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Fear of Missing Out, Social Media Abuse, and Parenting Styles

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ABSTRACT

With the increasing rise in technology use, particularly engagement in social media, it is important for researchers to gain a better understanding of the usage patterns along with the antecedents and consequences of heavy social media usage. In addition to the rise in social media usage, a new anxiety driven phenomenon is storming the research world, FoMO (Fear of Missing Out). To date, there has been little empirical research on the relationship between social media usage and psychological adjustment. This study aimed to investigate the relationships between FoMO, social media abuse, and parenting styles. It is theorized that because FoMO is an anxiety-driven problem, it can lead individuals to the addiction or abuse of social media by engaging in safety behaviors that are similar to behaviors associated with abuse, dependence, or withdrawal, to the addiction. Previous research has shown a correlation between parenting styles and child social anxiety; therefore, it was theorized that parenting styles would be related to FoMO. Participants completed a 71-item questionnaire composed of six scales: FoMO, Social Media Engagement, Self-Esteem, Parenting Styles, and two Social Media Abuse scales. The questionnaire was deployed to middle school, high school, and college students ($n = 661$) with statistical evaluation of bivariate correlation and mean difference analyses to test study hypotheses. Results indicated that self-esteem was significantly negatively correlated with both FoMO and social media abuse, FoMO was significantly positively correlated with social media abuse, and neglectful parenting style had the highest mean value for self-reported FoMO.

Fear of Missing Out, Social Media Abuse,

and Parenting Styles

A Thesis

Presented to

The Faculty of the Graduate School

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

Clinical Psychology

By

Kylie Richter
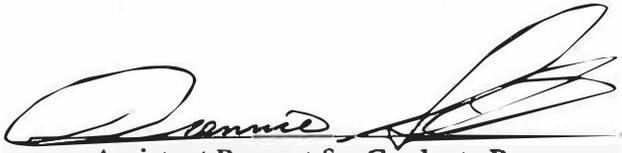
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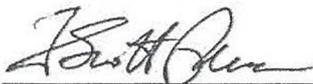
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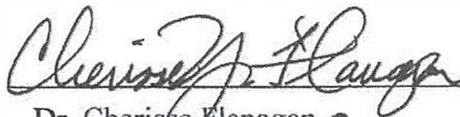
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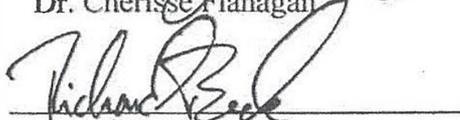
Dr. Richard Beck

To my parents,

Thank you for always encouraging me to believe in myself and follow my dreams. Without your support, I do not know where I would be today. I am one of the lucky few to have two amazing parents that love me unconditionally, support me in everything I do, challenge me to push myself, and teach me how to live a life passionately for Christ. I love you guys. Thank you.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Importance

Social media usage has risen remarkably in recent years to the point where one could well be the focus of teasing and even derision if he or she does not regularly participate in social networking. Younger generations have grown up with advanced usage of technology, with current estimates noting that 73% of teens, ages 13-17, have smartphones (Lenhart et al., 2015). With the increasing rate of cell phone usage and the extended options of social media applications, commonly called apps, such as Facebook, Twitter, Instagram, Snapchat, etc., it is rare for an adolescent or young adult not to regularly participate in at least one of these online activities. Research indicates that 92% of teens report going online daily (Lenhart et al., 2015) and 56% of online users participate in more than one of five social media platforms, e.g., Facebook, Twitter, Pinterest, LinkedIn, and Instagram (Greenwood, Perrin, & Duggan, 2016). However, the accumulation of empirical research exploring usage patterns and antecedents and consequences of heavy social media usage is not well documented nor understood to date. Therefore, thoughtfully constructed investigations of the relationship of social media usage to social and psychological adjustment is needed to provide a better understanding about this growing trend.

Recently, several studies have provided support for a linkage between social media use and various aspects of adolescent's well-being (e.g. Baker, Krieger & LeRoy, 2016; Woods & Scott, 2016). The developmental growth process is progressing rapidly in early adolescence, rendering teens more susceptible to experiences of low self-esteem, depression, anxiety, and difficulty regulating emotion when faced with transition, disappointment, or loss (Reed, Tolman, Ward, & Safyer, 2015; Woods & Scott, 2016). Woods and Scott (2016) reported a significant correlation among adolescents for social media usage and depression, as well as social media usage anxiety. On the basis the researchers' processes and mechanisms of anxiety, Przybylski, Murayama, DeHaan, and Gladwell (2013) proposed that the link between unmet psychological needs and social media engagement is significant, but indirect and suggested that the mediator is an anxiety related variable labeled the Fear of Missing Out (FoMO).

FoMO is defined as "a pervasive apprehension that others might be having rewarding experiences from which one is absent, which is characterized by the desire to stay continually connected with what others are doing" (Przybylski et al., 2013, p. 1841). Social media provides the perfect avenue for people who struggle with FoMO to feel like they are staying connected. Przybylski et al. (2013) used self-determination theory (SDT) to formulate a better understanding of FoMO. SDT states that an individual's psychological well-being and effective self-regulation depend on three fundamental psychological needs, 1) competence, 2) autonomy, and 3) relatedness (Ryan & Deci, 2017). Therefore, FoMO is best understood as a conscious personal health management concept, arising from situational or chronic deficits in psychological need satisfactions. To ease these intrusive thoughts, individuals might engage in excessive social media use.

