted friends via social media to gain a better understanding of the material or of certain phrases. This also occurred after instances of asking the teachers for clarification during class, but such interactions did not improve the students' understanding of the material. Students without such cultural barriers reported using social media when they felt bored, were not challenged by the

material in class, felt they already had an understanding of the material, or were unmotivated to maintain attention during lectures which used slides that they could then study at a later time. These students also reported feeling a need to stay connected as a force of habit (Alt, 2017). Such reports from students support the notion that FoMO is predictive of social media addiction. However, some may interpret these statements to indicate that the students are presenting problematic use of social media rather than FoMO. In fact, some studies have found associations between FoMO and social media addiction, in addition to deficits in energy, sleep, stress management, and well-being (Blackwell, Leaman, Trampusch, Osborne, & Liss, 2017; Milyavskaya, Saffran, Hope, & Koestner, 2018). While Alt's (2017) study ultimately concluded that students with different academic needs may utilize social media for different functions, researchers understand that regardless of circumstance, FoMO plays a role in the problems caused by social media use, especially in use that is excessive. Further study is needed to understand the effects, vulnerabilities, and predictors of FoMO.

Another focus of the literature is a tendency for those exposed to social media to compare themselves with their peers, or the unrealistic standards of beauty maintained by young professionals who use social media to gain popularity. In an examination of social comparison to moderate the effect of time spent on Facebook and depressive symptoms, the moderation of social comparison was insignificant (Chow & Wan, 2016). Some attention has been called to the excess of hypersexualized imagery on social media and its resulting negative effects on youth, especially in girls. Given the prevalence of shared images on social media, and the increased likelihood of specific platforms to spread idealized or unrealistic standards of beauty, it is important for researchers to consider the



effects of users being subjected to making comparisons between themselves and these images. A study which focused on an all-female population of 114 adolescents examined the impact of Instagram on body image and satisfaction. The results showed that heavily filtered pictures, and pictures which re-shaped the bodies of models to look thinner, were considered by the participants to be realistic (Kleemans, Daalmans, Carbaat, & Anschutz, 2018). The authors concluded that the exposure to these images has led to a decrease in the ability of adolescents to distinguish between realistic and unrealistically-edited photos, and has subsequently led to decreases in body satisfaction. Girls who were more likely to make social comparisons were particularly vulnerable to these effects. These findings are but one example of a specific platform's influences on social comparison, and further study is needed to address differences or similarities between Instagram and other platforms which prioritize photo sharing (Tiggeman, Hayden, Brown, & Veldhuis, 2018).

A low sense of well-being is yet another variable that has been linked to heavy usage of social media. As of 2013, the literature has presented mixed or no associations (Best, Mankleow, & Taylor, 2014). However, more recent studies have shown more clarity through mediating variables. One study, which found a negative association between Facebook use and well-being, also found that social comparison and self-objectification mediated this relationship. This result held true for both men and women (Hanna, et al., 2017). FoMO was negatively related to well-being in another recent study (Milyavskaya, Saffran, Hope, & Koestner, 2018). In a longitudinal examination of 1095 Dutch participants, lasting one week, researchers found that those who took a break from using Facebook reported increased well-being over time (Tromholt, 2016). The results

were stronger for those who used Facebook more frequently before the trial, those who used Facebook passively, and those who were susceptible to feelings of envy when engaging in social comparison. A study of passive Facebook use over the course of one week showed a decrease in well-being over time in a lab setting and in a field setting (Verduyn, et al., 2015). Here too, authors found an association with envy and well-being as a result of passive social media use. True or false self-presentation behaviors were among one of the variables which did not yield a significant association with well-being (Wright, White, & Obst, 2018).

Though certain features of social media have been found to produce negative effects, there is other evidence to indicate potential benefits of unproblematic SMU, regardless of time spent using social media. So pervasive are the negative beliefs about social media that the research has less of a tendency to focus on its benefits outside of obvious utilizations of online functions for underserved or disabled populations. However, several authors have found that Facebook use decreases symptoms of depression in some individuals in its ability to foster increases in social capital among young adults (Steers, 2016; Valenzuela, Park, & Kee, 2009; Ellison, Steinfield, & Lampe, 2007). Further, vulnerable populations, such as sexual or racial minorities, may find a set of protective factors within the realm of their online presence.

In a qualitative report of black female participants, the authors found that social media platforms played a key role in helping girls form their identities through expressions of “digital literacy” (Kelly, 2018). Digital forms of communication appeared to allow for interactions that the participants otherwise did not feel comfortable engaging in with non-minorities in a face to face setting. In these situations, the functions of social

media which allowed girls to form groups reinforced their sense of belongingness to a social identity. Specifically, Snapchat was being used to build solidarity between members of a marginalized group, and was used as a safe space for expression of opinion. In this way, Snapchat allowed the participants to develop strategies for resisting racial tension in school (Kelly, 2018). In the studies related to Instagram's effects on body satisfaction, there were some benefits to using Instagram in relation to social capital. Though exposure to thin-ideal images led to a decrease in body satisfaction, the number of likes received by a user had a positive effect on participant's facial satisfaction.

In a study involving 374 university students, researchers found an association between social media "addiction" or problematic use, depression, and negative affect. However, non-problematic time spent using social media was not associated with these symptoms (Jasso-Medrano & Lopez-Rosalez, 2018). In the individuals who expressed symptoms of suicidality, social media was used as an effective tool to reach out to others and ask for help. In fact, the results showed a decrease in suicidality among students who used social media. The authors concluded that in those with suicidal ideation, social media can be a protective factor, and that SMU was not itself harmful so long as the individuals did not present with problematic use or "addiction" to social media.

### **Differences between Platforms**

An important consideration with regard to the study of social media is the wide range of effects observed between different platforms. Due to the varied nature and functions of popular platforms, different results appear when individual platforms are examined for specific effects. For example, certain platforms such as Facebook,

Snapchat, and Instagram are more likely to elicit increases in problematic use of SM than other platforms (Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018). This may be one explanation as to why some inconsistencies have been observed in the literature, especially in cases where using one platform is conflated with the use of social media as a whole. Utz and Khalid (2015) contend that people perceive interpersonal interactions differently across platforms. In their comparison of jealousy-inducing interactions between romantic partners on Facebook and Snapchat, the authors found that Snapchat elicited more jealousy. The difference in these perceptions may be attributed to the differences in functions of these platforms. Specifically, Snapchat is more often utilized for flirting and romantic interaction, while Facebook was used as a central mode of communication to initialize and maintain friendships.

The tendency for a young adult to make use of specific functions over others may also be related to innate personality traits (Steers, 2016). Introversion and extraversion were expected to predict different types of SMU, such that introversion leads to more anonymous interaction, and extraversion was less likely to be associated with anonymous interactions (Best, Manktelow, & Taylor, 2014). Extraversion has also been linked to an increase in SMU, but not necessarily SM addiction (Blackwell, Leaman, Trampusch, Osborne, & Liss, 2017; Jasso-Medrano & Lopez-Rosalez, 2018). In fact, one study found an association between introversion and problematic use (Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018). Introverts were anticipated to use social media to satisfy their need for communication, given that they are more likely to avoid face to face interaction to the same extent as extraverts (Jasso-Medrano & Lopez-Rosalez, 2018). Though the hypotheses were similar to those who experience loneliness, Jin and Park

(2010) found that loneliness had no association with cell phone use. Further, those who scored higher in loneliness were less motivated to use cell phones for interpersonal reasons. The directionality of these effects needs further study; do people become lonely because they do not use cell phones for interactional purposes, or are lonely people less likely to engage in social media? There are likely some mediating effects that the literature has yet to explore.

### **Vulnerability**

Many researchers have called for an investigation as to whether social media users engage with social media as a result of being more depressed, or if users become depressed as a result of their social media use, as the directionality of these effects are still unclear. The vulnerability model, as studied by Orth and colleagues (2008), may shed some light on the subject. A prospective study of the vulnerability model, which predicts that low self-esteem leads to depression, and the scar model, which contends that depression precedes low self-esteem, found that the vulnerability model was supported. This model may be useful in understanding the directional relationship of mental health symptoms and social media use.

There are some consistencies in the traits which have been observed to predict social media addiction. These traits include age, personality trait, gender, and type of engagement. Young adults and adolescents have been found to be vulnerable to social media use, especially problematic use (Blackwell, Leaman, Trampusch, Osborne , & Liss, 2017; Jasso-Medrano & Lopez-Rosalez, 2018). The ease of studying this population, especially among undergraduate university students, as well as this population's susceptibility to engage in social media, are two major reasons most studies

focus on these age groups. Importantly, while FoMO has also been linked to those of a younger age, researchers note that experiencing FoMO is not limited to a young population; the same is true for SMU or problematic use (Milyavskaya, Saffran, Hope, & Koestner, 2018). Personality traits are another factor that may predict increased SMU or problematic use, though this is another area that has seen inconsistencies within the literature. The Big Five of Personality Traits measures Neuroticism, Extraversion, Agreeableness, Openness, and Conscientiousness (John, Donahue, & Kentle, 1991). Neuroticism and Extraversion were associated with social media use in a non-representative sample of 207 individuals (Blackwell, Leaman, Tramposch, Osborne, & Liss, 2017). Becker and colleagues (2013) observed an association between Neuroticism and SMU in their sample of 319 undergraduates, but did not find this association with Extraversion. A study which only measured the personality trait of Neuroticism found a similar association with regard to time spent on Facebook; however, the association was small (Chow & Wan, 2016). More importantly, Facebook use was associated with depression only in the individuals who scored high in Neuroticism. These individuals were also more likely to present a false self on Facebook (Michikyan, Subrahmanyam, & Dennis, 2014). Another study using a sample of 1008 undergraduates found no association with problematic use and Extraversion, but did find the association in individuals who scored higher in Agreeableness, Conscientiousness, and Neuroticism, and who scored lower in Extraversion.

Further study will be needed to understand whether high or low Extraversion is more likely to predict social media use; of course, it is plausible that these traits create a different set of vulnerabilities depending on how the individual utilizes social media and

which platforms they prefer to use. The literature appears to agree upon Neuroticism as a predictor of problematic social media use. Other factors related to SMU have not been replicated to show the same association with personality traits, as Milyavskaya and colleagues (2018) found no association between any of the Big Five of Personality Traits with FoMO.

