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SOCIAL MEDIA AND MOOD: DIFFERENCES IN SMARTPHONE USE AND ANXIETY

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SOCIAL MEDIA AND MOOD: DIFFERENCES IN SMARTPHONE USE AND ANXIETY

by

ANHKIM PHO

Presented to the Faculty of the Honors College of

The University of Texas at Arlington in Partial Fulfillment

of the Requirements

for the Degree of

HONORS BACHELOR OF ARTS IN PSYCHOLOGY

THE UNIVERSITY OF TEXAS AT ARLINGTON

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November 2, 2017

ABSTRACT

SOCIAL MEDIA AND MOOD: DIFFERENCES IN

SMARTPHONE USE AND ANXIETY

Anhkim Pho, B.A. Psychology

The University of Texas at Arlington, 2018

Faculty Mentor: Angela Liegey Dougall

The pattern of social media and smartphone use is steadily rising, along with the levels of anxiety and other mental illnesses. This study investigated 1) whether there was a relationship between social media, smartphone use, and anxiety and 2) whether gender moderated these relationships. Questionnaire data were gathered from university students (N = 100) aged 17 to 25 and correlation analyses were run to examine the relationships. The study found that there was greater Twitter use, $r(98) = -0.217$, $p = 0.031$, and phone calling associated with less interaction anxiety, $r(98) = -0.292$, $p = 0.003$. However, texting was associated with more trait, $r(98) = 0.208$, $p = 0.038$, state, $r(98) = 0.292$, $p = 0.003$, and shared content anxiety, $r(98) = 0.194$, $p = 0.053$. Additionally, there may be gender discrepancies in smartphone use; within females, more texting was related to greater trait, $r(77) = 0.231$, $p = 0.005$ and state, $r(77) = 0.311$, $p = 0.040$, anxiety and more calling was related to less interaction anxiety, $r(77) = -0.318$, $p = 0.004$. Whereas males were more active on YouTube, which was associated with greater social interaction $r(19) = 0.452$,

$p = 0.039$, privacy concern $r(19) = 0.503$, $p = 0.020$, interaction, $r(19) = 0.208$, $p = 0.038$, and self-evaluation anxiety, $r(19) = 0.511$, $p = 0.018$. Therefore, females may use texting as a way to cope with anxiety. In contrast, the use of platforms like YouTube may increase anxiety among males.

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CHAPTER 1

INTRODUCTION

Depression and anxiety are commonplace among the adult population in the United States, but it is especially prevalent in the young adult demographic (Kessler, Calabrese, Farley, & Gruber, 2012). This increasing trend of psychiatric disorders bring poor health outcomes, such as self-harm and suicide, which are at their peaks within the past 30 years (Curtin, Warner, & Hedegaard, 2016). Another recent trend, that has been steadily increasing, is internet and social media use.

In the last decade, social networking has become a ubiquitous phenomenon among emerging adults. An estimated 90% of young adults have been labeled as frequent users of social media, day and night (Duggan & Smith, 2013). Although social networking sites have been lauded for creating a global village, this does not come without risks, especially in terms of computer-mediated interactions on individuals' well-being (Steers, Quist, Bryan, Foster, Young, & Neighbors, 2016). Specifically, one study found that those who were high in social anxiety and need for social assurance had more problematic Facebook use (Lee-Won, Herzog, & Park, 2015).

Internet use, gaming, and social media has broadly been associated with increased social anxiety, loneliness, and negative self-esteem, and with reduced life satisfaction (van Rooij, Ferguson, van de Mheen, & Schoenmakers, 2017). Greater collective social media usage was also found to impede sleep quality while corresponding to higher levels of anxiety and depression (Woods & Scott, 2016). Anxiety-characterized symptoms were also

found to be increased with daily social media use. In conjunction, this pattern has predicted the increased likelihood of harboring an anxiety disorder in a nationally-representative sample of emerging adults in the U.S. (Vannucci, Flannery, & Ohannessian, 2017).

There are various reasons for utilizing the Internet, smartphone, or other electronic devices on a regular basis. Major motivations for smartphone use include access to information, entertainment, relaxation, relationship development, and security (Kang & Jung, 2014). Texting as a form of communication is especially appealing to young individuals due to its rapidity and autonomy from parental supervision (Skierkowski & Wood, 2012).

As the world of social media and smartphone addiction progresses into universality, it is beneficial to spot signs of anxiety in its plethora of forms in hopes of moderating it. This current research study investigated 1) whether there was a relationship between social media, smartphone use, and anxiety and 2) whether gender moderated these relationships. Specifically, the following forms of anxiety were examined: state anxiety, trait anxiety, social interaction anxiety, and social anxiety.

