SOCIAL MEDIA USAGE, NEGATIVE MOOD REGULATION EXPECTANCIES, AND EMOTIONAL OUTCOMES

A Thesis By

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Abstract:

Using social media has been linked to negative emotional outcomes. Yet not all studies find that social media damages users' mental health. It is possible that a moderating variable that interacts with social media usage may influence negative emotional outcomes. Negative mood regulation expectancies (NMRE), the belief a person has about their ability to cope with their negative moods, moderate relationships of stressors with negative emotional outcomes. This study examined NMRE as a potential moderator of the relationships of social media usage with depression, anxiety, and loneliness.

Adults 18-29 years old (N = 459) who used social media platforms were surveyed online. After accounting for variance explained by demographic variables, simultaneous multiple regression results showed that NMRE moderated social media usage's relationships with anxiety and loneliness, but not with depression. The moderation was greater for loneliness than for anxiety. Among the high NMRE group, those with the lowest social media usage had the least loneliness. High NMRE enhanced social media usage's relationship with loneliness, rather than buffering the relationship.

Results imply that a clinical intervention to treat highly lonely clients engaged with social media should increase their confidence about coping with negative moods. One shortcoming of this research was measuring usage with the Social Media Use Integration Scale (SMUIS). Social media research will be hampered until a universally agreed upon construct of usage is developed with a valid measure.

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CHAPTER 1

INTRODUCTION

The present study explores the associations between social media usage and emotional outcomes. Social media have defined our experience of the 21st century (Williams et al., 2012). They have revolutionized how we communicate with each other, becoming the electronic version of word of mouth, with billions of people creating trillions of connections each day. By 2013, 10 years after inception, 60% of all Americans used social media (Pew Research Center, 2021). After 2014, the growth rate started to flatten, but social media usage still dominates society. Facebook, Snapchat, Instagram, Twitter, and YouTube are the largest global social media platforms. For example, 70% of all U.S. adults use Facebook daily, and the company has 1.84 billion daily users globally (*10 Facebook statistics*, 2021; *About Facebook*, 2021). According to the Pew Research Center (2020), about 75% of all U.S. adults use at least one social media site. According to Hruska and Maresova (2020), the average adult uses multiple platforms simultaneously for six hours every day.

By 2003, the second generation of the Internet developed into Web 2.0 (Ellison & Boyd, 2013; Kaplan & Haenlein, 2010; Matei, 2011; Williams et al., 2012), which enabled continuously modified, content-rich web pages created through simultaneous dynamic collaboration. From Web 2.0, social media platforms evolved. “Content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion" (Kaplan & Haenlein, 2010, p. 61). Social media platforms publish user-generated content using Web 2.0 technology.

Social Media Usage and Negative Emotions

Social media's rapid growth in popularity over a brief period leads to the question of why social media usage has surged. Discovering the purpose of people’s social media daily usage may give insight. Whiting and Williams (2013) proposed that people use social media to satisfy seven personal needs: (1) social interaction, (2) information seeking, (3) passing the time, (4) entertainment, (5) relaxation, (6) communicatory utility, and (7) convenience. Steinfield et al. (2008) asserted that people

use social media to gain social capital[1] and self-esteem. Ngai et al. (2015) validated the conclusions of Steinfield et al. (2008), stating that social media usage provides social benefits to people like increased social capital (i.e., one's perceived worth in society) and social influence. Lastly, Hoffman and Novack (2012) stated that people use social media to accomplish several goals: (1) relating to others, (2) autonomy and competence, (3) external locus of causality (i.e., determinants of behaviors), and (4) defining their social identity. All four articles agree that social media provide social and personal gratification. Pursuing gratification via social media usage leads to emotional outcomes.

Internet and digital technology research claim that the emotional outcomes are negative. An early article on negative outcomes claims that greater Internet use is associated with increased depression and loneliness (Kraut, 1998). Moreno et al. (2012) proposed a U-shaped association between Internet use and depression among older teens. Low and high Internet use groups scored higher in depression (i.e., PHQ-9 scores) versus the medium use group that scored lower. A peer-reviewed longitudinal study by Twenge et al. (2017) found that more new media screen time correlated with increased depression. Wadley et al. (2020) assert an emergence of a new field of research crossing technology usage with emotion regulation, which they named digital emotion regulation.

Social media research trends suggest a possible association with negative emotional outcomes. However, much of the research is correlational, meaning that casual inferences cannot be drawn. When studying the relationships between emotions and social media, Kalpidou et al. (2011) found that spending more time on Facebook correlated with lower self-esteem. Pantic (2014) says in an article published on the National Institute of Health's website, "Several studies have indicated that the prolonged use of social networking sites (SNS), such as Facebook, may be related to signs and symptoms of depression" (National Center for Biotechnology Information, 2014, p.1). Kross et al. (2013) showed that Facebook use predicts negative shifts in well-being (i.e., affect and life

1 Steinfield et al. (2008) define social capital as “an elastic construct used to describe the benefits one receives from one’s relationships with other people” (p. 434).

satisfaction). Repeated measures analyses showed that the higher the Facebook usage, the worse participants felt and the more their life satisfaction declined. In a follow-up study, Verduyn et al. (2015) added experimental and longitudinal evidence that passive (i.e., scrolling and viewing) but not active (i.e., posting and commenting) Facebook usage undermines affective well-being. Hunt et al. (2018) did an experimental study of undergraduate students' negative emotional outcomes related to using Facebook, Instagram, and Snapchat. They assigned participants to either a control group or an experimental group that limited their social media use. They concluded that limiting use to ten minutes per platform per day significantly decreased depression and loneliness.

Lin et al. (2016) surveyed a nationally representative sample of 1,787 U.S. young adult users of the 11 most popular social media platforms and split the sample into three groups based on the amount of social media visits per week. After controlling for covariates, the highest users were more depressed than the lowest. Shensa et al. (2018) followed up on Lin et al. (2016) by surveying 1730 U.S. young adults, who detailed their time and frequency of social media usage. Shensa et al. (2018) also found that higher usage was associated with more depression and anxiety. Primack et al. (2017) similarly surveyed a national representation of U.S. young adults and found an association between using multiple social media platforms and depression and anxiety. Vannucci et al. (2017) studied U.S. young adults who used seven of the top social media sites and found that more social media usage was associated with greater anxiety.

Other research, in contrast, concludes that social media usage is not associated with negative emotional outcomes. For example, Hampton et al.’s (2015) study for the Pew Research Center found that frequent social media users did not have higher stress and more negative emotions. Banjanin et al. (2015) conducted a cross-sectional observational study of high school students in Serbia and found no relationship between time spent on social media and depression. Furthermore, Coyne et al. (2020) conducted an eight-year longitudinal study on adolescents and found no association between social media usage and increased anxiety or depression.

Some researchers have found complex associations between social media usage and negative emotional outcomes. Gonzales and Hancock (2011) showed that viewing one's own Facebook profile enhances self-esteem rather than diminishes it. Boursier et al. (2020) did an experimental study on adolescent boys and found an inverse causality, in which social image anxiety led to problematic social media usage. Tandoc et al. (2015) discovered from surveying 736 college students that Facebook usage's prediction of depression was inconclusive. However, when they added the mediator of envy to the hierarchical regression, the model significantly predicted depression. It is evident that the field has contradictory findings regarding whether and how social media usage is associated with negative mood outcomes.

One reason research in this area has contradictory findings is there is no standard definition for the construct of social media usage. Most studies define the construct as self-reported hours, but Verbeij et al.'s (2021) convergent validity study found significant differences between adolescents' digital trace data and their self-reported time online. Other studies measure the construct as social media engagement: "the integration of its use into the daily lives and social behavior of users, as well as the emotional connection a user develops to the media rather than simply frequency-of-use estimates" (Jenkins-Guarnieri et al., 2013, p. 47). Overall, Sigerson and Cheng (2018) concluded there is mixed evidence of content, structural, and convergent validity within and between the different usage measures, concluding "each one still needs additional validation work" (p.102). Thus, some scales of social media "usage" actually measure how much people use social media, while other "usage" scales measure a personality characteristic that represents the strength of a person's need for spending time on social media. While these two constructs are surely related, they are not the same construct. This disagreement about how to operationalize usage is a serious impediment to this field of study.