Gender differences in an individual's vulnerability to problematic SMU have been observed. Men and women were thought to use cell phones and social media for different interpersonal purpose in Roberts and colleague's (2014) gender comparison of cell phone addiction. The results showed that women were more likely to present problematic cell phone use than their male counterparts. This finding was replicated in other studies of social media addiction (Jenaro, Flores, Gomez-Vela, Gonzalez-Gil, & Caballo, 2007; Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018). Yet, in a study that examined attitudes toward cell phone use in the classroom, men were more accepting, indicating that they were more likely to use cell phones in inappropriate settings. When comparing men and women in their susceptibility to the negative effects of music media, which is more often shared across such platforms as YouTube, Tumblr, and Facebook, no significant results were found (Kistler, Rodgers, Power, Austin, & Hill, 2010). However, there appears to be a tendency for women to be more susceptible to other harmful effects such as social comparison and body dissatisfaction (Kleemans, Daalmans, Carbaat, & Anschutz, 2018; Strubel, Petrie, & Pookulangara, 2018; Tiggeman, Hayden, Brown, & Veldhuis, 2018).

Researchers have also called for a better understanding of the associations that the *type* of use creates for those engaging with social media. Passive and active users differ in

the amount of participation they maintain online, but how does this participation, or lack thereof, relate to their mental health and sense of self? Passive and active users are hypothesized to differ in the ways they use social media, similar to the way introverts and extraverts are dichotomized in their hypothesized use of social media. In an examination of how passive and active users engage in self-presentation, the authors contend that passive users may experience lower self-concept clarity compared to active users who engage in more self-presentation behaviors (Appel, Schreiner, Weber, Mara, & Gnams, 2018). However, this would not hold true if active users are more likely to use false self-presentation. Passive users may differ in other ways due to innate differences in their motivations for social media use. Passive SMU and casual “liking” on Facebook were associated with relaxation motives, for example (Laeq Khan, 2017). Active users may be more motivated to use social media for connection and communication (Alt, 2017; Seidman, 2013).

In a qualitative study which explored active and passive SMU, some passive users expressed guilt over not contributing to online conversations or forum discussions (Lutz & Hoffman, 2017). While passive SMU was related to low self esteem and body dissatisfaction, active use was related to higher self esteem, and had additional influence in the choices the users made while online, such as making purchases geared toward self-maintenance (Strubel, Petrie, & Pookulangara, 2018). Given the ability of Facebook to elicit online connection and face-to-face disconnection simultaneously, it stands that some of the contradictions in the literature stem from a failure to differentiate between type of engagement in social media within the sample population (Steers, 2016). Ultimately, this combination of vulnerabilities may indicate the need to take an



intersectional approach to understanding what puts an individual at risk of experiencing the negative effects of social media.

### **Self-Concept**

Though some studies have begun to explore self-concept in relation to SMU, the contemporary nature of SM undermines the ability of recent literature to fill the gaps in our understanding of the mechanisms behind its influence. It appears that heavier Facebook use is negatively associated with self-concept clarity, and the association is stronger for passive users (Appel, Schreiner, Weber, Mara, & Gnams, 2018). Yet, Belk (2013) contends that social media has become a part of the “extended self.” This concept, proposed in 1988, has since been updated to fit into an era which utilizes technology in brand new ways. Rather than an individual embodying him or herself through material goods, the self has become dematerialized, such that the information about the self is maintained online and is not visible until called forth. Further, this extended self can be viewed by virtually anyone.

Belk’s theory describes the re-embodiment of the self through a digital presence, and this presence differs from that which is presented in real life. As time passes, an individual increases the degree to which he or she identifies with the online self, and the self is co-created with others through online interactions (Belk, 2013). While some may use social media as an extended self, others (particularly minority groups) may be more likely to present a “double-identity” in cases where they benefit from expressing opinions in online spaces, free from the judgement they might experience in face-to-face settings (Kelly, 2018). The presentation of a false-self on social media has been associated with problematic use (Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018), but the literature

has yet to clarify why false self-presentation takes place. Milyavskaya and colleagues (2018) suspect that this behavior is related to FoMO, such that envious users engage in “social one-upmanship,” in which they create posts that overstate their positive affect to counter the feeling that they have missed out on social activities.

Growing up in a digital era creates new formats in which adolescents may formulate their own identity. Facing unique risk factors, connecting digitally while disconnecting from in-person interaction, and socializing through new and subtle digital forms of communication play a role in the coming-of-age process for a new generation (Belk, 2013). Self-concept clarity was more consistent in older adolescents when compared with younger adolescents, and those with a less stable sense of self experimented more with self-presentation (Fullwood, James, & Chen-Wilson, 2016). Beneficial in some ways, but detrimental in others, social media has fostered novel interactional styles that allow individuals to experiment with self-presentation, regardless of the truth behind that presentation. The false presentation of self and the resulting decline in self-concept may contribute to the influx of negative effects observed in younger individuals. Importantly, we must consider how students perceive their own role in problematic SMU. Previous studies have shown that students do in fact perceive their own addiction to cell-phone use, however the self-perception of addiction or problematic use has not been explored within the context of social media use alone (Fioravanti, Dettore, & Casale, 2012; Baker, Lusk, & Neuhauser, 2012).

### **The Current Study**

The current study explores the influences of the types of social media use in relation to anxiety, depression, and sense of self-concept in young adults. The types of

use are defined as active use (posting, responding publicly, creating content which is shared across platforms, i.e. making YouTube videos) and passive use (consuming without contributing content toward the site, i.e. scrolling through Twitter but never posting original Tweets). Social Media platforms considered in this study are as follows: Facebook, due to its prevalence in the literature, the size of its user base, and the multiple functions provided by the platform for consumers to begin and maintain connectedness between themselves and others; Instagram, for its trend of recent growth, especially among younger consumers, the pervasiveness of celebrity presence, and photo-heavy content; Snapchat, due to its rapid growth in user base over the last several years, and its functions which facilitate competition and jealousy (Utz, Muscanell, & Khalid, 2015); YouTube, due to its widespread use across other platforms, and the participatory nature between content creators and viewers; Tumblr, for its emphasis among users of mental health, and the functions which facilitate both anonymous support and cyberbullying; Twitter, for its large user base and propensity to elicit FoMO; and Pinterest, for its associations with social comparison. Other platforms included for examination due to their large user base were Musical.ly/TikTok, and Reddit. An "Other" category was listed for the smaller platforms which were left out of the above options, but which may be a source of time spent on social media.

Study 1 is a quantitative investigation of anxiety and depression in the time spent using, perception of addiction, and the type of use of social media. Three hypotheses were formed: 1) Those who perceive their own addiction to social media are more likely to score high in depression and anxiety. Given that the previous literature has found no relation between time spent using social media and significant symptomology, these two

factors are not expected to be related. However, problematic use, defined in this study as the perception of one's own addiction, is more likely to show such an association. 2) This study seeks to determine which specific platforms are associated with higher levels of depression and anxiety. As previous studies have found such associations in Facebook, Instagram, and Twitter, it is expected that these findings will replicate. 3) Those who score higher in active use of social media, rather than passive use, will score lower in anxiety and depression.

Study 2 is a qualitative exploration of SMU as it relates to young adults' formation and maintenance of self-concept. This type of study uses open-ended responses to help the authors gain an understanding of the ways that adolescents perceive their own use of social media, and the motivations behind using social media to increase self-concept clarity. Rather than using quantitative data, qualitative data will allow for a broader discussion of the perceptions that the participants have related to their social media use. The authors hope to gain a nuanced and varied set of perspectives that share some common themes. It is expected that some participants will express conflicting views about the negative and positive effects of social media simultaneously. Participants are likely to describe the way they view themselves through the lens of their own social media profiles. They may also recognize that social media helps their peers present false attitudes or behaviors. Those who use social media less frequently are expected to report a reduced influence of social media on their sense of self-concept. Those who engage in social media more frequently are expected to report a higher external influence on their self-concept. Further, they are expected to engage in social media out of a desire to stay

connected to the world around them, or to do so out of a desire to comply with social norms.

## **Method**

### **Sample**

Participants (N = 98) included undergraduate university students at a mid-size Midwestern university between the ages of 18 and 21. The current study targeted a population that has been able to use social media to formulate self-concept at an earlier point in life. Students were recruited on a volunteer basis; no select sampling method was utilized. The survey was accessed through the university's online portal for study participation, and the students of an introductory course to psychology were incentivized by obtaining course credit for their time. The data was examined for instances of indiscriminate or incomplete answers, and such records were removed from the sample, leaving a response pool of 79. Of these participants, the study was somewhat racially diverse, with Caucasians representing 50.6% of the population, African-Americans representing 39.2%, Asians representing 3.8%, Pacific Islanders representing 1.3%, and 5.1% identifying as "Other." Disproportionate gender representation was present, as males represented only 18% of the analyzed sample. No participant declined to identify their gender, and all participants identified as either Male or Female. Ethical approval for the study was obtained by the IRB at Eastern Illinois University, where data collection was based.

### **Measures**

A demographics questionnaire requested information related to the students' race, gender, age, the types of platforms they use, and the hours spent per day/week using

those platforms over the past two weeks. In addition, participants indicated on a 5-point Likert scale the ways in which they engage in each platform used. This scale was used to determine the participant's active or passive use, with low scores indicating active use and higher scores indicating passive use. Participants indicated the degree to which they feel they are "addicted" to, or dependent on, social media. This section of the questionnaire read "Do you feel you are addicted to social media?" "Do you feel you are dependent on social media?" and "Do you think about social media even when you are not using it?" To each question, students could choose between the responses "Not at all" "A little bit" and "Yes, often" which were respectively coded with a 0, 1, and 2. The scores to each question were added to find the total addiction score, ranging between 0 and 6.

The Beck Anxiety Inventory (BAI) is a 21-item, multiple-choice self-report inventory that is designed to measure the severity of anxiety in both adults ages 17-80. It discriminates from depression due to its items which describe emotional, physical, and cognitive symptoms of anxiety. It can be completed in under ten minutes. Each question asks participants to report the extent to which each symptom has affected them in the past week at four levels: Not at all, mildly, moderately, or severely. Scores range from 0 to 63 points. The internal consistency of the BAI is about .92 and reliability is .75 (Beck, Epstein, Brown, & Steer, 1988).

The Zung Self-Rating Depression Scale (ZSDS) is a 20-item, multiple-choice self-report inventory that is designed to measure the severity of depression in adults, which can be completed in under ten minutes. The questionnaire includes 4 domains related to depression including pervasive effect, physiological equivalence, other

disturbances, and psycho-motor activities. A 4-point scale was used to score the questions with a range from 25-100. Split-half reliability of the ZSDS is .73, with an internal validity of .69 (Zung, 1965).