1.1 State and Trait Anxiety

1.1.1 State Anxiety

According to the American Psychiatric Association (2013) and Spielberger (2010), general anxiety is defined as an emotional state associated with feelings of tension, apprehension, worry, and nervousness. General anxiety can be split into two categories: state or trait. State anxiety is based on temporality, or current time space, which is concerned with experiencing the aforementioned discomforting feelings that occur in response to a situation or stimulus (Cattell & Scheier, 1961).

1.1.2 Trait Anxiety

Trait anxiety, in contrast to state anxiety, presents a more dispositional and long-term tendency to decipher those situations and stimuli as threatening, and to respond accordingly with anxiety (Spielberger, Gorsuch, & Lushene, 1970).

1.2 Social Interaction Anxiety

According to Mattick & Clarke (1998), social interaction anxiety is the "anxiety and fear at the prospect of being observed or watched by other people, and in particular, where the individual expresses distress when undertaking certain activities in the presence of others" (p. 457). These individuals express this psychological trait of shyness and despair during engagement of conversation with others. Additionally, they found that social interaction anxiety was demonstrated as a predictor of Facebook and smartphone addiction. To be specific, the main concern is the fears of being boring, inarticulate, sounding foolish, not knowing what to do in social interactions, and of being ignored. This adds to the speculation that highly anxious individuals may feel more liberated and comfortable by using social media and texting rather than face-to-face communication or calling (Lee, 2015).

1.3 Social Anxiety

Social anxiety is a branch of general anxiety that results when people are fearful or anxious during social interaction, or when they feel that they are being evaluated negatively by others in a social setting. It can be further elaborated as enduring discomfort from negative reflection through incompetent performance in the anticipation and handling of interpersonal transaction (Hartman, 1986). Even in mere anticipation of the social experience, one may feel emotional stress, discomfort, apprehension, fear, and self-

consciousness. Thus, they may purposefully avoid such situations as to not be negatively perceived from others (Leitenberg, 1990).

A study found that those with social anxiety disorder correlate with low perceived intimacy and closeness in friendship, peer, and romantic relationships. Further, they observed that socially anxious people perceived themselves as holding low social rank, being inferior, and having a submissive presence (Weisman, Aderka, Marom, Hermesh, & Gilboa-Schechtman, 2011). Consequently, this disorder can be debilitating and potentially interfere with a person's daily functioning within society.

1.4 Gender Differences in Anxiety

There is an imbalance in the sexes regarding mental illnesses such as depression and anxiety. Specifically, research has found that females tend to report more feeling of depression and social anxiety than males (Selfhout, 2008). On a biological basis, female sensitivity to stress may be increased due to the effect of sex steroids on the maturating hypothalamic-pituitary-adrenal axis. Males, on the other hand, may be more protected against stress sensitivity due to their production of androgens, like testosterone (Naninck, Lucassen, & Baker, 2011). On a psychosocial basis, females tend to cope with stress by expressing greater sensitivity to rejection (Chaplin, Gillham, & Seligman, 2009). Additionally, females were shown to exhibit the "tend and befriend" reaction in times of psychological distress. Furthermore, Veroff, Kulka, and Douvan (1981) found that when compared to men, women were 30% more likely to have given some form of support in response to stressors (e.g. economic, interpersonal, and health problems). Thus, it appears that men and women differ in their coping styles; women relied on a collectivistic orientation whereas men had a proclivity for individualism.

1.5 Gender Differences in Social Media Use

Generally, women tend to gravitate towards social media, due to intrinsic factors such as sociability and affection, as well as instrumental factors, which include convenience and instrumentality (Leung & Wei, 2000). Ehrenreich and Underwood (2016) observed that females tended to have higher levels of internalizing symptoms in order to solicit peer support via social media. Problematic smartphone use, or the excessive use of one's smartphone that could interfere in work, academic, or social settings, was also noted to be significantly higher for women than men (Wolniewicz, Tiamiyu, Weeks, & Elhai, 2017). In regards to smartphone addiction, female gender, as well as higher anxiety levels, were found to be a predictive factor.

CHAPTER 2

METHODOLOGY

2.1 Participants

The participant pool consisted of a total of 100 undergraduate students (79 female, 21 male) enrolled at the University of Texas at Arlington Introduction to Psychology courses. The study had an age range between 17 to 25 with half of the participants being 18 years old ($N = 50$) and of freshman academic ranking ($N = 64$). The mean age was 19 years ($SD = 1.43$). Participants were recruited using SONA, a human participant pool used by the University of Texas at Arlington.