Adolescents indicated they unwillingly feel compelled to compulsively check their phones or social media outlets (Tarsha, 2016). As Przybylski et al. (2013) suggested, relating FoMO to SDT provides a basis from which one's behavior of being preoccupied with thoughts of checking a cell phone almost constantly and/or engaging in online social connection resources multiple times per hour appears driven by attempts to satisfy relatedness needs.

Abusive behavior patterns commonly are defined in terms involving continued use, despite knowledge of harm arising directly from the behavior (Perkins, 2002). In this regard, excessive social media use, as seen in compulsively checking online accounts and feeling a need to stay connected, can clearly be conceptualized as abusive behaviors. Parents and researchers have become increasingly concerned with these potential consequences of social media use and overuse (Baker et al., 2016), and rightfully so, as Facebook's founding president stated in an interview "God only knows what [Facebook is] doing to our children's brains" (Allen, 2017). These behaviors highlight the problem that is becoming more apparent in younger generations. In VandenBos's book, *American Psychological Association Dictionary of Psychology*, second edition (2015), addiction is defined as "a state of psychological or physical dependence (or both) [… and can be] applied to behavioral disorders, such as sexual, Internet, and gambling addictions" (p. 19). Addictive behavior is defined as "actions, often obsessive and destructive, that are related to one's abuse or dependence on a substance [or thing,] that dominate one's life" (p. 20). Lastly, abuse is defined as "the misuse of a substance [or thing] to the extent that it causes the individual difficulty" (p. 5). By these definitions, it is possible for an individual to abuse social media or even become addicted to it.

Strong desires to frequently check social media accounts are also likely influenced by various types of innate motivation. SDT defines intrinsic motivation, enthusiasm and pleasure gained from engaging in a task; extrinsic motivation, the rewards from a task; and amotivation, lack of motivation. Alt (2015) assessed the links between motivation, FoMO, and social media engagement. It was hypothesized that a) amotivated or extrinsically motivated students would be more likely to use social media when available, and that b) FoMO would serve as a mediator linking motivational deficits to social media engagement. Results of this study indicated that social media engagement was significantly correlated with amotivation and extrinsic motivation at the .001 level. For results in relation to hypothesis b, there was a significant correlation at the .001 level between FoMO and SME factors, FoMO and amotivation, and FoMO and extrinsic motivation.

Whether the reason be the need for relatedness, an addiction to social media, or the innate type of motivation prominently experienced by some individuals, the compulsive behavior of constantly checking one's phone or social media accounts could easily become detrimental to one's well-being. Consequently, for individuals with high levels of FoMO, there could be a negative association with the drive to stay continually connected and one's mental and physical health (Baker et al., 2016). Similarly, Blackwell et al. (2017) reported that FoMO was a stronger predictor of social media usage and addiction than personality traits and attachment styles combined. The results of these two studies (i.e., Baker et al., 2016 & Blackwell et al., 2017) and others like them (Barber & Santuzzi, 2017; Beyens, Frison, & Eggermont, 2016; Buglass, Binder, Betts, & Underwood, 2017; Elhai, Levine, Dvorak, & Hall, 2016; Oberst, Wegmann, Stodt, Brand,

& Chamarro, 2017; Przybylski et al., 2013) raise an important question as to the extent and nature of the influence FoMO might be exerting on the psychological adjustment of social media users.

Social Media Abuse

As stated previously, the use of social media is rapidly growing among adolescents and young adults. However, recently, researchers have hypothesized that this increased usage of social media has moved past a trend and rather is becoming a pattern of abusive behavior which may well rise to the level of an addiction (Andreassen, Pallesen, & Griffiths, 2016; Banyai, et al., 2017; Blackwell et al., 2017; Hormes, Kearns, & Timko, 2014). Interestingly, Sean Parker, founding president of Facebook, recently explained in an interview that during the creation of Facebook, a key objective was "How do we consume as much of your time and conscious attention as possible?" (Allen, 2017). In fact, there is now a greater pressure for social media users to be available 24/7 due to the instant communication and constant notifications these social media platforms, such as Facebook, provide. Because social media outlets are available at any time via apps on handheld devices, individuals can essentially connect anywhere at any time. This increase in accessibility is supported by findings that 92% of teens report going online daily, with 24% using the Internet 'almost constantly,' and 56% going online several times a day (Lenhart et al., 2015). The popularity of social media among adolescents and young adults raises concerns about what motivates them to use these accounts (Beyens et al., 2016). Hormes et al. (2014) investigated college students' use of social networking sites from the perspective of substance and alcohol abuse. They utilized scales that measured alcohol and substance symptoms (e.g., craving, tolerance, and withdrawal) and then