### **Procedure**

#### **Study 1**

The participants of Study 1 ( $N = 79$ ) completed all measures in the form of an online survey hosted by Eastern Illinois University's Qualtrics server. The data was then pulled from the Qualtrics responses and gathered to be analyzed in SPSS. Participants read a brief introduction to the study, outlining its nature and the kind of questions which would be asked, then those who wished to continue clicked on a button which read "I understand the nature of the study and wish to continue" as an indicator of informed consent.

Students were provided with a list of 9 popular social media platforms and were asked to indicate how many hours per day or week, on average, they used each social media platform. The total amount of time spent for those who indicated daily use on a specific platform was multiplied by the number of days in one week. This total was added to the weekly amount of time spent on other, less frequently used platforms. The weekly total amount of time spent on all platforms formed each participant's "composite" time spent using social media. Given that the total number of hours available in one week is 168, any student who overestimated their time spent using social media above this amount were not included in the analysis. The responses provided on this section of the survey was also used to indicate the number of platforms each participant uses on a weekly basis.

Students rated their own perceptions of being addicted, dependent on, or preoccupied with social media in a series of 3 multiple-choice questions. The responses to each question were coded on a scale of 0-3 based on the participant's selection. The scores from these questions were added to create the participant's "Addiction" score. Students were then asked to indicate their level of passive or active use on each platform they used. Active use was described as "only posting or leaving comments," coded as a 1 when selected by the participant. "Spending more time posting comments than reading content" was coded as a 2. "Spending the same amount of time posting comments and reading/watching content" was coded as a 3. "Spending more time reading content than posting or commenting" was coded with a 4. Passive use, a score of 5, was described as "Only reading or watching content." The average score across platforms used for each participant was used to quantify the students' active or passive use of social media. Upon their completion of the surveys, students were shown a debriefing form which provided them with the researcher and the faculty sponsor's contact information in the event of any further concerns, feedback, or queries.

## **Study 2**

The second part of the study included a qualitative response through a series of short written essays. Students were given the option to provide responses solely to the online portion of the study (Study 1) or to provide their online and written answers simultaneously for additional credit. Of those who participated, 27 chose to provide written responses exclusive to Study 2. These students entered a research lab in groups ranging in size from 2 to 5. The participants were individually instructed to type out their responses to 7 short-essay questions and to use as much time as possible to consider the



content of their responses. Students were provided with one hour to complete their written answers. The time spent to answer the full set of questions ranged from 20 to 45 minutes. For this section of the study, consent was obtained by providing the participants with a detailed outline of the methods in which their confidentiality would be protected, as well as the nature of the study and the types of questions to which they might respond to. Students signed forms to indicate their informed consent. Upon their completion, students were given a debriefing form which provided them with the researcher and the faculty sponsor's contact information in the event of any further concerns, feedback, or queries. The seven questions included in the qualitative section are found in Appendix D.

The first question asks the participant to describe the function of their social media use. For example, some may use social media for connection to peers, while others may primarily use social media to keep up with current events. Question 2 helps the author understand the perceived role, or lack thereof, of social media as it relates to self-concept clarity. Question 3 specifies how social media relates to the formation of self-concept in earlier years, while question 4 focuses on the current impact of social media on self-concept, or the maintenance of self-concept clarity. Question 5 inquires about the self that is displayed on the platforms that the participants use. This question seeks to examine the congruence or incongruence of the self that is displayed online, and the mechanisms that an individual uses to understand their own identity. Question 6 allows the researcher to discover the student's perceptions of social media in general. This question is also designed to provide insight as to how SMU has provided benefits or drawbacks for the student's mental health. The final question is intended to further identify the importance of social media's role in self-concept clarity.

The data was analyzed using a bracketing technique for thematic analysis. The anonymous responses were grouped by question and analyzed for recurring themes. Concepts or ideas which were expressed by more than 2 participants were categorized and further analyzed for the specific ideas expressed in their respective category. Categories were broken down into more specific subcategories, outlined in the results section.

## **Results**

### **Study 1**

Eight of the nine available platforms were indicated to be used for at least one hour per week by at least one participant, however the number of platforms used by any given student never exceeded 6. “Musical.ly/TikTok” was the only platform which was not indicated to be used by this sample in any capacity. 60% of the sample scored between 0 and 2 on the perceived addiction scale, while 40% scored between 3 and 6, with a mean of 2.15.

Pearson correlations were the major analyses used in this study. Correlations between many factors were conducted. The different variables exhibited various relationships with one another. See Table 1 below:

Table 1

*Correlation Coefficients Between Study Variables (N = 79)*

Variables	1	2	3	4	5	6
1. Depression	--					
2. Anxiety	.418***	--				
3. Total Time Spent Using	.111	.081	--			
4. Platforms Used	-.103	.171	.400***	--		
5. Addiction Score	.216	.076	.237*	.250*	--	
6. Active Score	.061	.008	-.229*	-.032	-.342**	--

Note: \*\*\* =  $p < .001$  \*\* =  $p < .01$  \* =  $p < .05$

Hypothesis 1 predicted that those who perceive their own addiction to social media will score higher in depression and anxiety. A correlational analysis was performed which resulted in a non-significant relationship between perception of social media addiction and depression,  $r(79) = .08, p > .05$ . or anxiety,  $r(79) = .22, p > .05$ .

Hypothesis 2 predicted that those who spend more time using Facebook, Instagram, and Twitter were more likely to score higher in depression and anxiety. Correlational analyses showed no such significant relationship; that is, no social media platform was more significantly related to anxiety and depression than another. Further, the total amount of time reportedly spent using social media was not a significantly associated with scores of anxiety,  $r(79) = .08, p > .05$  or depression,  $r(79) = .11, p > .05$ .

Hypothesis 3 predicted that those who scored higher in active use would score lower in depression and anxiety. A correlational analysis was performed which showed a non-significant relationship between the type of use and depression  $r(79) = .06, p > .05$  or anxiety  $r(79) = .01, p > .05$ .

Observations of the correlations in Table 1 reveal that the number of platforms used was significantly associated with the total time spent using social media. That is, those who used multiple platforms were more likely to perceive the increased amount of time they spent using social media,  $r(79) = .40, p < .001$ .

Through a correlational analysis, the total time spent using social media also showed a significant positive relationship with the participants' perception of their increased addiction to social media. Those who perceived their increased time spent on social media also perceived themselves as being more addicted,  $r(79) = .24, p < .01$ .

Correlational analyses also showed that those who used more platforms also scored higher in the perception of their own addiction,  $r(79) = .25, p < .01$ .

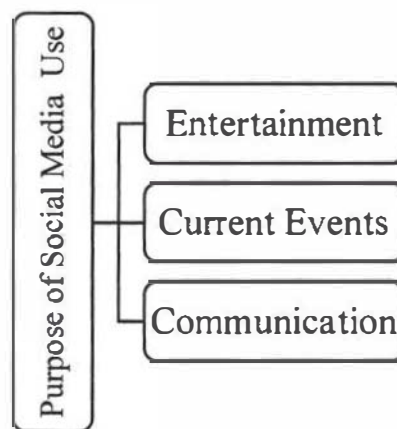
The total time spent using social media revealed a significant relationship with the type of use; correlational analyses revealed that more time spent using social media was related to active use,  $r(79) = -.23, p < .01$ .

The perception of addiction was also associated with the type of use, revealing that those who perceived an addiction to social media reported engaging in more active use,  $r(79) = -.34, p < .001$ .

## **Study 2**

27 students provided answers to all seven short-answer essay questions. The first question sought to gain knowledge regarding the reasons and motivations for the

respondents' social media use. The responses provided yielded 3 main categories for motivations behind social media use: Entertainment purposes; Learning or maintaining knowledge of current events via the news and other media outlets; and sharing or communication purposes. 25 (93%) of the respondents cited two of these three categories when describing their purpose for using social media, while one respondent indicated using social media for all three categories. One of the students denied the use of social media to serve any specific purpose.



10 respondents (37%) reported using social media for entertainment purposes. Included in this category were those who reported using social media to occupy their time, for seeking out humorous content, watching videos involving cooking or baking techniques, watching videos which simulated a satisfying sensation, and online shopping. Three such responses which exemplified these categories are provided: *“I use most of social media for entertainment... I use Facebook to look at funny pictures... I watch YouTube to... have a good laugh while watching something I enjoy.”* *“I also enjoy watching recipe videos and Dr. Pimple Popper. I use Instagram to have a cute profile of creative pictures I take.”* *“I use social media for my entertainment. I post things on social media. I post things like pictures or comments. I watch videos.”*

13 (48%) of the respondents reported using social media to maintain an understanding of current events. Subcategories included tracking the status of a) celebrities, b) sports, c) TV shows, and d) general public knowledge and current events, such as what might be found on the news. The following statements encapsulated the content presented in this category: *"I use social media be up to date with what's going on in the world, and to see what the new trends are."* *"I use snapchat for news and... I use Instagram to keep up with sports/TV references."* *"Social media also allows me to keep up with celebrities, music, and shows that I enjoy."* *"I also use social media to get information as far as news, sports, famous people's live, etc."* *"I enjoy reading updates that goes on in society."*

In the responses, students also indicated actively or passively using social media. Indirect methods of communicating with friends and family were noted and categorized as passive use: *"[I use social media]to... see what's new in the outer world and to keep in touch with friends that way without exactly communicating with them."* *"I mostly use it for looking at what my friends and family post."* *"To keep myself updated with old friends and keep in touch with family members. I enjoy reading updates that goes on in society."*

Active use of social media was also represented in some responses, most notably from a student who reported using it as an outlet for personal reflection: *"I use it to express my own thoughts and feelings about what's going on in my life."* *"I use it to post about my life or my thoughts on things, as well as view other's thoughts."*

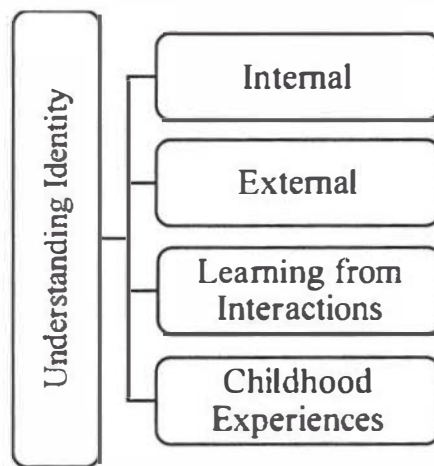
Two students indicated boredom as a reason to engage in social media, stating *"I use it to help the time go by throughout the day."* *"I use it to entertain myself when I get bored."*

Sharing and communication was another popular topic among the respondents, represented in 16 (59%) of the responses. Included in this category was any response which indicated a desire to exchange messages with friends, contact family members, gain a sense of belongingness to another group, connect with new people, and forward entertaining content to friends and family. One student noted that her friends influenced her use of social media: *"I use Snapchat to message my friends, because we don't really text anymore. We just like to message over Snapchat, I just joined in and went along with it."*

Other responses represented in this category include the following: *"I use it to mainly talk to my friends. I have a lot of internet friends and using social media sites allow me to communicate to them even though live far away from me."* *"To keep in touch with my family and friends."* *"To talk to people and to feel as though I am part of a group of like-minded people."* *"I use social media to stay in contact with family and friends that I am not around all the time. Also I use it to connect with new people."* *"I use social media to keep myself updated with old friends and keep contact with family members."*

Given the propensity for social media to facilitate self-promotion, it was expected some students may indicate using social media for purposes of gaining notoriety or marketing themselves, however only one of the participants indicated using social media for this purpose, reporting that she used social media to promote and expand her business.