Two meta-analyses highlight additional variables contributing to the relationship between social media usage and depression, suggesting the need for future research to discover more such factors. Baker and Algorta (2016) reviewed 30 empirical studies and deduced no conclusive positive

or negative association of social media usage with emotional outcomes. They recommended further research to determine potential mediators and moderators of social media usage's relationship with emotional outcomes. Similarly, Ivie et al. (2020) conducted a meta-analysis of 11 studies of 92,371 adolescents and found a small but significant positive relationship between depressive symptoms and social media usage. However, “high heterogeneity along with a small overall effect size observed in the relationship between self-reported social media use and depressive symptoms suggest that other factors are likely to act as significant moderators of the relationship” (p.165). Baron and Kenny (1986) reasoned that a moderator variable should be sought when there are inconsistent or weak relationships between independent and dependent variables. This inconsistency is certainly true of the relationship between social media usage and mood outcomes. One potential moderator of the relationship of social media use with affect is negative mood regulation expectancies.

Negative Mood Regulation Expectancies

Negative mood regulation expectancies (NMRE) (Catanzaro & Mearns, 1990) are defined within Rotter's (1954, 1982) social learning theory as people's confidence that, when they are upset, they have the capacity to alleviate their negative mood. Research has been done in the last 30 years on the moderating effect of a person's NMRE on the relationship between stress and pathological outcomes (Catanzaro & Mearns, 2016).

Social media usage behavior can be predicted using Rotter's (1954) social learning theory. The foundation is his predictive formula: BP = f(E & RV). BP stands for behavior potential or the likelihood of exhibiting a particular behavior. E is expectancy, the probability of the behavior leading to a particular reinforcer. RV is reinforcement value, which is the degree of preference for an outcome to occur. For the current topic, social media usage (BP) is a function of its reinforcement value (RV)—which is how much someone wants the outcomes that come from social media use such as social capital and influence (Ngai et al., 2015; Steinfield et al., 2008) and social and personal gratification (Whiting & Williams, 2013)—and the expectancy (E) that social media will provide those outcomes.

Wright and Mischel (1982) contended that moods influence E, goals, and RV. They induced participants into one of three moods: happy, neutral, or sad. They gave all groups the same task and manipulated performance outcomes of success or failure. The study showed that, compared to happy participants, sad participants had lower E—meaning they were less confident that they would succeed. Similar results occurred for participants' minimal goals, which is the lowest level of reinforcement that is still satisfying. However, sad participants with a failure manipulation raised their minimal goals, so that minimal goals exceeded E. The study concluded that negative affect combined with failure leads to self-defeating patterns of goal setting: irrationally high minimal goals coupled with low expectancies create a vicious cycle of failure that perpetuates negative affect. This irrational behavior explains negative emotional outcomes.

Franko et al. (1985) defined generalized expectancy (GE) for affective self-regulation as a cross-situational expectancy that some overt behavior or cognition will alleviate a negative emotional state or induce a positive one. They found that children possess self-regulatory strategies for coping with sadness and anger, and they have beliefs about whether these coping strategies will be effective.

Kirsch (1985) defined response expectancy (RE) as beliefs about the likelihood of non-volitional outcomes, such as pain or emotions. An example of these self-confirming beliefs is the placebo effect: the belief that a pill will cause a reaction leads to the reaction, even if the pill is inert. Likewise, the more someone expects to experience a certain mood, the more likely the mood will manifest. According to Catanzaro and Mearns (1990), NMRE are a kind of RE, and therefore are partially self-confirming.

NMRE are beliefs a person has about their ability to cope with their negative moods. According to Rotter's formula, the more strongly a person believes they can successfully cope with their negative moods, the more actively they will cope, and the less intense their negative moods will be (Catanzaro & Mearns, 1990). Therefore, there is an indirect path linking NMRE and mood, mediated by coping. According to the RE model, NMRE are also partially self-confirming: expecting to get into a

better mood will result in healthy mood regulation, independent of actual coping. Thus, stronger NMRE protect individuals against emotional distress (Catanzaro & Mearns, 2016). On the other hand, those with low NMRE do not believe their actions will improve their negative emotions, and they are more likely to experience negative mood outcomes. Much research demonstrates how high NMRE people actively engage in behaviors to change their negative moods, avoid maladaptive attempts to cope, and successfully repair their negative moods.

Several studies have concluded that NMRE moderate the relationship between stressors and emotional outcomes (Catanzaro & Mearns, 2016). Catanzaro (1996) measured the effect of NMRE and anxiety on college test performance. Students completed the NMR Scale and a measure of state anxiety prior to taking an examination. The NMRE x Anxiety interaction was a better predictor of exam performance than anxiety alone. Those with the lowest NMRE and highest anxiety had the lowest test performance; whereas, for high NMRE participants, anxiety enhanced exam performance.

Tresno et al. (2013) studied Japanese college students to examine childhood abuse and NMRE as predictors of current self-injury behavior. They found that, regardless of child abuse levels, high NMRE participants engaged in less self-injury. But, for those participants with low NMRE, more childhood abuse related to increasingly more self-injury. Thus, NMRE buffered the effects of childhood maltreatment on self-injurious behavior. Wang et al. (2019) studied Chinese prison police officers to determine if NMRE would buffer the relationship of job stress with mental health. The interaction of NMRE x Job stress significantly predicted work engagement. High NMRE participants were unaffected by higher job stress. For low NMRE participants, though, higher job stress was associated with lower work engagement.

Mearns and Mauch (1998) studied job stress and NMRE in relation to police officers' anger and distress. Those with low NMRE had greater anger. Furthermore, the interaction of NMRE x Job stress predicted distress. For stronger NMRE officers, greater job stress did not increase distress. For low NMRE participants, in contrast, greater job stress was associated with increasingly higher distress. Those police officers with highest stress and lowest NMRE experienced the most severe

distress. In a two-part study, Kaur and Mearns (2021) assessed NMRE as a moderator of the relationship between childhood abuse and compulsive buying. Study 1 found that both NMRE and child abuse independently predicted compulsive buying. Study 2 participants met clinical criteria for compulsive buying. The NMRE x Child abuse interaction predicted compulsive buying: NMRE moderated the effect of child abuse on compulsive buying. Low NMRE and high child abuse participants engaged in the most compulsive buying.

The Present Study

The present study explores the associations between social media usage and negative emotional outcomes. Some research over the last 15 years shows an association between social media usage and negative emotional outcomes such as depression, anxiety, and loneliness. Yet, other studies have inconsistent results that raise further questions. Evidence suggests that assessing a moderating variable that interacts with social media usage may increase prediction of negative emotional outcomes. NMRE moderate the relationship of stressors with negative emotional outcomes. But to date, there is no research about NMRE as a moderator of the relationship between social media usage and negative emotional outcomes.

My research will test four hypotheses.

Hypothesis 1: social media usage will correlate positively with negative mood outcomes of depression, anxiety, and loneliness.

Hypothesis 2: NMRE will correlate negatively with negative mood outcomes of depression, anxiety, loneliness.

Hypothesis 3: both social media usage and NMRE will independently predict depression, anxiety, loneliness.

Hypothesis 4: the interaction of social media usage x NMRE will add significant prediction to the models testing hypothesis 3.