2.2 Materials

An online Qualtrics© questionnaire was utilized to inquire about the participants' perceived amount of time spent on each social media or smartphone platform as well as various psychometric scales. The preliminary part of the questionnaire inquired about the participant's basic demographic information (see Appendix B). Then, they were asked to complete four assessments.

2.2.1 Modified Facebook Intensity Scale

Self-reported use of the subject's technology and social media usage was assessed using a modified version of the Ellison Facebook Intensity Scale (Ellison, Steinfield, & Lampe, 2007). This version included 21 items (see Appendix C) to measure the participant's perceived time spent on the respective social media applications or mobile interfaces.

2.2.2 State-Trait Anxiety Inventory

The 40-item State-Trait Anxiety Inventory (STAI) (see Appendix D) measured state and trait anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The state and trait anxiety scales were included to examine general anxiety levels as both stable dispositions and labile states, and their relationships with social media use (Cronbach's $\alpha = 0.929$ and Cronbach's $\alpha = 0.93$, respectively).

2.2.3 Social Interaction Anxiety Scale

The 20-item Social Interaction Anxiety Scale (SIAS) (see Appendix E) assesses the general fear and psychological discomfort experienced from individuals' perceived past social interactions (Cronbach's $\alpha = 0.895$; Mattick & Clarke, 1998).

2.2.4 Social Anxiety Scale for Social Media Users

The novel 22-item Social Anxiety Scale for Social Media Users (SAS-SMU) (see Appendix F) psychometrically measures social anxiety relating with social media platforms (Alkis, Kadirhan, & Sat, 2017). There are four dimensions of social anxiety that are tested in this scale.

2.2.4.1 Shared Content Anxiety (SCA)

The dimension of shared content anxiety (Cronbach's $\alpha = 0.893$; SCA) refers to "the social anxiety derived from the sharing of content by individuals themselves or by others pertaining to them in social media platforms (Alkis, Kadirhan, & Sat, 2017, p. 300)."

2.2.4.2 Privacy Concern Anxiety (PCA)

The dimension of privacy concern (Cronbach's α = 0.865; PCA) refers to "social anxiety derived from the possibility of disclosing and sharing personal information on social media platforms (Alkis, Kadirhan, & Sat, 2017, p. 300)."

2.2.4.3 Interaction Anxiety (IA)

The dimension of interaction anxiety (Cronbach's α = 0.929; IA) refers to "social anxiety derived from interaction and communication with someone, especially those who newly met on social media platforms (Alkis, Kadirhan, & Sat, 2017, p. 300)."

2.2.4.4 Self-Evaluation Anxiety (SEA)

The dimension of self-evaluation anxiety (Cronbach's α = 0.847; SEA) refers to "social anxiety derived from the way a person evaluates and views him/herself because of what other people thought about him/her on social media platforms (Alkis, Kadirhan, & Sat, 2017, p. 300)."

2.3 Procedure

The online questionnaire took around 45 to 60 minutes to complete. Prior to beginning the questionnaire, the participant read the full informed consent document and verified their eligibility requirements to participate in this study. The eligibility criteria (see Appendix A) included whether the participant used a smartphone and were in a specific age range (between 17 and 25 years of age). Next, the participant self-reported their time spent using their smartphone and social media. The rest of the questionnaire involved the specific scales and surveys regarding mental health status and anxiety. SONA research participation credits were compensated after completion. After the participants completed

their questionnaires, the researcher extracted and de-identified each file to ensure anonymity. Then, the data were analyzed using IBM SPSS 23.0©. Multiple correlations were run in order to examine any relationships between variables. Files were also split by gender in order to observe any gender differences in the data.

CHAPTER 3

RESULTS

3.1 Hypothesis-1

The first hypothesis was partially supported: *There was a relationship between social media, smartphone use, and anxiety*. Among the sample, there was a negative correlation between interaction anxiety and Twitter use and calling. However, texting was found to be associated with higher levels of trait, state, and shared content anxiety (see Table 3.1). There were no significant relationships between the types of anxiety with Facebook, Instagram, Snapchat, and YouTube.