Students were then asked to describe what makes them understand their own identity. This second question did not prompt for the students to relate their answers specifically to social media, instead indicating what factors outside of it, in addition to it, helped them understand their own forms of understanding who they are or how they form their self-concept. Four categories were created from the responses: Internal influences; External influences; Learning from Interactions; and Childhood Experiences. Only one respondent explicitly denied social media influence on their sense of identity.



Internal influences were reported by 15 (56%) of the participants and included any response which indicated an individual's knowledge of their own interests, hobbies, thoughts, self-esteem, beliefs, reactions, goals, and personal moral code: *"I love to sit down and play video games from time to time. Playing video games allows me to focus and helps with my reaction time. Exercising allows me to feel achievement, when I set a new personal record on a lift or make a lot of baskets (basketball) in a row, I feel very happy when I am able to work harder and develop more skill... I also understand myself when I work on my studies. I have always been the type of person that has been pretty good at all subjects throughout school... When I work to improve my knowledge in any way it helps me realize that I can achieve any goal I set, and shouldn't give up if*



*something gets tough.” “I feel like my personality helps me identify my own identity. I have a strong personality and it shows who I am. If I am really struggling with who I am as a person I often take a moment and sit back and think about who I am, and why I am that way. If I do not like something I will try to change it.” “My interests in sports, running, baking, Netflix, etc. are a small part of my identity.” “Talking about things that are important to me and things that bother me help me understand my identity. Such as speaking up about what I believe or what inspires me to people or even just writing it down helps me realize that these components of myself make up who I am.” “I guess my hobbies and... my future goals and dreams play a role in understanding my identity.” “The thing that helps me understand myself the most consistently is introspection. The less time I have to do that, the less I feel I have a handle on what is going on with myself internally.” “Understanding what I like, who I aspire to be, who I like to surround myself with, and what’s most passionate about.” “Self-love and being able to identify what I love about myself and being comfortable in my own skin.”*

External influences included any response which indicated an individual’s reliance on outside forces. These might come from peers, family, authority figures, or strangers. Students who indicated external influences on their identity typically relied on statements, criticisms, or forms of praise. 13 students (48%) reported external influences as a factor in forming self-concept: *“Seeing how I interact with others and noticing the groups I hang around.” “My friends definitely influenced me because I see some things they are doing and I want to tag along.” “I think what helps me understand my own identity is the things i go through in life like my bad and good experiences, life lessons, adventures and journeys I have taken or I may even take in the future.” “I also talk to*

*friends and like to ask them what they think of me and I use their answers to have a better understanding of how others see me... What others say about me does effect on how I understand who I am." "I use the way others view me as a way to know where I actually stand in society." "I think my friends help me understand my own identity by telling me how I am. I realize how I actually act because I am around them most of the time. I think I play a role in my own identity as well but for the most part my friends and family play the biggest part." "What the majority of people notice the same thing about me is what also helps me understand my own identity."*

Four students described a specific event or interaction which allowed them to think more deeply about themselves and their connection with those around them.

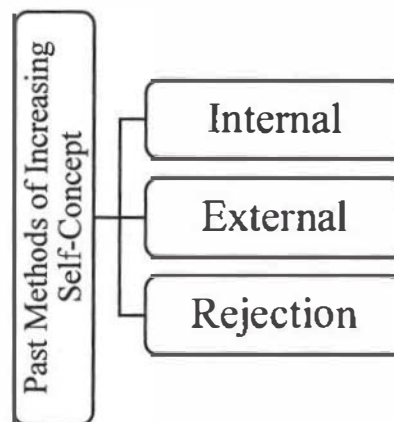
Alternatively, students whose responses fell into this category discussed a deeper internal influence which extended into external domains or their interactions with others:

*"Different experiences help me understand my identity. If there is a situation and I become angry, I know that there was a line drawn for me. The next time a situation similar to the past one comes up, I will know how to handle it because I learned something about myself that I maybe did not know about before hand. Something else that helps me understand my own identity is if a friend comes to me asking advice on a situation, I will be able to tell him/her my input and also take that advice and use it for myself. There is a possibility that I had not thought of that reasoning before and realize that I am helping myself as well." "If I am really struggling with who I am as a person I often take a moment and sit back and think about who I am, and why I am that way. If I do not like something, I will try to change it." "When I wake up, I already know how I would want to act in a situation. So I would like to consider myself as taking things on as*

*a like sort of challenge. But I challenge myself, I challenge my own character a lot. So I don't know how I would give an example, but I like to be independent of myself I guess that's how I would like to present myself in my head. Strong and independent. So going out every day I would test out how I handled the day. I would have to use other people's responses to my actions to gauge how independent I am. When I go out I hold myself to a very high standard while trying to remain humble. I used the way others view me as a way to know where I actually stand in society."*

Childhood experiences or one's upbringing were also a factor: *"Knowing where I came from and the experiences that I have been through have helped me understand my identity and what I stand for as a person."* *"Remembering where I came from and the people I care about reminding me of who I am."* *"What helps me understand my own identity is my life's experiences. My up's and down's, my twist's and turn's. How I was raised by my parents and other responsible people that have a big influence on me. My talents also describe who I am as a person. The compliments I get sometimes, the bullies that I faced, and the obstacles that I overcame also play a role in who I am."* *"I have a strong personality and I think it shows who I am. I also feel like my family helped to create that. I grew up in a strict household so I am not a trouble maker. My friends definitely influenced me too because I see some things they are doing, and I want to tag along."*

Respondents were then asked how social media has been used in the past to create a better understanding of themselves. Students were free to discuss either intentional or unintentional motivations. Three categories were yielded from the responses: Rejection; Internal; and External influence.



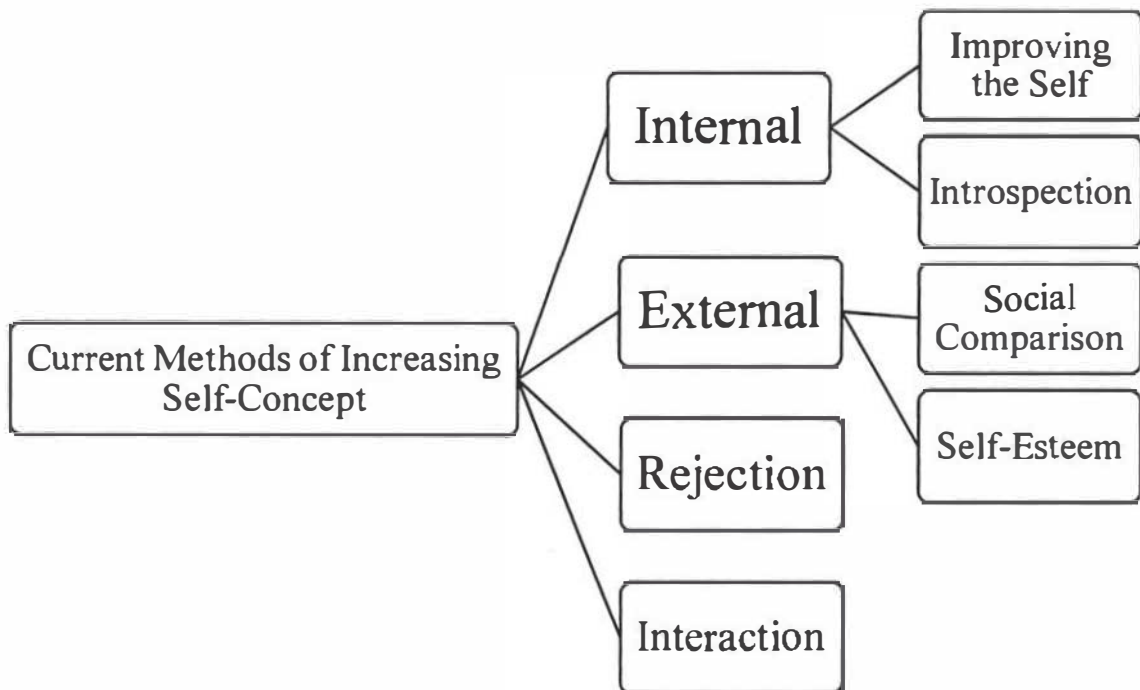
The Rejection category included any response in which a student rejected the idea of being influenced by social media in the past, or minimal influence, which was not related to the student's sense of self-concept. The following four statements encapsulate the main types of responses in this category. *"I've really only used social media as a way to have a good laugh. I mean I guess social media has shown me what I find funny, but other than that really nothing. I use social media but I could definitely be without it. I believe my life would be a lot worse and I wouldn't be the student I am today if I had used a lot of social media. I have just never found a reason to devote my life to needing something that is not good for my well-being."* *"It doesn't help me with that at all. Social media is very fun and addictive but no where near real."* *"I never really relied on social media to help create a better understanding of myself. I was never social media savvy or that interested in social media to use it as a resource to better understand myself. I more so relied on real life and other things than a social media account."* *"I understand myself pretty well without social media. The reason why I say that is that if you are you than only you can understand yourself. Social media does nothing but broadcast people and things that are interesting at times, but it can also bring destruction at times..."*

Eleven students (41%) indicated internal influences of social media; in this category were responses which mentioned their own interests, values, personal goals, introspection to their own reactions to content, or self-improvement. *“Social media also allowed me to have a better understanding of the things that I could believe in. It helped me stray away from what my parents believe and allowed me to have my own opinions and beliefs on things that I did know even know I could have. It allowed me to start liking new things and really opened up a whole new world of things that reflect on who I am.”* *“The only way social media help me understand myself is the access to videos about sports they give me. YouTube has countless and countless amount of sports videos, workouts and highlights on it. My goal is to become a football player and I played it my whole life so I always used it for motivation and help to become a better athlete.”* *“When I would see people post negative things on social media about themselves or others, I would simply feed into it. In the pasts I would just watch and wonder what is going on with them. Recently, if I see things like that, it is easy for me to remove that person. Seeing negativity on social media has helped me understand that I am an optimistic person and would rather not see bad things posted about people.”* *“I would just read what my friends or people who I knew would post. If I agree or disagreed with something in my head I would just tell myself “I don't wanna be like that or I wouldn't have handled the situation like that” and I would just figure out how I would respond to things if I would have agreed or disagreed.”*