CHAPTER 2

METHOD

Participants

A total of 663 U.S. adults 18-29 years old who were familiar with social media platforms began the study. It was limited to this age range to align with previous social media usage studies. As participation incentive, I offered an opportunity drawing for a chance to win a $100 Amazon gift card. I recruited participants in two ways (see Appendix A). First, I collected a convenience sample of friends and colleagues which amounted to 5%. Second, I targeted 12 subreddits within Reddit associated with mental health, internet, and survey taking under the topic psychological effects of social media which accounted for the remaining 95%. Members from subreddits r/nosurf, r/mentalhealth, and r/psychologyresearch viewed the survey the most[2] and thus the survey was reposted on these sites two more times at two-week intervals. Subreddits r/SampleSize, r/SurveyExchange, r/ SurveyCircle, r/Favors and r/takemysurvey provided the least amount of use, and thus the survey was not reposted on these sites. Administrators of the subreddits r/Anxiety, r/lonely, r/feelings, r/social media and r/Internet rejected my post due to academic survey filters or context of survey topic. According to Reddit analytics of each site, most viewings occurred late night or early morning.

Of those that began the study, 69% passed the data check and completed all measures, leaving 459 participants (*M* age = 24.9, *SD* = 2.63). Of these 459, 83.6% were college educated, while 37.6% had a graduate school education. Participants were primarily white (72.2%) with 59.6% men and 37.3% women. They were 55.6% single/divorced and 43.4% married/with partner. Participants' living situations were 26.8% alone, 14.8% with roommates, 19.3% with parents, and 37.9% with spouse.

2 r/nosurf has 197K members and was viewed 838 times in the first 24 hours. r/mental health has 364K members and was viewed 213 times in the first 24 hours. r/psychology research has 19.4K members and was viewed 138 times in the first 24 hours.

Procedure

After approval from Cal State University, Fullerton's Institutional Review Board, my online Qualtrics survey (see Appendix B) was distributed electronically. I used convenience sampling (5%) and targeted subreddits within Reddit (95%) associated with the psychological effects of social media. At the beginning of the survey, participants were required to read the informed consent and were not allowed to continue unless they checked agreed. The first survey question asked for age range between 18 and 29; if the participant did not answer, they were not allowed to proceed. Next, further demographic items were asked on gender, race/ ethnicity, marital status, education, and living situation. The measurement questionnaires came next. Following recommendations from Mieczkowski et al. (2020), to avoid a priming effect when measuring social media usage's effects on emotional outcomes, I ordered questionnaires involving emotions before measures of social media usage. Participants were given the opportunity to end the survey at any time and took an average of 22 minutes to complete it.

Measures

Depression

The Center for Epidemiological Studies – Depression (CES-D) scale measures current depression symptoms (Radloff, 1977), with 20 items answered on a 4-point scale from *rarely* (0) to *most days of the week* (3). For example, "I thought my life had been a failure," "my sleep was restless," and "I felt hopeful about the future" (reversed scored). The higher the score, the higher the depression. The measure has high internal consistency (α = .85) and a test-retest correlation over a four-week period of .67 (Radloff, 1977). Alpha in this study was .89.

Anxiety

The General Anxiety Disorder-7 scale (GAD-7) (Spitzer et al., 2006) contains 7 items answered on a 4-point scale from *not at all* (0) to *nearly every day* (3). For example, "feeling nervous, anxious or on edge," "worrying too much about different things," and "trouble relaxing." The higher the

score, the higher the anxiety. The measure has high internal consistency (α = .92) and good test-retest reliability of .83 over a 1-week interval (Spitzer et al., 2006). The alpha in this study was .83.

Loneliness

The UCLA Loneliness Scale is a 20-item measure of subjective feelings of loneliness (Russell et al., 1978). Items are answered using a 4-point scale from *never* (0) to *often* (3). For example, “I cannot tolerate being so alone,” “there is no one I can turn to,” and “I feel isolated from others.” Higher scores indicate more loneliness. The measure has high internal consistency (α = .96) and a test-retest correlation over a two-month period of r = .73 (Russell et al., 1978). The alpha in this study was .93.

Social Media Usage

Participants reported their use of seven social media platforms: Facebook, Twitter, YouTube, Instagram, Snapchat, Tik Tok, and Reddit. They rank ordered their favorite platforms and estimated how many hours per week they spent on each. Participants also reported total hours per week and per day. Amount of social media usage measured BP, from Rotter's (1954) social learning theory predictive formula.

I also defined social media usage as platform engagement, measuring attitudes with the Social Media Use Integration Scale (SMUIS), which “measures the integration of the social behavior and daily routines of users, along with the importance of an emotional connection to this use” (Jenkins-Guarnieri et al., 2013, p. 38). The scale was developed specifically for young adults with the premise that engagement is a more useful measurement than hours used. According to Sigerson and Cheng (2018), the SMUIS is the most valid of the 12 social media engagement scales. The SMUIS is a brief 10-item scale: the items measure social integration and emotional connection and integration into social routines. The items are responded to with a 6-point scale from *strongly disagree* (1) to *strongly agree* (6). Higher scores mean more social media use integration into daily lives of users. The SMUIS has high total internal consistency (α = .91) and test-retest reliability over 3-week period of r = .80 (Jenkins-Guarnieri et al., 2013). The alpha in this study was .83.

Though the SMUIS has high internal consistency and is widely used, its content validity appears problematic (Sigerson & Cheng, 2018). Some items measure social media usage behavior (BP, from a social learning theory perspective) like, “I respond to content that others share using Instagram,” and “using Instagram is part of my everyday routine.” Other items measure the intensity of needs related to social media usage (RV) like, “Instagram plays an important role in my social relationships.” And others measure beliefs about the likelihood of satisfying one's needs (E) like, “I would be disappointed if I could not use Instagram at all.”

Negative Mood Regulation Expectancies

The Negative Mood Regulation Scale (Catanzaro & Mearns, 1990) measured NMRE. Its 30 items complete the stem: “When I’m upset, I believe that….” Examples are: “telling myself it will pass will help me calm down,” “thinking that things will eventually be better won’t help me feel any better,” and “I’ll be upset for a long time.” Items are rated on a 5-point scale from *strongly disagree* (1) to *strongly agree* (5). Higher scores represent higher NMRE. The measure has high internal consistency (α = .87), and test-retest reliability ranges from α = .67 to α = .78 over intervals of 3 to 8 weeks (Catanzaro & Mearns, 1990). The alpha in this study was .86.

Demographics

A series of demographics were collected as part of the survey including age, gender, race, marital status, education, and living situation. Nominal-level demographics with three or more levels were subsequently dummy-coded for analyses.

CHAPTER 3

RESULTS

Descriptive Statistics

Depression scores ranged from 0 to 57 and had negatively skewed distribution (*M* = 25.17, *SD* = 10.34), with 81.2% scoring 16 or above, the cutoff for depression (Radloff, 1977). Anxiety scores ranged from 0 to 21 and had a negatively skewed distribution (*M* = 8.59, *SD* = 4.33), with 39.6% scoring 10 to 14 indicating moderate anxiety, and 4.1% scoring 15 to 21 indicating severe anxiety (Spitzer et al., 2006). Loneliness scores ranged from 0 to 60 and had normal central tendency (*M* = 29.30, *SD* = 11.32), with 45.5% scoring 30 or above, indicating high loneliness (Russell et al., 1978). Thus, a large percentage of participants in this study had elevated negative moods.

Self-reported total hours of social media usage per week ranged from 1 to 160, with a positively skewed frequency distribution (*M* = 23.98, *SD* = 18.89). Of the seven ranked platforms, 20.5% of participants chose Facebook as their number one favorite, and 21% chose Instagram and 25% chose Twitter as second favorite. The SMUIS had a normal distribution (*M* = 37.94, *SD* = 8.30), with a range of 15 to 59. Agreement with all 10 questions would give a score of 40 or above (Jenkins-Guarnieri et al., 2013). In this sample, 35% scored 40 or above indicating strong social media behavior engagement. NMRE had a positively skewed distribution (*M* = 97.34, *SD* = 14.19), with a range of 42 to 140. This mean is lower than Catanzaro and Mearns's (1990) validity sample (*M* = 107.10, *SD* = 16.22). Recently, Kaur and Mearns (2021) reported a lower mean (*M* = 91.06, *SD* = 21.26). Descriptive statistics are summarized in Table 1.