modified said scales to assess the same symptoms (i.e., craving, tolerance, and withdrawal) towards social networking sites. They found that disordered online social networking use was present among college students. Similarly, Banyai et al. (2017) examined social media addiction by using a scale that measured six components of traditional addiction criteria: salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. Although the terms addiction, addictive behavior, and abuse have already been addressed, the current diagnostic criteria are worth noting. In *The Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) there is currently only one diagnosable nonsubstance addictive disorder, Gambling Disorder. However, the conditions for further study section in the *DSM-5* does mention another potential nonsubstance addictive disorder titled Internet Gaming Disorder (IGD). In the proposed criteria in the DSM-5 for IGD, the patient must exhibit at least five of the following nine criteria: 1) preoccupation, 2) withdrawal, 3) tolerance, 4) unsuccessful attempts to stop, 5) loss of interest in other activities, 6) continued use after knowledge of problem, 7) deception of those close to them, 8) usage as an escape, and 9) loss of relationships or employment due to problem. Van den Eijnden, Lemmens, and Valkenburg (2016) argued that IGD and a social media disorder fall under that same overarching construct of Internet addiction. Therefore, they believe that assessing problematic social media use should be done similarly as if one were assessing for IGD. In summary, the usage of social media has moved from being merely a leisure activity to something more problematic. Thus, researchers are searching for empirical evidence on the degree and nature of this increasing issue.

It has been theorized that FoMO may activate an individual's social monitoring system (Baker et al., 2016). Social monitoring theories suggest that individuals are able to detect social threat and monitor the probability of others excluding or rejecting them. The stimulation of social monitoring systems can cause somatic issues and disrupt an individual's overall well-being (Baker et al., 2016). When an individual has high levels of FoMO, they are more likely to experience social pain due to the intrusive thoughts of loss or rejection. Woods and Scott (2016) argued that the stress and guilt young people feel from not responding to a message immediately often causes increased anxiety, which leads to an inability to relax at bedtime. They obsess over the idea that they are missing out on new messages or content, causing them to check their phones and social media accounts. It is theorized that because FoMO is an anxiety driven problem, it can lead individuals to addiction or abuse of social media by engaging in safety behaviors that are similar to behaviors associated with abuse, dependence, withdrawal, or tolerance to the addiction.

Self-Esteem

To date, there has been limited empirical research on the relationship between FoMO and self-esteem, although research has shown a relationship between social media usage and self-esteem. Woods and Scott (2016) explained that receiving positive or negative feedback on social media platforms can influence an individual's self-esteem. In addition, they suggest that the higher the frequency of social media usage, the lower an individual's self-esteem will be due to social comparison. Their results yielded findings offering support to their hypothesis that social media usage and self-esteem would show a statistically significant negative correlation. In other studies, higher scores for addiction

to social media were reported to be associated with lower levels of self-esteem

(Andreassen et al., 2016; Banyai et al., 2017). The results from these studies and others

like them provide support for hypotheses and theories, articulating that social media use

and self-esteem are also significantly negatively related. Expanding on this idea, if social

media use and self-esteem are negatively related, and social media use and FoMO are

positively related, then FoMO and self-esteem logically could be assumed to be

significantly negatively related. Buglass et al. (2017) examined the relationship between

FoMO, self-esteem, and social networking site (SNS) use. They found that "FoMO

mediated the relationship between SNS use and psychological wellbeing, with increases

in SNS use, leading to increases in FoMO which in turn resulted in decreases in self-

esteem" (p. 252).

Parenting Styles

For the purpose of this study, the term *parenting style* refers to the four different

categories of parenting behavior: authoritative, authoritarian, indulgent, and neglectful

(Baumrind, 1971). Authoritative parenting is characterized by open communication,

emotional warmth, and developmentally appropriate structure whereas authoritarian

parenting is characterized by high levels of control, demanding and rejecting of

psychological autonomy. Indulgent, also referred to as permissive, parenting is

characterized by responsiveness and lack of structure. Lastly, neglectful parenting is

characterized by being absent from the child's life and having no structure (Guyer et al.,

2015; MgBemere & Telles, 2013; Parvez & Irshad, 2013; Steinberg, 2001). "Parenting

style is a foundational social context" as particular parenting approaches correlate with

different child behaviors (Guyer et al., 2015, p. 864). Research indicates that parenting

styles are extremely influential during the developmental period and can play a role in the onset or maintenance of child social anxiety (Spokas & Heimberg 2009). Social anxiety is a fear of social situations that can be accompanied by fears of rejection, criticism, or embarrassment (APA, 2013). Because parenting style sets the tone in which a child matures, and influences of how a child will respond to social challenges, it is important to be aware of how different approaches affect children differently (Guyer et al., 2015). Low warmth and high overprotection are common parenting attributes that researchers have found when looking at the relationship between child social anxiety and parenting style (Gulley, Oppenheimer, & Hankin, 2014; Spokas & Heimberg 2009). Parvez and Irshad (2013) also found that anxious students reported an overprotective and rejecting parenting style. Based on these findings, the characteristics of authoritarian and neglectful parenting styles appear to be linked to child social anxiety.

If certain parenting styles are related to social anxiety, it could be theorized that they also influence other types of anxiety-driven problems. Accordingly, FoMO is an anxiety-driven problem that, again, is defined as "the pervasive apprehension that others might be having rewarding experiences from which one is absent" (Pryzbyski et al., 2013, p. 1841). Blackwell et al. (2017) further this theory as the authors propose that an individual's parenting style might influence the fear of social exclusion. Examining the relationship between parenting styles and FoMO would better help parents, practitioners, and scientists understand the FoMO phenomenon and how to treat it.