The external category included any response which mentioned motivations involving “fitting in,” getting feedback from others, fear of judgements, and positive or negative self-esteem. Self-esteem was mentioned in 3 of the 6 responses which fell into

the External category. Below are examples of the External responses: *"I didn't really use social media as much as I do now because back then I would try to "fit in" with the crowd and see what all the hype was about."* *"In the past, I have let social media and the people that post on social media opinion's help me understand myself. I thought that I should live by certain people's post and judge myself how social media judges others."* *"I used to be very shy until I feel like I got social media. I am a very humorous person and getting "likes" on things has definitely helped me to feel better about myself. I used to delete Instagram posts if they were not getting enough likes because I figured it must have been a bad picture, which sounds dumb now but at the time it was really something that bothered me."* *"In the past I feel like I didn't have a good understanding of myself and would just post to make people like what I was posting. I would look at different people's posts and think I wanted to be like that. A lot of these accounts came from skinny girls that were models that had bodies that I wanted."*

The fourth question asked respondents how social media currently impacts one's view of oneself. Four categories appeared in the responses: Internal; External; Interaction; and Rejection, the former two of which were divided into sub-categories.



Internal responses to this question was comprised of two sub-categories:

Improving the self, and Introspection. The former of these subcategories were assigned to responses which indicated a self-directed goal or an active effort to strengthen one's personal values: *"Social media has ... made me think of trying to sell some things online for marketing business."* *"Social media influences the way I look at myself by showing me how I do not want to be. The things that I see on social media now absolutely disgusts me. People on there are way out of pocket and it makes me so glad that I am the way I am."* *"I also now follow different fitness and nutrition accounts that help motivate me to be a more healthy person and develop healthy habits as opposed to the models and Instagram influencers that I used to follow."*

The second subcategory, Introspection, was assigned to responses which seemed to carry a main theme of self-reflection, insight on the self, or exploring and defining a concrete view of the values, interests, or beliefs that characterize the individual: *"Social media reflects me now a lot as well. Being older and having the time to read and post*

*really shapes me and lets me expand my views, beliefs, and a lot of other smaller things like music.” “Now today I would use social media kinda as a journal or diary, especially Facebook. I just use it to share things that I agree with and that encourage me, things that I find funny things that I agree with, what I’m feeling at a certain point in time all of that. Sometimes I would look up certain memes that I’m agreeing with or memes that are funny or lift me up and I would share them” “I see myself as introverted and very laid back. I have always thought these things about myself but now that social media has been enhanced and used more by others, it really helped me to see I carry or present myself differently and I don’t care so much about being seen. It helped me see my priorities might be different than others but I might be wrong because anyone can portray themselves as they want to on social media. it has helped me to see that I am free spirited and authentic as well.” “I tend to compare myself to other people on social media who are on it much more than I am and use it as a way of showing myself that I’m not obsessed with social media.”*

Responses characterized as an external influence were those which appeared to come from sources outside of the self rather than self-directed, independent goals. These responses fell into 2 sub-categories: social conformity, and self-esteem. Such responses appeared to indicate motivation to define oneself by their approval or reactions from others rather than a strengthening of personal identity. Responses falling into the social conformity group were those in which students identified attempts to present content they felt that others enjoyed, regardless of the content they wanted to produce themselves: *“It has made me feel that I have little handle on what I am purely like as an individual and*



*has caused me to notice much more than in real life that I will say most things and do most things based on my perception of what other people might want.”*

The effects of social media on self-esteem, be they positive or negative, were also included in this category. Self-esteem appeared to be affected by the frequent intake of information and images presented by others, which impacted the ways a participant might view themselves, especially in comparison to those they were viewing: *“Social media has actually made me feel really self-conscious. I do not get on social media to look at others that are considered “perfect” but I have scrolled past them. Seeing people that look like they are “God’s gift to the world” does not help someone who feels opposite. I do not think that I’m unattractive or worthless. But I do think seeing attractive people on social media has made me feel more self-conscious about myself.”* *“Social media in all honesty makes me more confident and aware. I post a lot of things and I get a lot of compliments. Those compliments boost my ego and makes me more confident. It also shows me how talented and determined I am. I actually use social media to build myself. I do youtube and that helps get me out there and my other social medias I’m getting them big enough to the point to where they can become small businesses and I can start getting paid to be on there.”* *“I mean maybe if a few girls put the heart eyes emoji in my comments or something then I would feel happy and a bit confident.”*

Interactions made up a small category, with three of the participants describing social media’s influence as means to strengthen one’s bonds with family or friends. Given the number of participants who described communication as their primary function for social media, it is unsurprising that this topic arose again here: *“Social media has helped me put myself out there and interact with other people.”* *“Sometimes I would look*

*up certain memes that I'm agreeing with or memes that are funny or lift me up and I would share them. When I would share them I would hope that maybe my friends would see what I'm posting and maybe I might inspire or entertain them in a way, almost like communicating with them indirectly." "I now use these platforms primarily to interact with friends and family who I do not see very often. I have transitioned from simply killing time to building relationships with the people around me."*

11 students (41%) indicated that social media currently has either no influence or very minimal influence on the ways they view themselves; that is, social media was rejected as a medium to strengthen or weaken one's self-concept at the current stage in life: *"I try not to let social media influence the way I view myself now. I understand that I should view myself based on my behavior and interest not on how social media views the world." "A lot of social media now is corny, and very stereotypical. I don't view myself in the way social media does now." "Now, I realize that social media is mostly b.s. people only post what they want others to think of them, so I know nothing on there is how it seems. I do not get on social media to "creep," I literally just use it for memes because they make me laugh and put me in a better mood. Sometimes I will go through phases where I am creeping on a celebrity and think to myself "wow they are so pretty their life must be so nice" but I eventually snap out of it and try and focus on loving myself for who I am."*

The fifth question had two parts: How might you present yourself differently online than you are in real life? Is doing so a choice you consciously make, or does it happen automatically?

Students were expected to provide mixed responses depending on the context of their social media use. Indeed, respondents noted differences between the ways they presented themselves on different platforms due to the varied nature of the platforms and the purposes they serve in one's interactions: *"On twitter, I am absolutely the same person on and offline. I retweet things that I would say or find hilarious if I saw or heard it elsewhere. I post as if I am talking to my friends. Instagram is a little different because I would not ever post an "ugly" picture that I may take on snapchat. I kind of limit and have a "bar" I guess you could say that my pictures need to meet before I post them. I always try to post pictures where I look the best on Instagram. Snapchat however I send really ugly pictures so I am comfortable with myself." "I'm myself no matter where I'm at or how people are viewing me. What you see from me is what you get. But the only exception is when I'm making youtube videos. Sometimes I might need to act like somebody else."*

Though most responses indicated a mix of both genuine and false online presentations, 20 respondents denied presenting a false self in at least one context: *"I don't think I would present myself any different online, I am comfortable with who I am and I don't think that social media should affect that. I'm not really concerned with what others think, I think who I am and my interests are just fine. If people want to see me then they deserve the real me and not someone that is made up." "I think I present myself online as I am in real life. I don't want to have a fake life or seem fake on line and have people say that I'm a fake person or I just post things to make myself look better. I have the same personality and beliefs online and the same ones in real life." "NO, I act the exact same. People that are different on the internet are LAME." "I do not really present*

*myself differently on social media. I am the same on social media and off. I like representing myself the right way and truthfully, so that is what I do."*

13 (48%) students reported presenting a false self in at least one context, citing a variety of reasons for doing this. Those who reported disingenuous online behaviors usually did so for one of 4 reasons: To filter the content in order to maintain a sense of privacy; to focus on their own positive traits; to reduce the negative perceptions from others; or to explore a different or less prominent aspects of their personality: *"I might not post everything. Such as the way I feel, where I am going everyday, etc. I present myself differently in person because everything is not appropriate to post."* *"I use Instagram in particular as a type of "memory bank" and I almost completely only include things in my life that I enjoy or happy days of my life. I only put memories in there which I want to keep, and the bad parts of my life are therefore kept off of social media because I do not want to think about those things."* *"Presenting myself as an outgoing adventurous person happens automatically. The pictures I post are because I am adventurous, it just doesn't show how difficult it was for me to do something new."* *"I usually present myself in a manner that takes away all of my negative qualities, such as fear, anxiety, uptightness, etc. Those things never make it into the things I post."* *"On my Instagram I would say present myself more feminine though, this just so happens that the post I like or want other to see would be this way."*

Students were also quite adept at exploring the conscious and automatic nature of their false presentations, or were apt to explore the reasons that others express such behavior when they themselves did not. Some appeared to struggle when deciding the conscious or automatic nature of false presentations on social media: *"I would like to feel*

*like it is a conscious choice that is being made I consciously choose what I post on my feed. But I don't post anything on my feed that I wouldn't relate to in real life." "I would say that I present a better version of myself on social media. I feel like it's just an automatic thing that happens; however, I make the conscious choice to choose what I look best in and what might make people think I'm funny. I know that people I like follow my accounts and I want to look good to them. My Instagram is full of me wearing nicer clothes and my hair done but in real life I am usually dressed comfy and my hair a little messy." "I believe it is an automatic response to put the good things that happen in life on social media but to keep the bad things off." "I do believe that if someone presents themselves differently that it starts out as a conscious choice, but then develops to happening automatically."*

The sixth question students answered identified student perceptions of the positive and negative effects of social media. Unsurprisingly, most students (25 of the 27 respondents) were able to identify at least one positive aspect of using social media. Among the positive effects, the gaining of knowledge, easy communication, expanded social circles, more effective introspection, a coping mechanism, and increased self-esteem were identified: *"Positive: lets me send funny things to my friends, let me see funny memes, see what everyone is up to; a place where I can feel like I am allowed to express myself." "Seeing the videos I watch on Facebook has a positive effect on me because at the end of the day when I want to cry from anxiety attacks, the videos calm me down and relax me." "As far as positive effects go, social media has made me more aware and kept me updated with global happenings." "In areas of positivity, it has given me an outlet to discuss things with people that I normally never get the chance to in real*