Correlations

To test hypotheses 1 and 2, I calculated a correlation matrix (see Table 1).

Hypothesis 1 stated that social media usage would positively correlate with negative mood outcomes. Results show significant but small positive correlations of total hours with depression (*r* = .12), anxiety (*r* = .15), and loneliness (*r* = .12). Only SMUIS had a small but significant positive correlation with anxiety (*r* = .10). Hypothesis 1 was supported; however, the large sample enabled

small correlations to be significant. This means that it is unlikely due to chance that social media usage had low correlations with—in other words, was only weakly related to—negative moods.

Table 1. Pearson Correlations and Descriptive Statistics of Scale Totals

	Depression	Anxiety	Loneliness	Total hours	SMUIS	NMRE
Depression	--					
Anxiety	.66**	--				
Loneliness	.49**	.34**	--			
Total hours	.12**	.15**	.12*	--		
SMUIS	.001	.10*	.02	.11*	--	
NMRE	-.62**	-.35**	-.41**	-.13**	.25**	--
Mean	25.17	8.59	29.30	23.98	37.94	97.34
Standard Deviation	10.34	4.33	11.32	18.89	8.30	14.19

Note. N = 459. SMUIS = Social Media Use Integration Scale. NMRE = negative mood regulation expectancies.
* $p < .05$. ** $p < .01$.

Hypothesis 2 stated that NMRE would negatively correlate with negative moods. Hypothesis 2 was confirmed. NMRE significantly correlated with depression (r = -.62), anxiety (r = -.35), and loneliness (r = -.41).

Multivariate Analyses

Hypothesis 3 stated that both social media usage and NMRE would independently predict negative mood outcomes. To test hypothesis 3, I conducted three separate hierarchical multiple regression analyses, one each predicting depression, anxiety, and loneliness. Prior to analyses to help select variables for the regression models, a MANOVA was run on all demographics (dummy-coded if nominal-level with three or more levels) and the seven social media platform variables on the outcome variables—variables showing influence on the outcome variables were retained for subsequent analyses. In Step 1 of the regressions, I entered age, marital status, and living situation. In Step 2, I entered total hours, SMUIS, and NMRE. I evaluated the increase in R^2 that each step added to the regression model (ΔR^2).

To test hypothesis 4, I centered the variables by subtracting their means and then multiplied them together to create interaction terms—Total Hours x NMRE and SMUIS x NMRE. I added these two interactions in Step 3 into the hypothesis 3 models and evaluated the increase to the final regression model (ΔR^2).

Predicting Depression

To test hypothesis 3 and 4 predicting depression, I analyzed the model inclusive of demographics, total hours, SMUIS, NMRE, Total Hours x NMRE, and SMUIS x NMRE (see Table 2). The final model was significant: $R^2 = .41$, $F(6, 449) = 52.47$, $p < .001$, with 41% of the total variance in depression accounted for by the predictors.

Table 2. Hierarchical Multiple Regression Predicting Depression: *R*-Square Change, Unstandardized and Standardized Regression Coefficients, and Zero-Order Correlations ($N = 463$)

Variable	ΔR^2	*b*	β	Zero-Order Corr
Step 1 - Demographics				
Age		-.09	-.02	-.19
Marital Status		-.19	-.01	-.13
Living Situation	.06***	-.58	-.07	-.19
Step 2 - Predictors				
Total hours		.01	.02	.12
SMUIS		.17***	.14	-.002
NMRE	.35***	-.44***	-.61	-.62
Step 3 - Interactions				
Total Hours x NMRE		-.001	-.06	-.49
SMUIS x NMRE	.01	.01*	.08	-.11

Note. SMUIS = Social Media Use Integration Scale. NMRE = negative mood regulation expectancies. Reported *b*'s and β's come from the final model.
*$p < .05$. **$p < .01$. ***$p < .001$.

To test hypothesis 3, I entered the demographic covariates into Step 1 and predictors into Step 2. In Step 1, the model was significant: $R^2 = .06$, $F(3, 452) = 9.34$, $p < .001$. In Step 2, the model was significant: $R^2 = .41$, $F(6, 449) = 52.47$, $p < .001$. SMUIS ($b = .17$, $p < .001$) and NMRE ($b = -.44$,

$p < .001$) were significant independent predictors. NMRE was by far the strongest predictor ($\beta = -.61$). Total hours did not independently predict depression and did not contribute to the model. Thus, hypothesis 3 was partially supported.

To test hypothesis 4, I entered Total Hours x NMRE and SMUIS x NMRE into Step 3 (see Table 2) and the model was significant: $R^2 = .42$, $F(8, 447) = 40.27$, $p < .001$. However, the two interaction terms did not increase R^2 significantly or independently predict depression. Hypothesis 4 was not supported.

Predicting Anxiety

To test hypothesis 3 and 4 predicting anxiety, a model inclusive of demographics, total hours, SMUIS, NMRE, Total Hours x NMRE, and SMUIS x NMRE was evaluated (see Table 3). The final model was significant: $R^2 = .20$, $F(8, 447) = 14.10$, $p < .001$, with 20% of the total variance in anxiety accounted for by the predictors.

Table 3. Hierarchical Multiple Regression Predicting Anxiety: *R*-Square Change, Unstandardized and Standardized Regression Coefficients, and Zero-Order Correlations ($N = 470$)

Variable	ΔR^2	*b*	β	Zero-Order Corr
Step 1 - Demographics				
Age		-.08	-.05	-.19
Marital Status		-.25	-.04	-.19
Living Situation	.07***	-.46*	-.13	-.23
Step 2 - Predictors				
Total hours		.03	.11	.15
SMUIS		.08***	.15	.09
NMRE	.12***	-.13***	-.42	-.35
Step 3 - Interactions				
Total Hours x NMRE		.001	.07	-.25
SMUIS x NMRE	.01*	.003*	.10	-.01

Note. SMUIS = Social Media Use Integration Scale. NMRE = negative mood regulation expectancies. Reported *b*'s and β's come from the final model.
*$p < .05$. **$p < .01$. ***$p < .001$.

To test hypothesis 3, I entered the demographic covariates into Step 1 and predictors into Step2. In Step 1, the model was significant: R^2 = .07, F(3, 452) = 11.72, p < .001. In Step 2, the model was significant: R^2 = .19, F(6, 449) = 17.55, p < .001. SMUIS (b = .08, p < .001) and NMRE (b = -.13, p < .001) were both significant independent predictors. NMRE was a stronger predictor (β = -.42) than SMUIS (β = .15). Total hours did not independently predict anxiety and did not contribute to the model. Thus, hypothesis 3 was partially confirmed.

To test hypothesis 4, I entered Total Hours x NMRE and SMUIS x NMRE into Step 3 (see Table 3). The model was significant: R^2 = .20, F(8, 447) = 14.09, p < .001. SMUIS x NMRE (b = .003, p = .03) was a significant independent predictor (β = .10). The interaction significantly increased R^2 by .01 (p = .04). However, Total Hours x NMRE did not predict anxiety. Thus, hypothesis 4 was partially supported.

Inspection of the plot for the SMUIS x NMRE interaction clearly shows main effects for the two variables with parallel lines. Visually, there is no clear interaction (see Figure 1).