Present Study

To address the lack of empirical evidence identifying predictors and potential consequences of FoMO, the current study examined the strength and direction of the

relationships between FoMO, social media engagement, self-esteem, parenting styles, and social media abuse. Data was gathered from adolescent, college student, and Internet user samples via completion of a self-report online survey composed of six instruments. Three specific research hypotheses were investigated in this study: 1) decreased levels of self-esteem will be significantly and positively related to high levels of FoMO and social media abuse, 2) higher levels of FoMO will be significantly positively related to scores of social media abuse, and 3) authoritarian and neglectful parenting styles will be associated with significantly higher means values for self-reported FoMO. Additional investigation of the relationships between project variables was evaluated via exploratory analyses conducted for education and gender groupings, along with the specific relationship between social media abuse and parenting styles.

CHAPTER II

METHODOLOGY

Participants

There was a combined total of 661 middle school (ms), high school (hs), and college (cs) aged participants (ms = 33%, hs = 28 %, cs = 39%). Subjects were recruited from a public middle school (n = 219), public high school (n = 184), and private four-year university (n = 258). Of the 661 participants 89.7% used social media (ms = 30.35%, hs = 26.98%, cs = 42.32%). Table 1 includes the demographics of the sample.

Measures

FoMO

FoMO was assessed by using the 10-item Fear of Missing Out (FoMO) scale Przybylski et al. (2013) established. The measure uses a five-item Likert scale ranging from "1 = Not at all true of me" to "5 = Extremely true of me." Przybylski et al. (2013) created this scale to "reflect the fears, worries, and anxieties people may have in relation to being in (or out of) touch with events, experiences, and conversations happening across their extended social environment" (p. 1842). Some example items included, "I fear my friends have more rewarding experiences than me," "When I go on vacation, I continue to keep tabs on what my friends are doing," and "I get anxious when I don't know what my friends are up to." Participants rated these statements based on their general experiences.

Table 1

Demographics of the Sample

Variable	*n*	%
Number of Accounts		
1	61	10.3
2	113	19.1
3	157	26.5
4 or more	261	44.0
Gender		
Male	185	31.2
Female	408	68.8
Age		
13-17	297	50.1
18-21	265	44.7
22-26	29	4.9
26+	2	.3
Ethnicity		
Caucasian/White	375	63.2
Hispanic/Latino	127	21.4
African American/Black	44	7.4
Asian Pacific Islander	16	2.7
Native American or American Indian	7	1.2
Biracial	16	2.7
Other	7	1.2
Classification		
8th	180	30.4
$9^{th} - 10^{th}$	103	17.4
$11^{th} - 12^{th}$	58	9.8
Freshman	85	14.3
Sophomore	60	10.1
Junior	49	8.3
Senior	58	9.8

After starting with 32 items and two rounds of empirically-based items deletion, the final 10-item scale demonstrated high internal consistency with a Cronbach's alpha of $\alpha = .87$. As the scale is relatively new, little previous research use or documentation of psychometric properties of validity of the scale was found. However, there was a study done testing the reliability and validity of the Turkish version of the FoMO scale (Gokler, Aydin, Ünal, & Metintas, 2016). The Cronbach's alpha coefficient for the Turkish FoMO scale was $\alpha = .81$. To further assess the reliability across time, a test-retest yielded a coefficient of .81 as well. The scale was previously shown to be statistically and positively correlated with Problematic Mobile Phone Use, confirming concurrent validity. Result from their study drew the conclusion that the FoMO scale is a valid and reliable instrument to evaluate the FoMO (Gokler et al., 2016)

Social Media Engagement

Social Media Engagement was assessed by using the scale Alt (2015) developed. Alt's Social Media Engagement (SME) questionnaire contains nine items ranked on a five-point Likert scale ranging from "never to always". Within this scale, three factors were identified: social engagement, news information engagement, and commercial information engagement. The first factor consisted of four items and yielded a Cronbach's alpha of .85. The second factor, composed of just two items, yielded a Cronbach's alpha of .77. Lastly, the third factor consisted of three items and yielded a Cronbach's alpha of .83. Collectively, the researchers reported high internal consistency for the SME scale, noting a Cronbach's alpha of .84. Alt also reported that convergent validity was supported by the positive statistically significant correlations between all factor pairings.

Before answering the questionnaire, participants were asked "To what extent do you do the following activities by using your laptop computer or mobile phone during class?" Some example items include, "Reading updates about what is happening with others (e.g., your friends or family members) by using social media sites (e.g., Facebook, Twitter, Whatsapp, Instagram)," "Reading news updates via social media sites," and "Sharing commercial updates via social media sites." Although this scale has not been used extensively throughout research, it appears to have good reliability and validity and will be useful for the purposes of the current study. In addition, for the purpose of this study the wording on the introduction was slightly modified to say "To what extent do you do the following activities by using your laptop computer or mobile phone?"

Self-Esteem

Self-esteem was assessed by using the 10-item Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965). The RSES assesses global self-esteem, such as self-worth and self-acceptance, by using a four-point Likert scale ranging from "strongly disagree" to "strongly agree". Five of the questions were negatively worded, so when scoring the scale these negatively worded items were reverse scored. Such questions included, "I wish I could have more respect for myself" and "I feel I do not have much to be proud of." Some of the positively worded items include, "I take a positive attitude toward myself" and "I feel I'm a person of worth, at least on an equal plane with others." The scores ranged anywhere from 10-40, with lower scores indicating poorer self-esteem.