*life. Also, it has made me feel as though I'm a part of a community or group of the kind of friends that I haven't been able to make in real life." "The positive effects would include being aware of things that are happening nationally and internationally, making sure to keep in contact with friends, and reassuring myself that I am doing fine in life." "Positive effects it had on me is I get to help people have a better day if they are not having one and I get to make sure my family or friends are okay." "Being able to keep track of all of my old and new friends and family. Social media makes it possible to be able to stay in touch. I grew up overseas and my parents still work there so talking with them and seeing what they are doing has been the best thing that social media has done for me." "On social media positive vibes are also around from the quotes and videos people post. These things help give me motivation to be happy and remain positive at all times."*

22 respondents (82%) reported at least one negative facet of using social media. Among negative effects, reduced productivity (procrastination), preoccupation with other's activities (FoMO), and decreased self-esteem were identified. Some of these negative effects are characteristic of previous definitions of addiction-like use or problematic social media use: *"Negative effects that social media has had on me is that it has made me a little more self-conscious and that it has wasted a little of my time." "The negative affect social media has had on me include letting other people's opinion change who I was and sometimes adding drama to my life." "Social media has ruined some relationships of mine and has caused unwanted chaos." "One of the negative effects that social media has had on me is creating a false image of people's lives that can make me feel bad about my own." "I can say one negative effect is that I rely on social media too much and it had become a distraction in my life. I like to be on there when I'm driving, at*

*work, in class and even doing homework.” “I lose focus on my schoolwork because I always try to see what’s going on if I miss out on something sometimes I fall behind because I don’t pay attention.”*

At least 5 (19%) students identified overattachment to social media, making such statements as “I can get too attached sometimes.” or “I cannot go a week without checking it.”

The final question students answered read “Imagine that you suddenly stopped using all social media. How would you feel? How would it affect your sense of self? What would be the costs and benefits of doing this?” This question served to explore in greater depth the likelihood that students do indeed perceive negative effects of social media despite their continued use. Most students who identified negative changes also identified positive ones. Only 2 students did not report expecting a positive change to occur at all, while 6 students did not expect a negative change to occur. Students who expected positive change in response to giving up social media cited improved time management, reduced social comparison behaviors, greater and more involved exploration of one’s hobbies: *“I would have a lot more time to study and work on my life as whole. I think my life is good, but even one more hour of extra time seems amazing.”* *“I feel like it would definitely help me out as a person because I would have no posts to compare myself to and put myself down over. Sometimes I feel the need that I have to post when I go somewhere nice or do something cool and if I quit using it I feel like it could help me to enjoy and live in the moment more. It would help my phone battery not die so quickly. I would be able to focus more time on other things such as the people around me or maybe even my schoolwork.”* *“After getting used to it being gone, I think I would feel*

*better about the person I am instead of strive to be someone else. I would like to not feel anxious all of the time, but I think not having social media might take away my insecurity over it.” “I would feel more free. I would have more time to go out and enjoy life without being on my phone. Also I think I would have more time to do things I never did before or read more books to learn new things.” “I would be way more occupied doing the things I want to do, I wouldn’t be as distracted, and I wouldn’t be on my phone as much.”*

4 respondents identified times they intentionally reduced their use of social media, citing a mix of positive and negative influences. These reductions in social media use were reportedly associated with improvements in mood, self-efficacy, and time management, as well as reductions in social awareness: *“The benefits definitely outweigh the cost. I have cut my social media intake by 90% over the last month and I feel much more free and easy going than I did two months ago.” “I have stopped before I stopped Facebook for a week and Snapchat and I felt way better. I was more relaxed and able to go to the gym do homework and clean up my room. The only thing I didn’t like about it was the fact I didn’t know what was going on with the celebrities and my friends online. It made me realize that me and some of my friends only know each other online because without Facebook me and them didn’t talk for that week since I wasn’t online to comment or share on their post. It basically made me realize that media in some way is effecting how we verbally communicate because we barely call or communicate with people in person.” “I would miss it if I stopped using social media. I appreciate the compliments I get on social media and wouldn’t like to not have that confidence boost. There is a benefit to not having social media too since you don’t have to worry about what people are saying about you and posting. I have gone without social media on a retreat and it felt*



*good to get away from it for a bit but I was glad to have it back when the trip was over.”*

*“In high school there would be periods of times where I would deactivate all of my social media sites just to clear my mind and gain a better focus on things because social media can be toxic and sometimes distracting.”*

Several negative changes in response to a cessation of social media use, such as a loss of identity or purpose, boredom, and FoMO were expected from those who had not already attempted to stray from such frequent use: *“Just imagining myself without social media is a weird thought to me because I use it all the time and it takes up a lot of my time. I honestly would feel lost and not know what to do, I don't remember my life before I started using it. I think it would affect my sense on myself in a negative way solely because that is where I allow myself to speak freely about myself, what I like and what I believe. It would also be taking away the platforms where I met some of my best friends and I talk to them more than I do my friends in real life. I would probably lose some of my beliefs because I am not able to be up to date with what others are saying about them. I also think I would lose interest in the things that I love because I talk about them and share about them on social media.”* *“I guess one cost would be that I would “miss out” on what people close to me are posting so I won't be aware of everything.”* *“I would be losing the friends that I've made and the connections we've made... I would also be giving up finding a consistent group of people that seemingly have the same interests as I do even though I know it would be much more rewarding to find one in real life even if it were a lot harder to find (or at least require more effort).”* *“There would definitely be a void or a sense of incompleteness I would feel because I would say about 20% of my daily activities involve the use of social media.”* *“I think it would make me feel different*

*because I am used to this habit and it's hard to break... The cost breaking the habit and the benefits is having more time for yourself." "I would feel that I am separated from the world and I would not like it because that's how a lot of people stay in contact these days is through social media. I would just feel lost because a lot of news that people hear about is through social media."*

## **Discussion**

### **Study 1**

This study examined the relation between one's perception of social media addiction, specific social media platforms, and the type of social media use to symptoms of depression and anxiety. Other studies have previously associated problematic social media use with depression and anxiety, and individuals who perceived their own addictive behaviors, especially with those related to online content, were more likely to experience psychological distress and decreases in self-esteem. (Grubbs, Stauner, Exline, Paragament, & Lindberg, 2015; Fioravanti, Dettore, & Casale, 2012). However, the current study did not replicate these findings in students who perceived their own addiction to social media use. The current study also did not find that those who perceive their own addiction to experience higher scores on scales measuring depression and anxiety, conflicting with previous findings which suggest those who engage in problematic use do experience these declines in mental health (Becker, Alzahabi, & Hopwood, 2013; Jasso-Medrano & Lopez-Rosalez, 2018; Jenaro, Flores, Gomez-Vela, Gonzalez-Gil, & Caballo, 2007). The correlation between depression and perception of addiction nearly reached significance at an alpha of .058, but this result did not extend to

anxiety. Future study may explore the strength of relationships and the differences in effects of social media on anxiety and depression.

The current study found that not specific platform predicted symptoms of depression or anxiety more than any other, though previous findings have found a relationship between problems in self-esteem and platforms which exposed users to more images, such as Instagram (Kircaburun, Alhabash, Tosuntas, & Griffiths, 2018). Further, the number of platforms used were not associated with significant differences in depression and anxiety as previous studies have found (Primack, et al., 2016). It is possible that symptoms of depression and anxiety as a result of SMU do not appear significant when measured at a clinical level, however it is possible that the significant factor would be the number of students who experience mild, sub-clinical symptoms is significant when compared to students who do not engage in the same amount of SMU. This assumption could further explain results from previous studies which do not find problematic social media use to significantly impact depression or anxiety when measured at a clinical level (Jelenchick, Eickhoff, & Moreno, 2013). Similarly, the effects of social comparison on mental health symptoms may be prevalent at a non-significant level.

Though active and passive users likely have different habits related to their social media use, this was not a factor which was found to predict anxiety or depression. Several factors, including the exposure to unrealistic body-imagery and cyberbullying, could confound this variable. While the data did not support the idea that type of use was associated with depression or anxiety, those who reported spending more time on social media were also more likely to report engaging in active, rather than passive, use. Of

course, this is likely the case given the extra time one must take in order to create, distribute, and compose posts, comments, or replies. Engaging in discussion forums could take significant research to answer questions accurately, as could engaging in arguments – all activities of which constitute active use. The nature of passive use indicates one is less involved and therefore spends less time preoccupied with or engaging in social media content. It is likely that passive use is associated with using while bored.

While general public opinions may assume young adults do not perceive their addiction to social media, this was not found to be the case. Students who reported using multiple platforms were also aware of the increased time they spent, and reported higher average daily and weekly social media use overall. Those who reported using social media more frequently also reported feeling more addicted. Students who scored lower in passive use were also more likely to report feeling addicted to social media, as were those who reported more active engagement. It is possible that the frequent engagement in content, rather than the simple consumption of it, indicates a deeper level of processing involved, and could increase the likelihood that an individual is preoccupied with the content they have engaged in, which the student perceives as feeling addicted. For example, if a student is involved in an argument, they may spend more time outside of the interaction formulating a rebuttal to another user's response.

## **Study 2**

Question I: Respondents supported the finding that social media was used for communication between family and friends (Jin & Park, 2010). Further, their responses indicated indirect forms of communication through passive behaviors.

Students who indicated using social media for these purposes conveyed a sense of needing to remain current with societal trends. It is possible that these desires can be linked to what the literature describes as FoMO. Considering the vast amounts of content available on social media, it is not surprising that an individual might be viewed as spending excessive amounts of time on social media when attempting to remain up-to-date about such a large variety of topics.

These responses exemplify passive use of social media to maintain contact with others, simply by viewing profiles or updates without providing feedback or directly responding to the individual. Similarly, students noted that using social media was a vehicle to keep in touch with those they see infrequently. Again, this may be related to FoMO-like desires to maintain constant up-to-date working knowledge of the events, choices, and experiences that friends or acquaintances are engaging in. Literature has previously associated preoccupation, FoMo, and boredom with problematic use (Jenaro, Flores, Gomez-Vela, Gonzalez-Gil, & Caballo, 2007). Responses to this question indicate an unconscious transition into using a social media platform for messaging as a result of the social group's change in communication habits, or could indicate the pressure of FoMO to remain updated with one's peers.