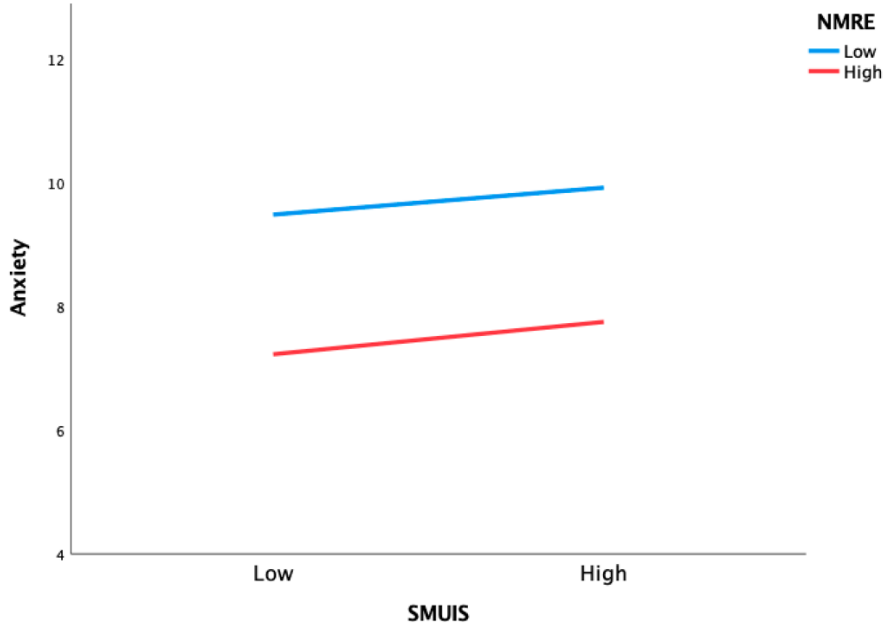

Figure 1. The interaction of SMUIS x NMRE predicting anxiety. NMRE: Low = 42-93, High = 94-140. SMUIS: Low = 15-37, High = 38-59.

Predicting Loneliness

To test hypothesis 3 and 4 predicting loneliness, I analyzed the model inclusive of demographics, total hours, SMUIS, NMRE, Total Hours x NMRE, and SMUIS x NMRE (see Table 4). The final model was significant: R^2 = .23, $F(8, 447) = 16.45$, $p < .001$, with 23% of the total variance in loneliness accounted for by the predictors.

Table 4. Hierarchical Multiple Regression Predicting Loneliness: *R*-Square Change, Unstandardized and Standardized Regression Coefficients, and Zero-Order Correlations (N = 467)

Variable	ΔR^2	*b*	β	Zero-Order Corr
Step 1 - Demographics				
Age		-.44*	-.10	-.19
Marital Status		.96	.05	-.07
Living Situation	.05***	-.50	-.06	-.11
Step 2 - Predictors				
Total hours		.04	.06	.12
SMUIS		.12	.09	.01
NMRE	.15***	-.32***	-.41	-.41
Step 3 - Interactions				
Total Hours x NMRE		-.001	-.06	-.33
SMUIS x NMRE	.03***	.02***	.19	.05

Note. SMUIS = Social Media Use Integration Scale. NMRE = negative mood regulation expectancies. Reported *b*'s and β's come from the final model.
*$p < .05$. **$p < .01$. ***$p < .001$.

To test hypothesis 3, I entered the demographic covariates into Step 1 and predictors into Step2. In Step 1, the model was significant: R^2 = .05, $F(3, 452) = 7.17$, $p < .001$. In Step 2, the model was significant: R^2 = .20, $F(6, 449) = 18.12$, $p < .001$. SMUIS was a significant independent predictor (p = .02) in this model, but not significant in the final model. NMRE (b = -.32, $p < .001$) was a significant independent predictor (β = -.41) in both. Total hours did not independently predict loneliness and did not contribute to the model. The total variance accounted for by the model was 20%. Thus, hypothesis 3 was partially confirmed.

To test hypothesis 4, I entered Total Hours x NMRE and SMUIS x NMRE into Step 3 (see Table 3). The model was significant: R^2 = .23, F(8,447) = 16.45, p < .001. SMUIS x NMRE (b = .02, p < .001) was a significant independent predictor (β = .19). The interaction significantly increased R^2 by .03 (p < .001). However, Total Hours x NMRE did not predict loneliness. Thus, hypothesis 4 was partially supported.

The interaction of SMUIS x NMRE predicting loneliness is plotted in Figure 2. For low NMRE participants, the difference in loneliness by between low and high SMUIS is negligible.

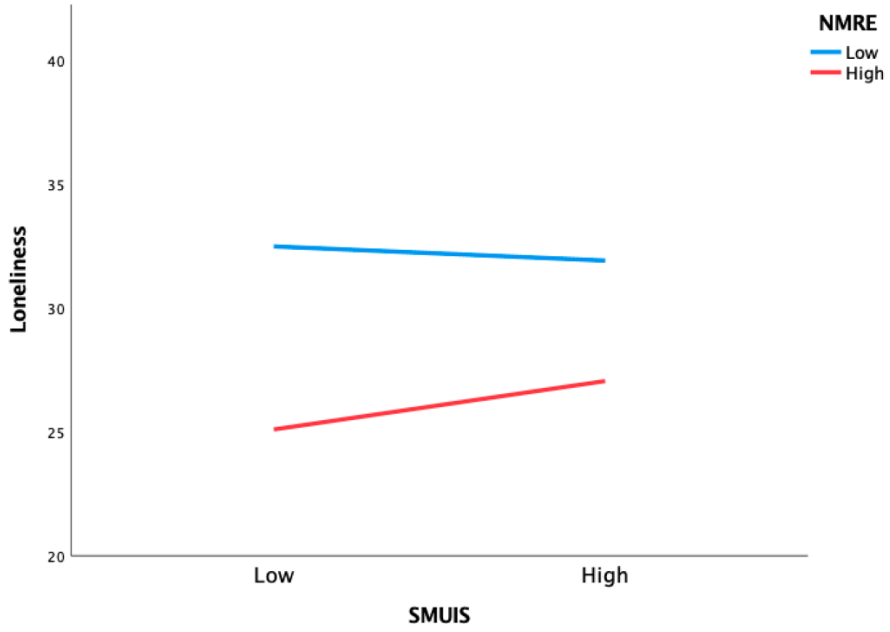

Figure 2. The interaction of SMUIS x NMRE predicting loneliness. NMRE: Low = 42-93, High = 94-140. SMUIS: Low = 15-37, High = 38-59.

However, among those with high NMRE, there was a bigger difference in loneliness between low and high SMUIS. The greatest loneliness was reported by low NMRE, low SMUIS participants. The least loneliness was reported by high NMRE, low SMUIS participants. Thus, the impact of having low SMUIS was moderated by participants' level of NMRE.

CHAPTER 4

DISCUSSION

My study fills a gap in the literature on the link between social media usage and negative mood outcomes. Following recommendations from Baker and Algorta (2016) and Ivie et al. (2020), I tested if a moderator influenced social media usage's relationship with emotional outcomes. As hypothesized, NMRE both independently predicted negative emotional outcomes and interacted with usage as a moderator to significantly increase prediction of two of three mood outcomes—anxiety and loneliness, but not depression.

Previous studies had inconsistent results concerning associations between social media usage and negative emotional outcomes. My study also had mixed results, depending on how social media usage was defined: hours of platform time versus social media engagement. Total hours of use had significant but low correlations with depression, anxiety, and loneliness, while engagement (SMUIS) had negligible correlations. On the other hand, in regression analyses, SMUIS was a significant independent predictor, while total hours was not. Even the correlation between the two variables was small. The SMUIS x NMRE interaction did not contribute to the prediction of depression, but it did increase prediction of anxiety and loneliness. The NMRE x Total hours interaction was unrelated to mood outcomes.

Like previous research, my study was based on the concept that social media usage is a stressor. My results are consistent with Catanzaro and Mearns (2016), Tresno et al. (2013), Wang et al. (2019), Mearns and Mauch (1998), and Kaur and Mearns (2021), in that NMRE moderated the effect of a stressor on mood outcomes. The moderation was greater for loneliness than for anxiety. Among low NMRE people, loneliness did not differ depending on level of SMUIS. However, for the high NMRE group those with the lowest engagement in social media had the least loneliness.