The RSES is the most widely used scale for measuring self-esteem and has been successfully utilized across a number of settings and populations., although, it was originally intended to measure self-esteem in high school students (Ciarrochi & Bilich,

2017; Robins, Hendin, & Trzesniewski, 2001). It has exceptional internal consistency with a Guttman scale of reproducibility of .92, as well as excellent stability as test-rest correlations over a two-week period were .85 and .88 (Ciarrochi & Bilich, 2017). Robins et al. (2001) support the claim that the RSES has the most of empirical validation than any other self-esteem measure. It correlates strongly with the Coopersmith Self-Esteem Inventory and also "correlates in the predicted direction with measures of depression and anxiety" (Ciarrochi & Bilich 2017 p. 61).

Parenting Styles

Parenting styles were assessed by using the 26-item questionnaire by Steinberg, Lamborn, Darling, Mounts, & Dornbusch (1994). It was designed to incorporate the parenting style theories of both Baumrind (1971) and Maccoby and Martin (1983). This scale uses the combined scores from three factors to identify either authoritative, authoritarian, indulgent, or neglectful parenting styles. The first factor identified is acceptance/involvement and measures how loving, responsive, and involved parents are. Example items include, "I can count on my parents to help me out, if I have some kind of problem," and "My parents spend time just talking with me." Strictness/supervision, which measures parental monitoring and supervision, is the second factor. Some example items include, "How much do your parents try to know where you go at night?" and "How much do your parents really know where you go at night?" Lastly, psychological autonomy is the third factor and measure promotion of personal achievement independence. Example items include, "My parents tell me their ideas are correct and that I should not question them," and "My parents act cold and unfriendly if I do something they don't like" (Steinberg et al., 1994). The Parenting Style index uses four different

Likert scales; "strongly disagree – strongly agree," "I am not allowed out – as late as I want," "Don't try – Try a little," and "Don't know – Know a lot."

In order to place a respondent in one of the four groupings, their answers to both the acceptance/involvement and strictness/supervision subscales were paired together. The scores for each subscale were divided into tertiles. Subjects who scored in the top third for both subscales were considered to have authoritative parents ($n = 82$) whereas subjects who scored in the bottom third for both subscales were considered to have neglectful parents ($n = 70$). Authoritarian parents ($n = 33$) were identified by the respondent's answers scoring in the bottom third for acceptance/involvement and in the top third for strictness/supervision. Lastly, indulgent parents ($n = 60$) were identified by the respondent's answers scoring in the top third for acceptance/involvement and in the bottom third for strictness/supervision (Lamborn, Mounts, Steinberg, & Dornbusch 1991). When conducting analyses with the four parenting style groupings, the sample was cut down to 245 subjects because only those participants whose scores were either in the high or low tertiles ranges for certain subscale pairings were considered to have one of the four parenting styles.

Social Media Abuse

Social Media Abuse was measured by two different scales, the Bergen Social Media Addiction Scale (BSMAS) and the Social Media Disorder Scale (SMD) (Andreassen et al., 2016; Van den Eijnden et al., 2016). Both of these scales were chosen because they are relatively new and can be used to test the reliability and validity of one another to strengthen the research findings.

The BSMAS is an adapted version of the Bergen Facebook Addiction Scale by simply changing the phrasing from "Facebook" to "social media." The BSMAS includes six items that are ranked on a five-point Likert scale "very rarely" to "very often". Each of the six items come from an addictive symptom and are prefaced with "How often in the past year have you…". The six symptoms include: salience, "spent a lot of time thinking about social media or planned use of social media;" conflict, "used social media so much that it has had a negative impact on your job/studies;" mood modification, "used social media to forget about personal problems;" withdrawal, "become restless or troubled if you have been prohibited from using social media;" tolerance, "felt an urge to use social media more and more;" and relapse, "tried to cut down on the use of social media without success" (Andreassen et al., 2016).

As stated previously, the BSMAS is an altered version of the BFAS. The BFAS was proven to be valid and reliable and has shown good psychometric properties. It had a Cronbach's alpha of .83 and a test-retest coefficient of .82 (Andreassen et al., 2016; Uysal, Satici, & Akin, 2013). The final version of the BFAS was narrowed down from 18 questions to six by choosing items with the highest possible factor loadings for each of the six symptoms listed previously (Bányai et al., 2017). The BFAS had also been used in multiple studies, even needing to be translated into several languages (Andreassen et al., 2016). The altered version of the BFAS, the BSMAS, has been consistent with the original version showing high reliability with two different Cronbach's alphas of .88 and .85 (Andreassen et al., 2016; Bányai et al., 2017).