Table 3.1: Anxiety Correlations for Hypothesis-1

Dimension of Anxiety	Facebook	Instagram	Snapchat	Twitter	YouTube	Texting	Calling
	r	*r*	*r*	*r*	*r*	*r*	*r*
	p	*p*	*p*	*p*	*p*	*p*	*p*
STAI Trait	0.047	0.023	0.098	-0.052	0.034	0.208	-0.054
	0.643	0.821	0.334	0.61	0.739	0.038	0.596
STAI State	0.036	0.108	0.123	0.004	0.076	0.292	0.039
	0.722	0.285	0.224	0.966	0.449	0.003	0.701
Social Interaction Anxiety	0.061	-0.003	0.069	-0.012	0.073	0.044	-0.099
	0.547	0.974	0.494	0.904	0.471	0.663	0.327
Shared Content Anxiety	0.098	0.028	0.144	0.035	0.006	0.194	-0.039
	0.332	0.785	0.152	0.733	0.95	0.053	0.698
Privacy Concern Anxiety	0.003	-0.012	0.018	-0.158	0.049	0.012	-0.066
	0.973	0.904	0.862	0.116	0.625	0.906	0.513
Interaction Anxiety	0.086	-0.141	-0.119	-0.217	-0.04	-0.092	-0.292
	0.397	0.162	0.238	0.031	0.694	0.363	0.003
Self-Evaluation Anxiety	0.093	-0.059	0.093	-0.07	-0.057	0.042	-0.097
	0.356	0.558	0.359	0.488	0.573	0.679	0.337

3.2 Hypothesis-2: Females

Before testing the hypotheses, differences in social media, smartphone use, and anxiety were examined by gender. Although there was no significant difference in anxiety levels by gender (see Figure 3.1 and 3.2), there was one significant discrepancy in smartphone use between females and males (see Table 3.3). Males demonstrated significantly longer durations of time spent on YouTube per day (M = 3.33 hours, SD = 1.98) than did females (M = 2.00 hours, SD = 1.89), $t(98) = 2.54$, $p = 0.013$. There were no significant differences in Facebook, Twitter, Instagram, texting, or calling use in males and females.

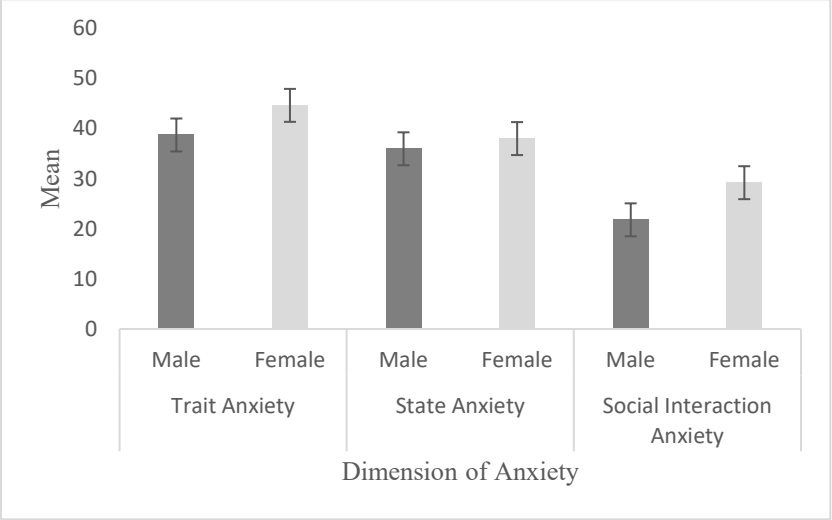

Figure 3.1: Comparison of State, Trait, and Social Interaction Anxiety with Gender

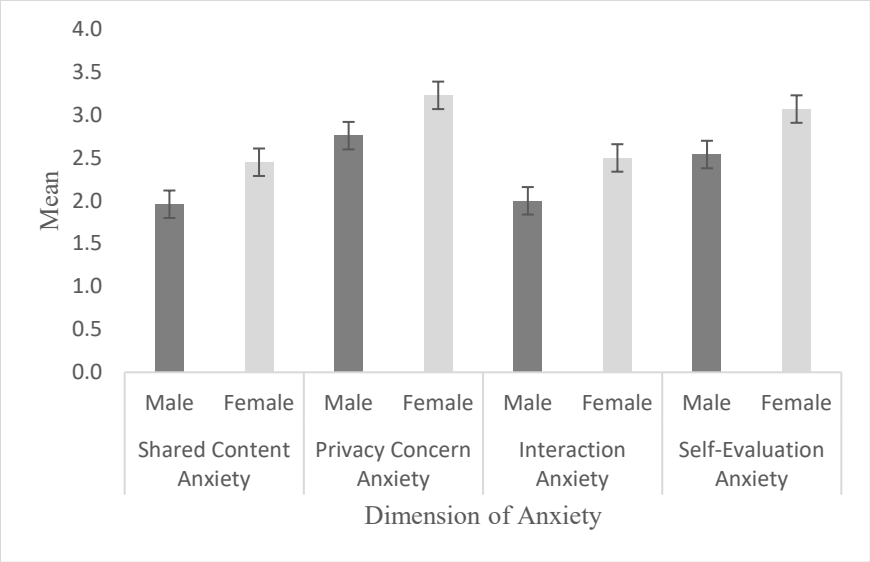

Figure 3.2: Comparison of Social Anxiety Scale for Social Media Users with Gender