The most important finding in my study was NMRE's moderation of social media usage's relationship with loneliness. This result supports Catanzaro and Mearns's (2016) conclusion that NMRE protect individuals against emotional distress. Overall, those with stronger confidence in their

ability to cope with negative moods were less lonely than those with lower NMRE. In addition, social media usage had less relationship with loneliness for those with weak NMRE and a stronger relationship for those with higher NMRE. Those with less confidence that they could cope with their negative moods had greater loneliness regardless of their social engagement usage. In contrast, for participants with more confidence in their coping with negative moods, those with high social media engagement were lonelier than those with less engagement. This finding suggests that having higher NMRE enabled lonely individuals to use social media to cope with their loneliness.

In my study, the impact of the interaction on the negative mood outcome is greater when NMRE is high. This result contrasts with other NMRE studies (Catanzaro & Mearns, 2016; Kaur & Mearns, 2021; Mearns & Mauch, 1998; Tresno et al., 2013; Wang et al., 2019). NMRE typically buffer the effect of the stressor on negative mood outcomes—among low NMRE participants, stressors have greater impacts on the outcome. My study had an opposite finding—higher NMRE freed up SMUIS to affect the outcome, rather than buffering the relationship. This may be because those with stronger beliefs that they could cope with their loneliness used social media to decrease their loneliness. This finding implies social media engagement could have a positive effect on loneliness rather than a negative one for the high NMRE group, suggesting SMUIS is not a stressor for high NMRE participants.

Clinical Implications

These results imply the benefit of a clinical intervention to treat lonely clients who use social media. When treating lonely social media users, clinicians should assess NMRE. Those with low NMRE should be taught negative mood coping skills to increase their confidence. As clients practice these new skills, they will begin to cope successfully with loneliness. When they succeed, they will build confidence; thus, their NMRE will increase. Not just learning coping skills decrease loneliness; one's response expectancy that one can cope by engaging in social media decreases loneliness. Thus, the clinician can use an intervention of confidence building in coping to decrease the potential harmful effect of social media usage on loneliness. Once lonely clients have higher NMRE, they may

find social media engagement is important to them as a coping strategy. Connecting and sharing with other lonely social media users may decrease loneliness.

Limitations of the Present Study

One limitation of my study is that all the variables were assessed via self-report. Although previous research (e.g., Kaur & Mearns, 2021) used similar methods, it is possible that shared method variance inflated correlations. Evidence against this is that most correlations in my study were small. Also, participants may have over-estimated their self-reported total hours of social media usage compared to their digital trace data (cf. Verbeij et al., 2021).

Because my study was cross-sectional and results were observed at single time, causal conclusions cannot be inferred. We cannot conclude that SMUIS and NMRE cause loneliness. Since lonely individuals may use social media engagement to cope with loneliness, another interpretation of my results is that loneliness and NMRE predict SMUIS. In other words, those with greater loneliness and high NMRE may engage with social media to cope with their negative moods. While those with high NMRE and low loneliness do not need as much engagement as those with greater loneliness.

Another limitation is that 95% of my study's sample participated via Reddit; hence, there was a self-selection factor. Most views of my research survey came from three subreddits: r/nosurf, r/psychologyresearch, and r/mentalhealth. R/nosurf is a community focused on becoming more productive and wasting less time on internet surfing. Participants' NMR Scale scores in my study were far lower than Catanzaro and Mearns's (1990) validity sample. Only Kaur and Mearns (2021), who also used a Reddit sample, reported a lower mean. Loneliness was far higher than Russell et al.'s (1978) validity sample (M = 18.7, SD = 11.0) with half of the participants scoring 30 or above, indicating high loneliness. Thus, my study's participants had lower-than-average NMRE and higher-than-average loneliness. These scores may indicate that participants were lonely and engaged in these subreddits to connect with others.

Finally, my study also took place during the COVID-19 pandemic, which challenged people's coping and raised their stress and isolation (Boals & Banks, 2020; Loades et al., 2020).

Social Media Usage Construct

Social media usage as a construct also limited this study. Like previous research, my study showed mixed results for associations between social media usage and negative moods. Platform engagement was a better predictor than self-reported usage time (cf. Jenkins-Guarnieri et al., 2013). Much previous research has defined the construct of social media usage as self-reported hours. My study showed that total hours did not independently predict negative mood outcomes, but SMUIS did. It seems likely that inconsistent construct definitions of social media usage amongst the profession have led to inconsistent results. In my study, there was only a small correlation between SMUIS and total hours. SMUIS only minutely correlated with negative mood outcomes. But the SMUIS x NMRE interaction significantly increased the prediction of anxiety and loneliness.

Defining usage as engagement is problematic. To start, the SMUIS's validity is weak (Sigerson & Cheng, 2018). In addition, applying Rotter's (1954) social learning theory to SMUIS content may provide insight into the construct problem. One can categorize the items into three types: social media usage behavior (BP), intensity of needs related to social media usage (NV), and beliefs about the likelihood of satisfying one's needs (E). Thus, the SMUIS is measuring multiple related phenomena, rather than a single construct.

To improve social media engagement measurement, behavior potential items should be removed. BP items do not measure how important social media usage is. In addition, engagement scales should measure need value and expectancies separately. Because a problem with previous research is that it is atheoretical, using Rotter's social learning theory framework (1954, 1982) to guide social media use research will be beneficial. Social media research will be hampered until a valid measure of a universally agreed upon construct is developed.

Recommendations for Further Research

My study provides a foundation for future research on social media's effects on negative mood outcomes. First, after nearly 20 years of research, it is imperative that the profession agree on an

operational definition for the construct of social media usage. Future research would benefit from an improved social media engagement measure focused on need value and expectancies.

Second, now that there is evidence that NMRE interact with social media engagement to predict anxiety and loneliness, there is opportunity to explore outcomes of other negative moods , as well as positive ones. I recommend self-esteem, well-being, anger, adult attachment, bereavement, and body image. The next study should be on self-esteem and well-being, since previous research on the topics also has had inconsistent results (Gonzales & Hancock, 2011; Kalpidou et al., 2011; Kross et al., 2013; Steinfield et al., 2008; Valkenburg et al., 2006; Verduyn et al., 2015). Studying NMRE's moderation of social media usage's impact on self-esteem and well-being may fill gaps in the literature.

Third, further research should explore if social media are used both to ameliorate negative moods or to enhance positive ones. A repeated measures study exploring mood changes connected with different levels of social media usage over time may answer this question. NMRE and negative mood outcomes could be examined to determine social media usage's impact on moods as a coping strategy. Fourth, further research could investigate if there are any significant differences among different social media platforms. Are some more damaging than others?

Summary and Conclusions

My study provides evidence that NMRE moderates the relationship of social media engagement with anxiety and loneliness. Those with less confidence that they can cope with their negative moods had higher loneliness regardless of their level of social media engagement. In contrast, for those with more confidence in their ability to cope with negative moods, those with high social media engagement were lonelier than those with less engagement. NMRE was not a buffer—diminishing the relationship—but instead heightened the relationship of SMUIS with loneliness. For high NMRE participants, social media engagement may not be a stressor, but rather a coping strategy. Clinical interventions to increase confidence in coping will decrease the negative effect of social media usage on client loneliness. Once clients have stronger beliefs that they can

cope with their negative moods, they will be able to engage with social media to ameliorate their loneliness.

Much previous research has defined the construct of social media usage as self-reported hours. My study showed that total hours did not independently predict negative mood outcomes, but SMUIS did. Inconsistent construct definitions of social media usage in the profession have led to inconsistent results. Social media research will be hampered until a valid measure with a universally agreed upon definition of the construct is developed. Improving upon the SMUIS with engagement items focused on need value and expectancies will enhance measurement of social media usage.

APPENDIX A

REDDIT POSTING EXAMPLES

Emails to friends and colleagues:

Hi. I am interested in studying the psychological effects of social media usage. I am a researcher at CSUF and am writing a thesis on this topic. Would you help me by taking the attached survey? At the end of the survey, I am offering an opportunity drawing for a chance to win a $100 Amazon gift card. Please click here if you are interested. Thanks!