The SMD scale is a nine-item scale prefaced with "during the past year, have you…" and is answered in absolutes with a yes or a no. The nine items come from the

nine criteria for IGD in the *DSM-4*. The authors of this scale proposed that IGD and SMD

both fall under the overarching construct of Internet addiction. Because of this, they

believed that SMD should be defined by the same criteria as IGD. The nine criteria

include: preoccupation, "regularly found that you can't think of anything else but the

moment that you will be able to use social media again;" tolerance, "regularly felt

dissatisfied because you wanted to spend more time on social media;" withdrawal, "often

felt bad when you could not use social media;" persistence, "tried to spend less time on

social media, but failed;" escape, "often used social media to escape from negative

feelings;" problems, "regularly had arguments with others because of your social media

use;" deception, "regularly lied to your parents or friends about the amount of time you

spend on social media;" displacement, "regularly neglected other activities (e.g. hobbies,

sport) because you wanted to use social media;" and conflict, "had serious conflict with

your parents, brother(s) or sister(s) because of your social media use" (Van den Eijnden

et al., 2016).

The original scale contained 27 items, three items for each of the nine criteria.

The two times the 27-item questionnaire was ran it showed strong reliability with

Cronbach's alpha of .90 and .92. However, the authors of this scale wanted to produce a

shorter version in hopes of saving time and providing an even better description of the

data. The 9-item scale was strongly correlated with the 27-item scale ($r = .89$) and

presented good reliability with a Cronbach's alpha score of .81. Convergent and criterion

validity of the short nine-item scale were also tested by the authors of the scale and

indicated satisfactory validity. Lastly, the authors also did a test-retest of the nine-item

short SMD scale with an interval of two months between the two deployments of

surveys. Results showed a moderate degree of reliability with a Pearson correlation of

.50, p < 0.001 (Van den Eijnden et al., 2016). Table 2 includes reliability statistics of

each scale for the current study.

Table 2

Cronbach's Alpha, Mean, and Standard Deviation of Measures

	Self Esteem	*FoMO*	*Social Media Engagement*	*Social Media Addiction*	*Social Media Disorder*	*Parenting Styles*
α	.88	.84	.56	.85	.73	.80
Mean	30.01	23.40	23.69	13.59	1.81	N/A
SD	4.93	7.23	6.03	5.04	1.78	N/A

Procedures

Before conducting the study, approval from the university's Institutional Review

Board (IRB) and the approval bodies of participating institutions was obtained. After

receiving authorization to conduct the study, researchers began recruiting participants. At

the public middle school, students were approached in two different classes based on

their school's team placement (8-1 or 8-2). Students on 8-1 were gathered from their

history class and students on 8-2 were gathered from their reading class. At the high

school, students were approached in their high school 101 classes and some additional

electives. University students were approached via social media, word of mouth, and in

psychology courses. Participants who heard of the survey in their psychology course had

the opportunity to receive extra credit.

If the subject was a minor, a copy of the consent form was sent home with them to be signed by their legal guardian and had to be brought back to their school before participation in the study could occur. The printed version of the consent form can be found in Appendix B. Additionally, participants gave consent to a shorten version of the consent form electronically before starting the survey. It stated:

> This study is investigating the impact of social media. It will take you about 20 minutes to answer the survey questions. We do not expect any discomfort for you as a participant, since your participation will be only to respond to questions. If you are uneasy about answering any of these questions, you may skip that question or discontinue participating. Please indicate whether you agree to these terms of participation.

For participants 18 years of age or older, the full consent form was provided electronically on the survey link. The electronic version of the consent form can also be found in Appendix B.

To be included in the study, subjects had to be active participants on at least one social media platform. As part of a screening process, participants who did not provide consent or who did not participate in social media were excused prior to survey completion. Furthering the screening process, participants who did not answer each question were eliminated from the survey analysis. After completing the informed consent, participants were directed to a demographics page asking for routine demographics (gender, age, ethnicity, classification, and number of social media accounts). Next, the participant was directed to pages including the six scales mentioned

above. After completion of the online survey, students were directed to a page to be

entered into a raffle for a $25 gift card to Amazon and to provide their Banner ID if their

professor was providing extra credit. The survey took between 10 and 20 minutes to

complete.

Plan of Data Analysis

The hypotheses guiding statistical analyses for this study are as follows: 1) self-

esteem will be significantly negatively related to FoMO and social media abuse, 2)

FoMO will be significantly positively related to scores of social media abuse, and 3)

authoritarian and neglectful parenting styles will be significantly positively associated

with FoMO. Multiple regression analyses were used to test each stated hypothesis. For

these equations, FoMO was the dependent variable and the independent variables were

self-esteem, social media abuse, and parenting styles. This type of data analysis allows

for examination of the relationship of multiple predictive variables simultaneously.

CHAPTER III

RESULTS

For statistical analyses, only participants reporting use of at least one social media account were retained in the data set. A total of 593 participants who answered, "yes" to the item "I use social media (i.e., Facebook, Instagram, Twitter, Snapchat)" were therefore included in the sample used for correlational analyses. In order to compare different parenting styles, scores from the parenting subscales were divided into tertiles. As previously outlined, the authors used a procedure consistent with scoring instructions provided by the authors of the Parenting Style Index (Lamborn, et al., 1991; Sternberg et al., 1994) which involved combining scores from the upper and lower tertiles of each subscale to create the four parenting style classifications (e.g. Authoritarian, Authoritative, Neglectful, Permissive). If the student's responses placed the parenting style of the student's parents into the middle tertiles on either parenting subscale, then no assignment of a parenting style classification variable was assigned. This processed resulted in parenting style classifications for 245 participants. Mean comparison analyses were then computed to identify statistically significant differences in dependent variables across parenting style groupings.