Question 2: Students identified internal, external, interactional, and childhood experiential factors which helped them understand their own identity. Even in students who did not explicitly list social media as a method for which to understand themselves, the pervasive nature and social pressure to engage in social media highly increase the ways students are influenced in both direct and indirect ways. Of the four categories provided by the students, it appeared that internal and external influences in particular are

most likely to be strengthened by the ways social media perpetuates an individual's reflection of oneself or interacts with others. Internal desires and personal goals can be expressed and explored through social media outlets, and external forces, such as social conformity or the desire for others to react to positive depictions of oneself, could be perpetuated on social media platforms.

Question 3: Some students were expected to reject the idea of using social media as a means of understanding oneself in the past. This was indeed the case due to the vulnerability of some students to be susceptible to the addictive nature of social media. Respondents perceived problematic behavior in related to social media use, such as time-wasting, preoccupation, and negative impacts on relationships or self-esteem. Other students expressed a separation of social media from in-person presentations of the self.

For those who indicated internal influences in forming self-concept through social media, introspection was a common theme among the respondents. Users who considered their own responses to other's public arguments or interactions internalized their reactions to understand themselves rather than interacting. This is one of the ways passive use can be manifested in social media use. Those with internal influences also found ways to work on their personal goals through the passive participation of viewing content related to their interests; of course, it is likely that active use could serve similar purposes. Those who were influenced by external factors in the past were mostly motivated by social interaction, conformity to expressions of beauty, and FoMO. Self-esteem is most likely to be influenced by external motivations for social media use.

Question 4: Compared to past behaviors, some students reported experiencing a reduction in the ability of social media to influence false-presentation behaviors over

time. It is likely that the novelty of social media has waned, and students become less susceptible to the social pressure brought on by external factors than in the past.

Alternatively, students may become less vulnerable to social media's influence as they age. Further study will be needed to determine long terms trends in the level of influence individuals are most likely to experience. Others who indicated that social media did not affect them may have been subject to self-reporting bias or social desirability bias.

Students who indicated they were motivated to use social media for self-improvement purposes usually has a goal in mind; to pursue a business, to become healthier, or to improve or reinforce their commitment to their own values or character traits. Given the accessibility of social media and online content in general, working on one's goals has never been easier. Time spent working on these goals via passive social media viewing could be perceived by others as addictive behavior, which could explain some of the media-sensationalized view of social media consumption as problematic. One student noted that she compared herself to others and felt the time she spent using social media was stark in contrast to others. This may indicate that the prevalence of using social media has simply led to changes in social norms. Students who reported false-self presentations were typically categorized as having external motivations. However, the motivation to impress or please others was also reported to motivate the individual to become more similar to the version of themselves that was presented online.

Students also discussed a natural inclination to interact with others due to the social media's ability to allow them to access those they might otherwise be out of contact with. Throughout the short-answer questions, students were apt to bring up the increased ability to communicate with others through social media, and the topic was

again mentioned as a primary influence for students in this question as well. Respondents discussed the influence to interact with others as a means of improving their own and others' well-being. Noted in other responses, students typically perceived this increased ability to communicate in indirect ways as a positive influence. These responses lend credence to the idea that younger individuals enjoy learning to navigate social media as a new form of digital literacy.

While some students rejected the idea of using social media as a means to influence their self-concept or behaviors, they appeared to simultaneously struggle with the pervasive influence of idealized imagery found online on platforms such as Instagram. However, students appeared to perceive a reduced influence of these images on their self-esteem over time. Perhaps as students become older, their awareness of unrealistic beauty standards, filters, and editing becomes heightened. Alternatively, they may be more likely to be exposed over time to the behind-the-scenes practices of social media celebrities and models to enhance photos, leading to a reduction of the influence of such images.

Question 5: The majority of students reported they did not consciously choose to provide false presentations of themselves on social media. However, selective presentation was more common. Some students reported a conscious discrepancy between the real self and the online self. Others expressed derisions toward those who filter their content, and were outright in their opinions that false-presentations on social media represented a deficit in character.

Predictors of false-self presentation are most likely not universal across all social media platforms, as the different platforms serve different functions, demographics, and



purposes. These factors also change across age groups due to the varied algorithms which cater to different populations. These platforms also differ in their levels of accessibility and the number of users to which they provide their services. Privacy settings are yet another factor which may be expected influence false presentation behavior, but this was not mentioned among the respondents. Those with stricter privacy settings may be less inclined to present false-presentations due to the increased likelihood that those who can view their content know the user personally. Those with fewer privacy settings may be more concerned about outside sources viewing their profile. These individuals may be more highly motivated to use their social media for professional presentations, and would therefore be more selective of the content with which they engage in. This may be especially true for active users, as their propensity to share more proactively increases the likelihood that their social media activity will be seen by strangers.

Those who purposefully engaged in false or selective presentations identified doing so out of a need to promote oneself, as a means of reflecting on positive aspects of one's activities, or to behave in a way that matched up with an individual's ideal version of oneself. One of the respondents perfectly described such behavior, as the individual reported presenting a filtered self-presentation on one platform but not another. The decision to do so appeared to be based on the idea of who would see it, or how likely the content was to have real-world influence. Other factors included privacy, the intended audience and size of audience, if it was intended for humor, or if the recipient was familiar. That is, messages intended for broad audiences were more likely to be selective, whereas smaller, more familiar audiences were more likely to receive genuine presentations.

Students appeared to be aware in some cases and unaware in others when engaging in false-self presentation behavior. Perhaps they consider the filtering of negative content as a form of compliance with social norms, the same way one might filter their own language or behavior in certain social settings. Indeed, one of the respondents appeared to be motivated by the idea that her online behavior may translate to face-to-face interactions, and would not like to be perceived as being deceitful should they meet in person.

Question 6: Most students identified both positive and negative effects of using social media. Though they did not express nuance with respect to the separation of normal versus problematic use of social media, students were aware of the addictive potential, and the harmful effects of social media on self-esteem. Some students reported feeling unable to escape social media, and despite previous mentions of attempting to take breaks from it, were relieved when they used it again. These sorts of characteristics are similar to those who experience other types of behavioral addiction, such as video gaming or gambling (Fioravanti, Dettore, & Casale, 2012; Grubbs, Stauner, Exline, Paragament, & Lindberg, 2015).

Respondents appeared to support the idea that social media can act as a protective factor against stress. Many students reported using it specifically to expose themselves to humor, calm the mind, or lift the mood. YouTube in particular may provide easy access to guided meditation, white noise, and music or sounds which help promote rest. However, the number of individuals who use these resources to improve mental health are unknown, and further study must be done in order to determine the significance of the effect.

The positive effects of social media were balanced with negative effects as well. The respondents were perceptive of the effects of FoMO, such as time consumption, distraction, and using the cell phone in inappropriate settings. Descriptions of these problems were characteristic of addictive behaviors, similar to that of other behavioral addictions (Fioravanti, Dettore, & Casale, 2012). One student reported that these behaviors create problems that extended to school and personal settings. Students also perceived the impact of unrealistic beauty standards in image-heavy platforms to reduce self-esteem, and identified the overabundance of selective presentations of others to impact self-esteem. Similar to findings in other qualitative studies, students of ethnic minority status identified social media's ability to create a community space in which they felt they belonged, as opposed to in-person communities in which they may have felt ostracized (Kelly, 2018). That the respondents were perceptive of the negative effects which have the potential to decrease functioning in school or work lends itself to the addictive nature of social media. In particular, younger individuals (and their parents who control their access to social media) would benefit from understanding more about this potential early on in order to make more informed choices with regard to their engagement with social media.

Question 7: Students were slightly more likely to expect positive changes in self-concept or mood states if they were to give up social media use. Overall, respondent's expectations for the proposed scenario were mixed. Many respondents expected an adjustment period should they suddenly be unable to use social media, and after this adjustment period, the positive effects would provide long-term improvements in focus, time management, relationships, and self-esteem. Those who had already experienced a

self-imposed “vacation” from social media reported both positive and negative effects, and none were motivated to continue their cessation of social media use entirely. One respondent discussed how her active social media use improves her self-esteem, and such a loss may reduce the protective factors in her personal life. Similarly, many respondents perceived the loss of information and accessibility to current events as negative consequence, and such descriptions are indeed characteristic of FoMO. The expected loss of relationships and communication were another identified risk of cessation from social media use. In other questions, one student included in her response a fear of reduction in the literacy of face-to-face communication as a result of social media’s domination of interactions. Thus, it appears that students share public perceptions of social media’s impact on reductions in face-to-face communication skills.

Students who commented “*I would feel lost at first.*” “*I would feel bored for a while,*” “*I would feel like something is missing,*” also expressed addiction-like descriptions of their social media use, and provided further evidence that they perceived the use of social media as an unproductive means of passing time. Indeed, the respondents expected to perceive themselves as being preoccupied by what they were missing should they give up social media, again lending credence to the idea that FoMO is a driving force in the problematic use of social media.

### **Limitations**

Several limitations were extant in this study and must be considered when interpreting the results of the current study. Threats to internal validity in this study may include self-report bias, social desirability reporting, and extreme response bias. Self-reports were unreliable, especially for the number of hours spent on social media. Several

participant's responses were excluded from the data as they totaled a number of average weekly use that was higher than the total number of hours in one week. Participants who volunteered for this study may leave the results susceptible to selection biases as this was a non-experimental design. Additionally, participants may have had a special interest in social media use and addiction, possibly impacting the results or impacting the nature of their responses. This study was completed using electronic survey methods, leaving it vulnerable to other limitations; the period of time in which student were recruited to participate may have been too short (4 weeks) to reach a sufficiently representative sample. Indeed, the sample was non-representative, thus the results of this study may not be applicable to all groups.

This study did not account for any stigmatized association students may have with the label of "addiction" to social media. Students were likely to experience defensiveness over the nature of this topic. Though special care was taken to reduce stigmatizations associated with the word addiction through alternative language and phrasing, it is likely that some individuals were more perceptive to the intent of the study than others. It is expected that some answers provided were inorganic in their content due to a social desirability effect. Such answers, which were excluded from the analysis, included those which provided surface-level descriptions of the expected responses without further elaboration on the personal effect of the topic to the individual.