So, as part of my MS in Clinical Psych, I am doing a thesis on the psychological effects of social media usage. I need your help to get 18-29 yr. olds (your kids and their friends?) to take the attached survey. At the end of the survey, I am offering an opportunity drawing for a chance to win a $100 Amazon gift card. The survey link is below..... Thanks!

Reddit:

Hi. Do you use social media? Have you ever wondered what are the psychological effects? I'm a student doing a research thesis on this topic. Help me? Please take this survey to enter an opportunity drawing for a $100 Amazon gift card.

Click here to learn more. https://fullerton.qualtrics.com/jfe/form/SV_0eaEsC1jrb5V1UG

APPENDIX B

QUALTRICS SURVEY: PSYCHOLOGICAL EXPERIENCES OF SOCIAL MEDIA

Start of Block: Informed Consent

Q0 **Welcome to this survey on**

Psychological Experiences of Social Media

Q1 **INFORMED CONSENT**

You are being asked to take part in a research study carried out by Marc Bruderer, a master's student in the Department of Psychology at California State University, Fullerton, under the direction of Prof. Jack Mearns. This consent form explains the research study and your part in it, if you decide to join the study. Please read the form carefully, taking as much time as you need.

This research study examines how social media usage effects psychological outcomes. If you are an individual the age of 18 to 29, you are eligible to take part in the study, which will take approximately 35 minutes.

If you take part in the study, you will complete questions about your social media usage, as well as questions about different emotions you may experience. After completing the survey, you may choose to enter an opportunity drawing to win a $100 Amazon card.

Your responses in this study are confidential. Neither the researchers nor anyone else will be able to link data to you. Your confidentiality will be protected to the full extent of the law.

If you have questions about this study or the information in this form, please contact the researcher, Marc Bruderer, at bruderer.csuf@gmail.com. You may also contact Jack Mearns, the faculty sponsor, at (657) 278-3514. If you have questions about your rights as a research participant, or would like to report a concern or complaint about this study, please contact the Institutional Review Board at (657) 278-7719, or e-mail irb@fullerton.edu

There is no direct benefit to you from being in this study. There is a potential risk that certain question may cause

discomfort or stress. If you discover you are feeling distressed while taking this survey, you may call the Didi Hirsch Crisis Helpline at (800) 273-8255 24 hours a day.

You have rights as a research volunteer. Your participation in this research study is completely voluntary. You may choose not to be a part of this study. There will be no penalty to you if you choose not to take part. You may choose not to answer specific questions or to stop participating at any time without penalty to you.

If you are in the CSUF Psychology 101 Subject Pool, you will receive one hour of research credit for taking part in this study. If you decide to quit the study at any time you will still receive complete credit.

Q2 I have carefully read and/or I have had the terms used in this consent form and their significance explained to me. By clicking on the I AGREE button, I acknowledge that I am signing my consent and I agree that I am 18 to 29 years of age, I am familiar with social media, and I choose to participate in this project.

○ I AGREE (1)

End of Block: Informed Consent

Start of Block: Descriptive Stats

Q3 Please tell us about yourself...

Q4 Age:

▼ 18 (18) ... 29 (29)

Q5 Gender:

- ○ Male (1)
- ○ Female (2)
- ○ Transgender (3)
- ○ Non-binary/ non-conforming (4)
- ○ Prefer not to say (5)

Q6 Race/ Ethnicity:

- ☐ Asian or Pacific Islander (1)
- ☐ Black or African American (2)
- ☐ Hispanic or Latino (3)
- ☐ Native American or Alaskan Native (4)
- ☐ White or Caucasian (5)
- ☐ Race/ Ethnicity not listed here (6)
- ☐ Prefer not to answer (7)

Q7 Marital Status:

- Single (1)
- Married or Domestic Partnership (2)
- Divorced or Widowed (3)
- prefer not to say (4)

Q8 Highest level of education achieved:

- below High School (1)
- High School Graduate (2)
- College Degree (3)
- Masters Degree (4)
- Doctorate Degree (5)
- Prefer not to say (6)

Q29 Living situation:

- alone (1)
- roommate(s) (2)
- parent(s) (3)
- spouse/ partner (4)
- prefer not to say (5)

End of Block: Descriptive Stats

Start of Block: NMR Scale

Q12 **The Attitudes Toward Feelings Scale**

This is a questionnaire to find out what people believe they can do about upsetting emotions or feelings. Please answer the statements by giving as true a picture of your own beliefs as possible. Of course, there are no right or wrong answers. Remember, the questionnaire is about what you believe you can do, not about what you actually or usually do. Be sure to read each item carefully and show your beliefs by checking the appropriate answer in the space to the right of each question.

If you strongly disagree with an item, click on the "1" in the space. Click a "2" in the space if you mildly disagree with the item. That is, click a "2" if you think the item is more generally untrue than true, according to your beliefs. Click a "3" in the space if you feel the item is about as equally true as untrue. Click the number "4" in the space if you mildly agree with the item. That is, mark a "4" if you think the item is more true than untrue. If you strongly agree with an item fill in a "5" in the space to the left of the item.

1. Strongly disagree
2. Mildly disagree
3. Agree and disagree equally
4. Mildly agree
5. Strongly agree

Q10 When I'm upset, I believe that...

	Strongly disagree 1 (1)	Mildly disagree 2 (2)	Agree and disagree equally 3 (3)	Mildly agree 4 (4)	Strongly agree 5 (5)
1. I can usually find some way to cheer myself up. (1)	○	○	○	○	○
2. I can do something to feel better. (2)	○	○	○	○	○
3. Wallowing in it is all I can do. (3)	○	○	○	○	○
4. I'll feel okay if I think about more pleasant times. (4)	○	○	○	○	○
5. Being with other people will be a drag. (5)	○	○	○	○	○
6. I can feel better by treating myself to something I like. (6)	○	○	○	○	○

7. I'll feel better when I understand why I feel bad. (7)	○	○	○	○	○
8. I won't be able to get myself to do anything about it. (8)	○	○	○	○	○
9. I won't feel much better by trying to find something good about the situation. (9)	○	○	○	○	○
10. It won't be long before I can calm myself down. (10)	○	○	○	○	○
11. It will be hard to find someone who really understands. (11)	○	○	○	○	○

12. Telling myself it will pass will help me calm down. (12)	○	○	○	○	○
13. Doing something nice for someone else will cheer me up. (13)	○	○	○	○	○
14. I'll probably end up feeling really depressed. (14)	○	○	○	○	○
15. Planning how I'll deal with things will help. (15)	○	○	○	○	○
16. I can forget about what's upsetting me pretty easily. (16)	○	○	○	○	○

17. Catching up with my work will help me calm down. (17)	○	○	○	○	○
18. The advice friends give won't help me feel better. (18)	○	○	○	○	○
19. I won't be able to enjoy things I usually enjoy. (19)	○	○	○	○	○
20. I can find a way to relax. (20)	○	○	○	○	○
21. Trying to work the problem out in my head will only make it seem worse. (21)	○	○	○	○	○
22. Seeing a movie won't help me feel better. (22)	○	○	○	○	○

23. Going out to dinner with friends will help. (23)	○	○	○	○	○
24. I'll be upset for a long time. (24)	○	○	○	○	○
25. I won't be able to put it out of my mind. (25)	○	○	○	○	○
26. I can feel better by doing something creative. (26)	○	○	○	○	○
27. I'll start to feel really down about myself. (27)	○	○	○	○	○
28. Thinking that things will eventually be better won't help me feel any better. (28)	○	○	○	○	○

29. I can find some humor in the situation and feel better. (29)	○	○	○	○	○
30. If I'm with a group of people, I'll feel "alone in a crowd." (30)	○	○	○	○	○