The second hypothesis was partially supported: *Gender is predicted to moderate the relationship between social media, smartphone use, and anxiety.* After splitting files by gender, the female sample ($n = 79$) showed more texting was related to greater trait and state anxiety and more calling was related to less interaction anxiety. Thus, this suggests that women preferred texting versus calling. There were no anxiety-related relationships found among females with Facebook, Instagram, Snapchat, Twitter, and YouTube.

Table 3.2: Anxiety Correlations for Female Sample

Dimension of Anxiety	Facebook	Instagram	Snapchat	Twitter	YouTube	Texting	Calling
	r	*r*	*r*	*r*	*r*	*r*	*r*
	p	*p*	*p*	*p*	*p*	*p*	*p*
STAI Trait	0.129	-0.013	0.133	-0.058	0.043	0.231	-0.128
	0.256	0.912	0.243	0.612	0.707	0.04	0.262
STAI State	0.157	0.089	0.191	0.036	0.084	0.311	-0.011
	0.167	0.436	0.091	0.752	0.46	0.005	0.921
Social Interaction Anxiety	0.104	-0.032	0.066	-0.048	0.084	0.078	-0.129
	0.36	0.781	0.565	0.676	0.462	0.493	0.258
Shared Content Anxiety	0.128	-0.011	0.117	-0.014	0.044	0.183	-0.112
	0.262	0.925	0.303	0.905	0.702	0.106	0.324
Privacy Concern Anxiety	-0.102	-0.053	0.023	-0.186	-0.027	0.033	-0.102
	0.372	0.641	0.842	0.101	0.813	0.77	0.373
Interaction Anxiety	0.098	-0.163	-0.065	-0.203	-0.064	-0.044	-0.318
	0.392	0.152	0.572	0.073	0.575	0.7	0.004
Self-Evaluation Anxiety	0.145	-0.09	0.137	-0.065	-0.11	0.053	-0.176
	0.202	0.432	0.23	0.568	0.333	0.643	0.12

3.3 Hypothesis-2: Males

In the corresponding male sample (n = 21), more time spent on YouTube was associated with greater social interaction, privacy concern, interaction, and self-evaluation anxieties (see Figure 3.3). Additionally, males experienced less interaction anxiety with increased Snapchat use. There were no anxiety-related relationships found among males with Facebook, Instagram, Twitter, texting, and calling.

Table 3.3: Anxiety Correlations for Male Sample

Dimension of Anxiety	Facebook	Instagram	Snapchat	Twitter	YouTube	Texting	Calling
	r	*r*	*r*	*r*	*r*	*r*	*r*
	p	*p*	*p*	*p*	*p*	*p*	*p*
STAI Trait	-0.351	0.017	-0.104	0	0.316	0.108	0.139
	0.118	0.943	0.653	0.998	0.163	0.643	0.549
STAI State	-0.431	0.146	-0.157	-0.114	0.147	0.21	0.209
	0.051	0.528	0.497	0.622	0.526	0.361	0.364
Social Interaction Anxiety	-0.208	-0.078	0.037	0.23	0.452	-0.172	-0.168
	0.365	0.736	0.874	0.317	0.039	0.456	0.466
Shared Content Anxiety	-0.113	0.044	0.302	0.429	0.224	0.324	0.239
	0.625	0.851	0.184	0.052	0.329	0.151	0.297
Privacy Concern Anxiety	0.303	0.002	-0.033	-0.064	0.503	-0.068	-0.068
	0.182	0.994	0.887	0.783	0.02	0.769	0.77
Interaction Anxiety	0.001	-0.263	-0.501	-0.302	0.419	-0.41	-0.399
	0.996	0.25	0.021	0.183	0.059	0.065	0.073
Self-Evaluation Anxiety	-0.189	-0.092	-0.175	-0.078	0.511	-0.026	0.164
	0.413	0.692	0.449	0.736	0.018	0.911	0.476

CHAPTER 4

DISCUSSION

The purpose of this study was to 1) observe whether there was a relationship between social media and smartphone use with anxiety, as well as 2) to discover if gender moderated those variables. The hypotheses were partially supported. Greater Twitter use and phone calling was associated with less interaction anxiety. However, texting was associated with more trait, state, and shared content anxiety. Additionally, there may be gender discrepancies in smartphone use; within females, more texting was related to greater trait and state anxiety, and more calling was related to less interaction anxiety. Whereas males were more active on YouTube, which was associated with greater social interaction, interaction, and self-evaluation anxiety. Therefore, females may use texting as a way to cope with anxiety. In contrast, the use of platforms like YouTube may increase anxiety among males.