Relationship Between Self-Esteem with FoMO and Social Media Abuse

One of the purposes of this study was to examine the association of self-esteem with FoMO and social media abuse. It was hypothesized that self-esteem would be significantly negatively correlated with both FoMO and social media abuse. To test this hypothesis, a bivariate correlation was conducted with the variables self-esteem, FoMO, Social Media Addiction, and Social Media Disorder. The results of these analyses are presented in Table 3. As predicted, self-esteem was found to be significantly negatively correlated with FoMO and both components of social media abuse. Furthermore, self-esteem is more strongly related to FoMO than it is to the social media abuse components. Additionally, when correlations were computed for each age grouping, the relationship between self-esteem and FoMO is observed to become consistently larger for older aged groups. In fact, among the youngest group, middle school students, although the correlation between self-esteem and FoMO was negative, as predicted, it did not reach the level of statistical significance. In terms of gender differences, when students from all age groupings were combined, females' levels of reported FoMO were more strongly associated with levels of self-reported self-esteem (z score = -2.40, p < .02). Also, social media abuse was significantly related to self-esteem levels in all group totals. However, not all SMA and SMD correlations were significant for both male and female subgroups within each age-level grouping. As depicted in Table 3, at the middle school level, only the total sample grouping (male and female participants) showed a significant relationship with SMA. Interestingly, at the high school level, SMA is statistically significantly related to self-esteem in only the total and female samples. Finally, at the college level, statistical significance is seen for the correlations between SMA and self-

esteem at the level of the total and both of the gender specific samples. As an additional

point of interest, the highest overall correlations between SMA and self-esteem were seen

for high school females and college males.

Table 3

Bi-Variate Correlations Between Self-Esteem, FoMO, and Social Media Abuse

Self-Esteem:	FoMO	SMA	SMD
Total Sample	-.29**	-.25**	-.26**
Male	-.12	-.18*	-.22**
Female	-.33**	-.24**	-.24**
Middle School			
Total	-.14	-.23**	-.28**
Male	-.09	-.21	-.24*
Female	-.14	-.15	-.23*
High School			
Total	-.36**	-.23**	-.30**
Male	-.06	-.02	-.17
Female	-.47**	-.32**	-.33**
College			
Total	-.39**	-.29**	-.24**
Male	-.24**	-.39*	-.35*
Female	-.37**	-.26**	-.21**

Note: * $p < 0.05$, ** $p < 0.01$

Relationship Between FoMO and Social Media Abuse

An additional goal of this study was to test the relationship between FoMO and social media abuse. It was predicted that FoMO and social media abuse would be significantly positively associated. A bivariate correlation was conducted with the variables FoMO, Social Media Addiction, and Social Media Disorder to test the prediction. Results of these analyses are provided in Table 4. Consistent with the stated hypothesis, FoMO and social media abuse were significantly positively related. However, in spite of the positive relationship, college aged males did not yield a significant correlation for FoMO and SMA. Middle school participants reported the highest correlation among FoMO and social media abuse. Furthermore, there was a statistical difference between the middle school students' and college students' FoMO and SMA relationship (z-score = 2.08, p < .04). Interestingly, middle school males are more likely to report social media abuse in conjunction with FoMO, as opposed to middle school females, and all high school and college students.

Table 4

Bi-Variate Correlations Between FoMO and Social Media Abuse

FoMO:	SMA	SMD
Total Sample	.46**	.45**
Male	.50**	.43**
Female	.43**	.44**
Middle School		
Total	.57**	.54**
Male	.69**	.62**
Female	.48**	.48**
High School		
Total	.44**	.46**
Male	.47**	.30*
Female	.39**	.50**
College		
Total	.41**	.39**
Male	.29	.40**
Female	.43**	.38**

Note: * $p < 0.05$, ** $p < 0.01$

Relationship Between Parenting Styles and FoMO

The final goal of this study was to assess the relationship between parenting styles and FoMO. It was hypothesized that authoritarian and neglectful parenting styles would associated with significantly higher means values for self-reported FoMO. A one-way

ANOVA was conducted to assess the mean differences of parenting style classification and self-reported levels of FoMO. Table 5 presents the results of these analyses. Surprisingly, only the neglectful parenting style appeared to be associated with FoMO. The students reporting being raised with a primarily negative parenting style presented the most elevated FoMO mean scores. In fact, Tukey post hoc tests of group differences indicated that neglectful parenting style and authoritative parenting style were significantly different ($p < .02$). When groups were divided by gender, female subjects also were observed to report higher levels of FOMO in association with experiencing a neglectful parenting style. Additionally, Tukey post hoc tests demonstrated the presence of a significant statistical difference among authoritative and neglectful parenting styles ($p < .03$). Interestingly, middle school participants reported a statistically significant relationship between FoMO and authoritarian parenting style. The post hoc test for the middle school group identified a significant difference between both indulgent and authoritarian parenting styles ($p < .05$) as well as indulgent and neglectful parenting styles ($p < .05$).