End of Block: NMR Scale

Start of Block: UCLA Loneliness

Q13 **UCLA Loneliness Scale**

Q11 INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

	I often feel this way 3 (3)	I sometimes feel this way 2 (2)	I rarely feel this way 1 (1)	I never feel this way 0 (0)
1. I am unhappy doing so many things alone (1)	○	○	○	○
2. I have nobody to talk to (2)	○	○	○	○
3. I cannot tolerate being so alone (3)	○	○	○	○
4. I lack companionship (4)	○	○	○	○
5. I feel as if nobody really understands me (5)	○	○	○	○
6. I find myself waiting for people to call or write (6)	○	○	○	○
7. There is no one I can turn to (7)	○	○	○	○

8. I am no longer close to anyone (8)	○	○	○	○
9. My interests and ideas are not shared by those around me (9)	○	○	○	○
10. I feel left out (10)	○	○	○	○
11. I feel completely alone (11)	○	○	○	○
12. I am unable to reach out and communicate with those around me (12)	○	○	○	○
13. My social relationships are superficial (13)	○	○	○	○
14. I feel starved for company (14)	○	○	○	○
15. No one really knows me well (15)	○	○	○	○

16. I feel isolated from others (16)	○	○	○	○
17. I am unhappy being so withdrawn (17)	○	○	○	○
18. It is difficult for me to make friends (18)	○	○	○	○
19. I feel shut out and excluded by others (19)	○	○	○	○
20. People are around me but not with me (20)	○	○	○	○

End of Block: UCLA Loneliness

Start of Block: GAD-7

Q14 **GAD-7**

X→

Q15 Over the last two weeks, how often have you been bothered by the following problems?

	Not at all 0 (0)	Several days 1 (1)	More than half the days 2 (2)	Nearly every day 3 (3)
1. Feeling nervous, anxious, or on edge (1)	○	○	○	○
2. Not being able to stop or control worrying (2)	○	○	○	○
3. Worrying too much about different things (3)	○	○	○	○
4. Trouble relaxing (4)	○	○	○	○
5. Being so restless that it is hard to sit still (5)	○	○	○	○
6. Becoming easily annoyed or irritable (6)	○	○	○	○
7. Feeling afraid, as if something awful might happen (7)	○	○	○	○
8 (8)	○	○	○	○

Data check. Please select answer #2 (9)	○	○	○	○

End of Block: GAD-7

Start of Block: CES-D

Q17 **CES-D**

Q18 Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

	Rarely or none of the time (less than 1 day) (0)	Some or little of the time (1-2 days) (1)	Occasionally or a moderate amount of time (3-4 days) (2)	Most or all of the time (5-7 days) (3)
1. I was bothered by things that usually don't bother me. (1)	○	○	○	○
2. I did not feel like eating; my appetite was poor. (2)	○	○	○	○
3. I felt that I could not shake off the blues even with help from my family or friends. (3)	○	○	○	○
4. I felt I was just as good as other people. (4)	○	○	○	○
5. I had trouble keeping my mind on what I was doing. (5)	○	○	○	○
6. I felt depressed. (6)	○	○	○	○

7. I felt that everything I did was an effort. (7)	○	○	○	○
8. I felt hopeful about the future. (8)	○	○	○	○
9. I thought my life had been a failure. (9)	○	○	○	○
10. I felt fearful. (10)	○	○	○	○
11. My sleep was restless. (11)	○	○	○	○
12. I was happy. (12)	○	○	○	○
13. I talked less than usual. (13)	○	○	○	○
14. I felt lonely. (14)	○	○	○	○
15. People were unfriendly. (15)	○	○	○	○
16. I enjoyed life. (16)	○	○	○	○
17. I had crying spells. (17)	○	○	○	○
18. I felt sad. (18)	○	○	○	○

19. I felt that people dislike me. (19)	○	○	○	○
20. I could not get "going." (20)	○	○	○	○

End of Block: CES-D

Start of Block: Hours

Q23 Now we would like to know a little about your social media usage

Q20 Please click on each social media platform you use

- ☐ Instagram (1)
- ☐ Snapchat (2)
- ☐ Twitter (3)
- ☐ Facebook (4)
- ☐ YouTube (5)
- ☐ Tik Tok (6)
- ☐ Reddit (7)

Page

Break

Carry Forward Selected Choices from "Please click on each social media platform you use"

Q24 Please rank order your favorite (1) to least favorite by dragging and dropping your preferences

- ☐ _____ Instagram (1)
- ☐ _____ Snapchat (2)
- ☐ _____ Twitter (3)
- ☐ _____ Facebook (4)
- ☐ _____ YouTube (5)
- ☐ _____ Tik Tok (6)
- ☐ _____ Reddit (7)

Page

Break

Carry Forward Displayed Choices from "Please rank order your favorite (1) to least favorite by dragging and dropping your preferences"

Q25 How many hours per week would you say you spend on each?

- ☐ _____ Instagram (1)
- ☐ _____ Snapchat (2)
- ☐ _____ Twitter (3)
- ☐ _____ Facebook (4)
- ☐ _____ YouTube (5)
- ☐ _____ Tik Tok (6)
- ☐ _____ Reddit (7)

Q26 How many total hours do you spend per week including all platforms?

_____

*

Q19 On average, how many hours a day do you spend on social media?

_____

End of Block: Hours

Start of Block: SMUIS

Q21 **SMUIS**

Q27 Please indicate the extent to what you agree or disagree with each statement in relation to your own social networking use

	Strongly Disagree 1 (1)	Disagree 2 (2)	Somewhat Disagree 3 (3)	Somewhat Agree 4 (4)	Agree 5 (5)	Strongly Agree 6 (6)
1. I feel disconnected from friends when I have not logged into ${Q24/ChoiceGroup/ChoiceWithLowestValue}. (1)	○	○	○	○	○	○
2. I would like it if everyone used ${Q24/ChoiceGroup/ChoiceWithLowestValue} to communicate. (2)	○	○	○	○	○	○
3. I would be disappointed if I cannot use ${Q24/ChoiceGroup/ChoiceWithLowestValue} at all. (3)	○	○	○	○	○	○
4. I get upset when I can't log onto ${Q24/ChoiceGroup/ChoiceWithLowestValue}. (4)	○	○	○	○	○	○
5. I prefer to communicate with others mainly through ${Q24/ChoiceGroup/ChoiceWithLowestValue}. (5)	○	○	○	○	○	○
6. ${Q24/ChoiceGroup/ChoiceWithLowestValue} plays an important role in my social relationships. (6)	○	○	○	○	○	○
7. I enjoy checking my ${Q24/ChoiceGroup/ChoiceWithLowestValue} account. (7)	○	○	○	○	○	○

8. I don't like to use ${Q24/ChoiceGroup/ChoiceWithLowestValue}. (8)	○	○	○	○	○	○
9. Using ${Q24/ChoiceGroup/ChoiceWithLowestValue} is part of my everyday routine. (9)	○	○	○	○	○	○
10. I respond to content that others share using ${Q24/ChoiceGroup/ChoiceWithLowestValue}. (10)	○	○	○	○	○	○

End of Block: SMUIS

Start of Block: End

Q28 You are finished!

Thank you for completing this survey.

Research over the last 15 years shows an association between social media usage and negative emotional outcomes such as depression, anxiety, and loneliness. Yet, these studies have inconsistent results that raise further questions. Your answers are invaluable in this research study to discover if social media usage and the belief that a person has in their ability to cope with negative emotions can predict their levels of depression, anxiety, and loneliness.

If you would like a copy of these results at the conclusion of this research study, please email:

bruderer.csuf@gmail.com

Please include: "Results copy" in subject line.

If you are a CSUF Psychology 101 student, you will receive one hour of research credit for taking part in this study. For credit, please email your name, ID number, and psych professor to:

bruderer.csuf@gmail.com

Please include: “CSUF Psyc credit” in subject line.

Q29 If you would like to be entered into a raffle for a free Amazon gift card worth $100, pleaseclick here

End of Block: End

Start of Block: Default Question Block

*

Q1 To be entered into an opportunity drawing to win a free Amazon Gift Card worth $100, please enter your email address:

_____

End of Block: Default Question Block

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