4.1 Summary of Results for Hypothesis-1

For the first hypothesis, there were negative correlations with interaction anxiety and Twitter use as well as calling. Specifically, with less calling or Twitter usage, there would be more interaction anxiety associated in the participants. Twitter is known for providing tweets about news and popular culture sources, as well as a medium for expressing many aspects of ones lived social, economic, and political selves (Primack et al., 2017; Murthy, Gross, & Pensavalle, 2013). These findings are partially supportive of other studies findings, which suggest that increased daily social media use is correlated

other studies' findings, which suggest that increased daily social media use is correlated with greater dispositional anxiety symptoms (Vannucci, Flannery, & Ohannessian, 2017).

Additionally, there were positive correlations with texting and state and trait anxiety, which imply that those with more of these anxious tendencies gravitated towards texting as the preferred means of communication. There was also a negative association with interaction anxiety with calling. In the study conducted by Harwood, Dooley, Scott, and Joiner (2014), they also found that sending more text messages was associated with greater anxiety levels, which mirrors the present study. It is arguable that text usage is a less personal form of communicating with others, and provides less anxiety-inducing opportunities than calling. This would make texting a more desirable method of interaction, and can be applied directly to the current sample.

4.2 Summary of Results for Hypothesis-2

In the second hypothesis, there were no significant discrepancies found between the genders with anxiety. However, the study did demonstrate a difference between which social media platform was preferred for the male sample: YouTube. This finding aligns with the major motivations for males' use of smartphone technology, which is based mostly on competitive entertainment, gaming, and knowledge acquisition (Andreassen et al., 2016; Heo, Oh, Subramanian, Kim, & Kawachi, 2014). Males also have a tendency to use online applications to fuel more generally isolating activities, which is in line with the finding that there were positive associations between social interaction, interaction, and self-evaluation anxiety and YouTube use.

For the female sample, there was a positive relationship between texting and state and trait anxiety levels. Additionally, there was a negative correlation between calling and

interaction anxiety, which is similar to the overall sample's results. In the study by Lepp, Li, and Barkley (2016), they found that augmentation of cell phone use, in the case of texting, has shown to be more valuable for females rather than males. Texting as a form of sociality was found to be related to peer communication, and calling was related to parental communication. These results support the use of the current study's female preference for texting use, perhaps as a means of coping with anxiety and connecting with their peers.

4.3 Limitations of the Current Research

This research study was dependent on an online survey that assessed different psychometric measures as well as self-reported social media and smartphone use. Because of this systematic limitation, there may not be full transparency within these boundaries, and some individuals may feel the need to downplay or increase certain data points. There was also an issue with the gender distribution, because there was an uneven amount of females to males. In future studies, making a more even distribution of gender and perhaps increasing the overall sample size would be ideal for maximizing external validity.

4.4 Implications for Future Research

These current findings can add to the growing body of social media-centered psychological research. Social networks and Internet use are intertwined within everyone's lives in some way or another, and continued research into this subject is bound to yield some interesting results. The ever-increasing rate of mental illnesses such as depression and anxiety disorders are alarming as well, and could be further examined. This has very important implications for the future generations, as younger and younger individuals are entrapped with smart devices at a staggeringly early age. Mental health, of course, is also

a hugely relevant topic because it can affect many social interactions and even economic productivity.

APPENDIX A

ELIGIBILITY REQUIREMENTS & SURVEY PURPOSE

You are eligible to participate in this study if you meet the following criteria:

1. Must be a smartphone user (Apple, Android, Windows etc.)
2. Between 17 and 25 years of age
3. Able to speak, read, and write the English language
4. Must not have participated in the study titled "Social Media, Smartphone Use, Physical and Mental Health, and Performance"

You are *not* eligible to participate in this study if any of the following apply to you:

1. Do not have/use a smartphone
2. Children < 17 years of age or adults > 25 years of age
3. Persons who participated in the study titled "Social Media, Smartphone Use, Physical and Mental Health, and Performance"

PURPOSE

The purpose of this study is to understand the amount of time you spend on your phone and the ways that you use social media. Furthermore, the study wants to explore how this use relates to your habits, mood, feelings, relationships, and health.

You will provide your smartphone use to us by reporting how often you spend on your phone accessing different applications.