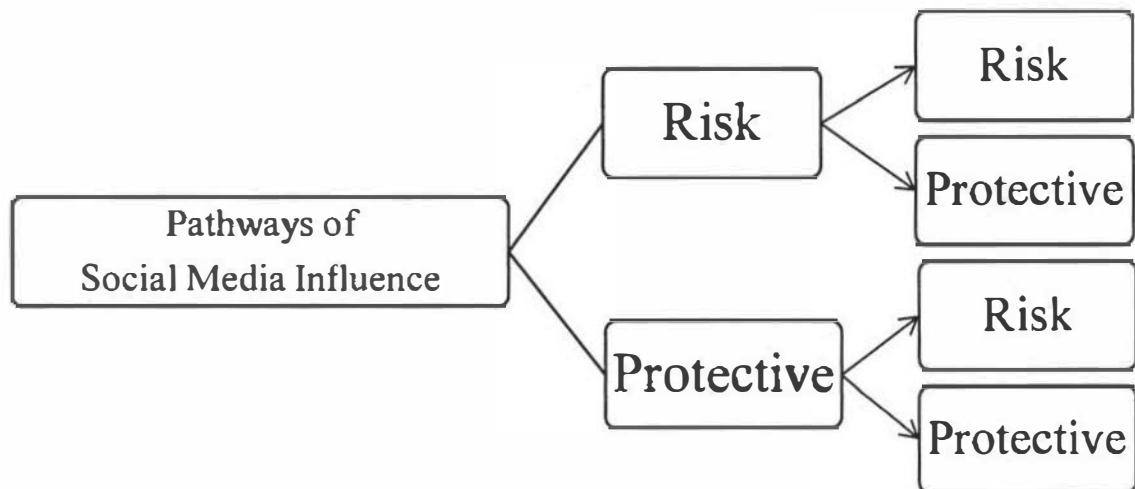
## **Conclusions**

To summarize the findings presented in this study, the researcher found that students who used more social media platforms and spent more time using social media were more likely to perceive themselves as being addicted. Students who used more

platforms also tended to engage in more active than passive use, and students who used more actively were also more likely to perceive themselves as having an addiction to social media. Neither depression nor anxiety were related to social media addiction, number of platforms used, specific platform use, type of use, perception of addiction, or time spent using social media. Some gaps in the literature were tentatively answered by the qualitative responses by students, who reported that false-self presentation behaviors do not occur as a means of overstating their positive attributes or participatory activities. Rather, students use selective presentation behaviors as a means of preserving privacy, complying with social norms, or as an attempt to focus more on positive aspects in their own and others' lives.

Students reported on several occasions a fear of missing out on current events, communication, and peer activities. Students were motivated by a mix of both internal goals and external influences to continue their engagement with social media. Students were also perceptive of problematic engagement of social media. It appears that over time, many perceived a reduction in the influence of the negative impacts of social media related to self-esteem. However, many perceived FoMO-like behaviors over which they did not feel they could control, and similar statements were made about the passive use of social media to engage in unproductive activity. While students identified false-presentation behaviors, students reported being more likely to engage in selective presentation as a means of preserving privacy or a sense of professionalism, or to behave in compliance with social norms. This was also done as a means of preserving one's own positive well-being as well as those close to them who may be exposed to the content they posted online.

The adjustment to social media may produce specific pathways in which individuals maintain online platforms. One of these pathways can be described by the use of social media as a protective factor, which provides the individual with a platform to engage with others, then turning into a risk factor depending on the social circles and behaviors that the individual engages in. Alternatively, social media may start out as a risk factor in the way it influences the individual's self-esteem, then turns into a protective factor as the individual develops and begins to use the online platforms for internally directed purposes. Other pathways may describe social media beginning as a risk factor which increases in risk over time, or as a protective factor which becomes more protective over time.



An intersectional approach must be considered when assessing an individual's pathway, taking into account age, ethnicity, personality type, type of engagement, length of time using social media, motivation of social media use, vulnerability to social comparison, and types and the number of platforms used. In order to reduce long-term

negative effects of social media on self-concept, platforms can take measures to reduce the ways that individuals engage in social comparison. Instagram has already done this by adding a feature which allows users to choose not to see the amount of “likes” on others’ profiles. Other features could be added which detect the use of filters or other such photo-enhancing applications, then allow the user to restrict such images from their feed.

Future studies may focus on the long-term fluctuations in the level of influence that young adults and teenagers experience as a result of social media. The influence may change in relation to the rise and fall of various new platforms over time, the type of content presented on the platforms, cohort effects, or age. While further study must be done with nationally representative groups in order to create a normed scale, the creation of a social media risk assessment may greatly impact the way professionals can identify a young person’s vulnerability to the risk factors, or their predisposition to benefit from protective factors.



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## Appendices

### Appendix A: Demographics Questionnaire

Gender

- Male
- Female
- Nonbinary
- Other
- Prefer not to answer

Age:

(Students submit a typed response)

Ethnicity

- Caucasian/White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other (please specify):

- Prefer not to answer

Do you feel like you have an "addiction" to social media?

- No
- A little bit

- Yes

Do you feel like you are dependent on using social media?

- No
- A little bit
- Yes

I think about social media even when I am not using it.

- Not at all
- Some of the time
- All the time

**Appendix B: Beck Anxiety Inventory**

	0 - It didn't bother me at all	1 - Mildly, but it didn't bother me much	2 - Moderately, it wasn't pleasant at times	3 - Severely, it bothered me a lot
1. Numbness or tingling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Feeling hot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Wobbliness in legs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Unable to relax	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Fear of worst happening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Dizzy or lightheaded	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Heart pounding or racing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Unsteadiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Terrified or afraid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Feeling of choking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Hands trembling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Shakiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Fear of losing control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Difficulty breathing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Fear of dying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Scared	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Indigestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Faint/lightheaded	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	0 - It didn't bother me at all	1 - Mildly, but it didn't bother me much	2 - Moderately, it wasn't pleasant at times	3 - Severely, it bothered me a lot
20. Face flushed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Hot/cold sweats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Appendix C: Zung Depression Scale**

	A little of the time	Some of the time	Good part of the time	Most of the time
1. I feel down-hearted and blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Morning is when I feel the best	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I have crying spells or feel like having one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I have trouble sleeping at night	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I eat as much as I used to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I still enjoy sex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I notice that I am losing weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I have trouble with constipation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. My heart beats faster than usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I get tired for no reason	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My mind is as clear as it used to be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I find it easy to do the things I used to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I am restless and can't keep still	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I feel hopeful about the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I am more irritable than usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I find it easy to make decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I feel that I am useful and needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. My life is pretty full	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	A little of the time	Some of the time	Good part of the time	Most of the time
19. I feel that others would be better off if I was dead	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I still enjoy the things I used to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Appendix D: Short Essay Response Questionnaire Used in Study 2:**

1. What do you use social media for?
2. What makes you understand your own identity?
3. In the past, how have you used social media to help you create a better understanding of yourself?
4. How does social media influence the way you view yourself now?
5. How might you present yourself differently online than you are in real life? Is doing so a choice you consciously make, or does it happen automatically?
6. What are the positive and negative effects that social media has had on you?
7. Imagine that you suddenly stopped using all social media. How would you feel? How would it affect your sense of self? What would be the costs and benefits of doing this?

**Appendix E: Informed Consent Form: Study 1****Welcome to the research study!**

We are interested in understanding how Social Media Use affects Anxiety, Depression, and Self-Concept formation. You will be presented with information relevant to these topics and will be asked to answer some questions about them. Please be assured that your responses will be kept completely confidential.

The study should take you one hour to complete, and you will receive credit for your participation. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Emily Baker at [Enbaker2@eiu.edu](mailto:Enbaker2@eiu.edu).

By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

- I consent, begin the study
- I do not consent, I do not wish to participate



## **Appendix F: Informed Consent Form: Study 2**

### **The Influence of Social Media: Depression, Anxiety, and Self-Concept**

#### **PRINCIPAL INVESTIGATOR**

Emily Baker

Department of Clinical Psychology, EIU

205-218-2125

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#### **PURPOSE OF THE STUDY**

You are being asked to take part in a research study conducted by graduate student Emily Baker and faculty Dr. Russell Gruber. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve.

Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

The purpose of this study is to discover the ways in which the use of social media influences formation of self-concept in young adults. This study also examines levels of depression and anxiety in students who use social media.

#### **STUDY PROCEDURES**

You will fill out a self-report measure of depression, a self-report measure of anxiety, and a demographics questionnaire where you will also note the frequency and type of social

media use you engage in. You will then be asked a series of questions about your formation of self-concept and the ways you feel social media has impacted your life. The self-report measures and demographics questionnaire should take no longer than 15 minutes to complete, and the follow-up questions are estimated to last between 30 and 45 minutes. You will not be asked to stay longer than one hour to complete the study. Your answers to all questions will be kept confidential and no identifying information will be linked to you.

## **RISKS**

No risks are anticipated with your participation in this study. You may decline to answer any or all questions and you may terminate your involvement at any time if you choose. Should you experience any emotional distress, you will be given a reference to the EIU counseling center at the end of the study.

## **BENEFITS**

There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study may better understand the mechanisms behind harmful effects of excessive social media use.

## **CONFIDENTIALITY**

Your responses to the survey and the interview will be anonymous. Please do not provide any identifying information (such as your name) in your responses. Every effort will be made by the researcher to preserve your confidentiality including the following:

- Assigning code names/numbers for participants that will be used on all research notes and documents
- Keeping notes, interview transcriptions, and any other identifying participant information in a locked file cabinet in the personal possession of the researcher, or on a password-protected file or an encrypted USB.

Participant data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. These incidents include, but may not be limited to, incidents of abuse and suicide risk.

### **CREDIT**

You will receive one hour of SONA credit for your participation. You may withdraw from the study at any time without risk of losing your credit.

### **ELIGIBILITY**

You **must** be between the ages of **18 and 21** to participate in this study.

### **CONTACT INFORMATION**

If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the Primary Investigator, please contact the Institutional Review Board at (865) 354-3000, ext. 4822. If you would like to discuss a problem with the primary investigator, please use the contact information at the top of the page, or contact Dr. Russell Gruber at [regruber@eiu.edu](mailto:regruber@eiu.edu) or by phone at 217-581-6614.

### **VOLUNTARY PARTICIPATION**

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect your eligibility to receive credit. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

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### **CONSENT**

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Investigator's signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix G: Debriefing Form****Debriefing Form**

Thank you for participating in this study as a research participant in the present study regarding anxiety, depression, self-concept, and social media. The present study tests whether active or passive social media use is related to depression and anxiety. This study also seeks to find out information about how social media relates to self-concept.

If you have any questions regarding this study, please feel free to ask the researcher at this time, or Dr. Russell Gruber (email: [regruber@eiu.edu](mailto:regruber@eiu.edu)). In the event that you feel psychologically distressed by this study and are unable to contact the primary investigator, we encourage you to contact Amanda Harvey at the EIU counseling clinic (email: [Ajharvey2@eiu.edu](mailto:Ajharvey2@eiu.edu)). You may also call 217-581-3413 Monday-Friday or the emergency hotline 1-866-567-2400 after regular business hours.

Thanks again for your valuable participation.