You will also report your level of stress, anxiety, symptoms of depression, addiction, and loneliness as aspects of mental health. In addition, you will report to us symptoms of sleep disruption, vision, hearing, and pain as aspects of your physical health.

You will also complete questions about your background and health behaviors, including questions related to gender, age, class level (freshman, sophomore, junior, and senior), number of semesters at UT Arlington, ability to pay bills, family income, medications, personality, and social life.

APPENDIX B

DEMOGRPAHIC INFORMATION

Please enter your age

_____

What is your height?

_____

What is your weight in lbs?

_____

What is your gender?
____ Male
____ Female

What is your Date of Birth (MM/DD/YYY)?
____/____/_____

What is your ethnic category?
____ Hispanic or Latino
____ NOT Hispanic or Latino

What is your racial group? (Select all that apply)
____ White
____ Black or African American
____ American Indian or Alaskan Native
____ Asian
____ Native Hawaiian or Pacific Islander
____ Other (please specify)
_____

What is your current undergraduate level?
____ Freshman
____ Sophomore
____ Junior
____ Senior

How many semesters have you been at UTA?
____ This is my first semester
____ 2-3
____ 4-5
____ 6-7
____ 8+

What is your current marital status?
____ Never married & not living with a partner
____ Married & living together
____ Married, but previously divorced
____ Living with a partner
____ Widowed
____ Divorced

How many people live in your home including yourself?

_____

Do you live on campus or off campus?
____ On campus
____ Off campus

What is your living situation?
____ Alone
____ Roommate(s)
____ Significant other
____ Significant other and children
____ Parents

Are you currently employed?
____ Yes
____ No

If employed, how many hours do you work per week?

_____

What is your total FAMILY yearly income (approximately)?
____ Under $10,000
____ $10,001 to $20,000
____ $20,001 to $30,000
____ $30,001 to $40,000
____ $40,001 to $50,000
____ $50,001 to $70,000
____ $70,001 to $90,000
____ Over $90,001

How difficult is it for you (and your family) to pay your monthly bills?
____ Very Difficult
____ Somewhat Difficult
____ Not Very Difficult
____ Not at all Difficult

What is your religious preference?
____ Catholic
____ Jewish
____ Protestant
____ Not religious
____ Other (please specify)
_____

Have you been diagnosed with an Anxiety disorder (Generalized Anxiety Disorder, Social Phobia, Panic disorder, Phobias, Post-Traumatic Stress Disorder, Obsessive-Compulsive Disorder etc.) or mood disorder (e.g Depression, Dysthymia, Bipolar etc.)?
____ Yes
____ No
____ Not sure

APPENDIX C

MODIFIED FACEBOOK INTENSITY SCALE

In the past week, on average, approximately how many minutes per day have you spent on each of the following social media applications on your smartphone?

			Duration			
Less than 30 min	30-60 min	1-2 hr	2-3 hr	3-4 hr	4-5 hr	More than 5 hr
0	1	2	3	4	5	6

1. Facebook
2. Instagram
3. Snapchat
4. LinkedIn
5. Whatsapp
6. Twitter
7. Yik Yak
8. Tumblr
9. PokemonGo
10. Other gaming applications that allow player-to-player interaction
11. YouTube
12. Dating applications (e.g. Tinder)
13. Vine
14. Pinterest
15. Myspace
16. Kik
17. Reddit
18. Facebook Messenger
19. Text messaging
20. Calling
21. Other Apps that allow user-to-user communication

APPENDIX D

STATE-TRAIT ANXIETY INVENTORY

A number of statements which people have used to describe themselves are given below. Read each statement and then select the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

Not at all	Somewhat	Moderately so	Very much so
1	2	3	4

1. I feel calm
2. I feel secure
3. I am tense
4. I feel strained
5. I feel at ease
6. I feel upset
7. I am presently worrying over possible misfortunes
8. I feel satisfied
9. I feel frightened
10. I feel comfortable
11. I feel self-confident
12. I feel nervous
13. I feel jittery
14. I feel indecisive
15. I am relaxed
16. I feel content
17. I am worried
18. I feel confused
19. I feel steady
20. I feel pleasant
21. I feel pleasant
22. I feel nervous and restless
23. I feel satisfied with myself
24. I wish I could be as happy as others seem to be
25. I feel like a failure
26. I feel rested
27. I am “calm, cool, and collected”
28. I feel that difficulties are piling up so that I cannot overcome them
29. I worry too much over something that really doesn’t matter
30. I am happy
31. I have disturbing thoughts
32. I lack self-confidence
33. I feel secure
34. I make decisions easily
35. I feel inadequate
36. I am content
37. Some unimportant thought runs through my mind and bothers me
38. I take disappointments so keenly that I can’t put them out of my mind
39. I am a steady person
40. I get in a state of tension or turmoil as I think over my recent concerns and interests

APPENDIX E

SOCIAL INTERACTION ANXIETY SCALE (SIAS)

Patient Name: _____ **Date:** _____

Instructions: For each item, please circle the number to indicate the degree to which you feel the statement is characteristic or true for you. The rating scale is as follows:

0 = **Not at all** characteristic or true of me.
1 = **Slightly** characteristic or true of me.
2 = **Moderately** characteristic or true of me.
3 = **Very** characteristic or true of me.
4 = **Extremely** characteristic or true of me.

CHARACTERISTIC	NOT AT ALL	SLIGHTLY	MODERATELY	VERY	EXTREMELY
1. I get nervous if I have to speak with someone in authority (teacher, boss, etc.).	0	1	2	3	4
2. I have difficulty making eye contact with others.	0	1	2	3	4
3. I become tense if I have to talk about myself or my feelings.	0	1	2	3	4
4. I find it difficult to mix comfortably with the people I work with.	0	1	2	3	4
5. I find it easy to make friends my own age.	0	1	2	3	4
6. I tense up if I meet an acquaintance in the street.	0	1	2	3	4
7. When mixing socially, I am uncomfortable.	0	1	2	3	4
8. I feel tense if I am alone with just one other person.	0	1	2	3	4
9. I am at ease meeting people at parties, etc.	0	1	2	3	4
10. I have difficulty talking with other people.	0	1	2	3	4
11. I find it easy to think of things to talk about.	0	1	2	3	4
12. I worry about expressing myself in case I appear awkward.	0	1	2	3	4
13. I find it difficult to disagree with another's point of view.	0	1	2	3	4
14. I have difficulty talking to attractive persons of the opposite sex.	0	1	2	3	4
15. I find myself worrying that I won't know what to say in social situations.	0	1	2	3	4
16. I am nervous mixing with people I don't know well.	0	1	2	3	4
17. I feel I'll say something embarrassing when talking.	0	1	2	3	4
18. When mixing in a group, I find myself worrying I will be ignored.	0	1	2	3	4
19. I am tense mixing in a group.	0	1	2	3	4
20. I am unsure whether to greet someone I know only slightly.	0	1	2	3	4

APPENDIX F

SOCIAL ANXIETY SCALE FOR SOCIAL MEDIA USERS

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number below the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

		Characteristic level		
Not at all	Slightly	Moderately	Very	Extremely
0	1	2	3	4

1. I feel anxious about the fact that others might find my actions awkward.
2. I am concerned about being ridiculed by others for the content I have shared.
3. I am concerned about the fact that the content I share will not be liked by others.
4. I am afraid that my close friends will not approve of my behavior.
5. I would feel uncomfortable when my friends publicly express their dislike about content I have shared.
6. I am concerned about disapproval of my behaviors by others.
7. I am concerned about being judged about my shared content by my friends in the presence of others.
8. The possibility of having my private information acquired by others makes me feel anxious.
9. The possibility of having my private information shared publicly makes me anxious.
10. I feel uneasy when my friends share my private information with people I do not know.
11. I would be concerned if my personal space is accessed without my consent.
12. I feel anxious about how social media companies/executives handle privacy policy regarding my private life.
13. I feel anxious when talking with people I have just met.
14. I feel nervous when I talk with people I do not know very well.
15. I feel uneasy while making new friends.
16. I feel tense when I meet someone for the first time.
17. I am afraid of interacting with others.
18. I feel nervous when I have to talk with others about myself.
19. I feel anxious about making a negative impression on people.
20. I am concerned about people thinking poorly of me.
21. I feel anxious about not being able to meet people’s expectations

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BIOGRAPHICAL INFORMATION

Anhkim K. Pho was born in Houston, Texas to a father and mother who have worked extremely hard, immigrating to America from a war-torn Vietnam. She was able to grow up in a land fertile with opportunities and is thankful for her parents' sacrifices every day. Some of the things she is immensely interested in are environmental sustainability, artistic expression, and community health.

Studying at The University of Texas at Arlington since August 2013, Anhkim has experienced an outpouring of knowledge as well as a deeper understanding of human compassion in the many opportunities she has journeyed. With a natural love of learning sprinkled in with hard work, she was able to graduate with a Bachelor of Arts in Biology and an Honors Bachelor of Arts in Psychology in May 2018. Anhkim hopes to carry with her the many life-lessons of personal growth and acceptance of all people into her future practice in medicine.