Table 5

Mean Differences Between Parenting Styles and FoMO

	Parenting Styles				
	Authoritative	Authoritarian	Indulgent	Neglectful	F Test
FoMO	M (SD)	M (SD)	M (SD)	M (SD)	p-value
Total	21.75_a (6.33)	22.80 (8.21)	23.28 (7.07)	25.27_a (8.47)	**.020**
Male	20.58 (6.38)	20.43 (7.59)	20.36 (4.86)	23.16 (8.25)	.517
Female	22.11_a (6.33)	23.52 (8.41)	25.32 (7.71)	26.51_a (8.45)	**.020**
MS	21.73 (6.83)	29.38_a (8.45)	$21.96_{a, b}$ (5.37)	27.33_b (7.26)	**.005**
HS	20.73 (4.57)	20.11 (9.27)	23.00 (7.48)	25.13 (9.67)	.281
CS	22.04 (6.72)	20.62 (4.94)	27.00 (9.13)	24.46 (8.32)	.088

Note. Means in a row sharing subscripts are significantly different from each other. Bolded p-values indicate statistical significance.

Relationship Between Parenting Styles and Social Media Abuse

The overall goals of this study were to analyze how self-esteem, FoMO, social media abuse and parenting styles related to one another. No predictions were made on the relationship between parenting style variables and social media abuse, however, as an exploratory analysis, a one-way ANOVA was computed comparing mean differences of social media abuse across parenting style classifications. The results of these analyses are presented in Table 6. Social media abuse was found to have a statistically significant relationship with the neglectful parenting style variable. Further, for all significant mean

differences across gender and groups, neglectful parenting style had the largest observed mean. Tukey post hoc tests conducted on the overall sample for SMA revealed a significant difference between authoritative and neglectful parenting styles ($p < .05$), as well as indulgent and neglectful parenting styles ($p < .05$). The female mean comparison for SMA also demonstrated a significant difference between authoritarian and neglectful parenting variables ($p < .05$). Authoritative and neglectful parenting styles yielded significant mean differences for high school participants ($p < .02$) under the SMA component, and with the total sample ($p < .02$) and male population ($p < .03$) under the SMD component. Furthermore, middle school subjects demonstrated a significant mean difference between indulgent and neglectful parenting styles for the SMD component of social media abuse ($p < .05$). Although exploratory, these observed relationships are interesting and deserve further investigation. Implications of these results will be further discussed.

Table 6

Mean Differences Between Parenting Styles and Social Media Abuse

	Parenting Styles				
	Authoritative	Authoritarian	Indulgent	Neglectful	F Test
	M (SD)	M (SD)	M (SD)	M (SD)	p-value
SMA					
Total	12.89_a (4.90)	12.56 (3.97)	12.74_b (4.81)	$15.02_{a,\,b}$ (5.18)	**.019**
Male	10.75 (4.91)	12.50 (3.78)	11.21 (4.25)	13.11 (5.13)	.397
Female	13.58 (4.74)	12.58_a (4.11)	13.82 (4.95)	15.74_a (5.06)	**.035**
MS	11.91 (4.50)	13.67 (3.61)	12.41 (4.93)	15.00 (5.93)	.283
HS	10.88_a (5.08)	11.67 (3.50)	12.65 (5.18)	16.00_a (4.52)	**.008**
CS	13.67 (4.81)	12.43 (4.54)	13.73 (4.05)	14.04 (5.17)	.788
SMD					
Total	1.43_a (1.55)	1.47 (1.67)	1.54 (1.65)	2.31_a (2.06)	**.012**
Male	0.60_a (0.99)	1.63 (1.77)	1.22 (1.48)	2.21_a (2.27)	**.029**
Female	1.70 (1.61)	1.42 (1.67)	1.76 (1.74)	2.35 (2.00)	.125
MS	0.90 (1.22)	1.78 (2.05)	1.19_a (1.44)	2.57_a (2.09)	**.026**
HS	1.19 (2.20)	1.11 (1.17)	2.05 (2.06)	2.74 (2.30)	.087
CS	1.61 (1.37)	1.50 (1.74)	1.45 (1.04)	1.67 (1.67)	.974

Note. Means in a row sharing subscripts are significantly different from each other.
Bolded p-values indicate statistical significance.

CHAPTER IV

DISCUSSION

Overview of Results

The aim of the present study was to investigate the relationships among self-esteem, the Fear of Missing Out, social media abuse, and parenting styles. The results were largely consistent with the hypotheses, offering mainly weak to moderate statistically significant findings. To further investigate these associations, the sample was divided into groups by age middle school, high school, and college; gender, and group-gender. The goal of these analyses was to examine the magnitude of the observed relationships among variables by group and gender.

Self-Esteem with FoMO and Social Media Abuse

Consistent with the present study's hypothesis and previous research findings, self-esteem was significantly negatively correlated with both FoMO and social media abuse (Andreassen et al., 2016; Banyai et al., 2017; Buglass et al., 2017; Woods & Scott, 2016). This finding suggests that the lower an individual's self-esteem is, the more likely they are to report experiencing FoMO and engaging in social media abuse. Andreassen et al. (2016) proposed that the relationship between self-esteem and social media abuse suggests that individuals use social media to attempt to raise self-esteem, for example, accumulating likes, getting retweets, receiving positive comments, etc. In relation to FoMO, this correlation may indicate that low self-esteem can create feelings of self-

doubt, which can lead an individual to believe they are being left out because they are not well liked. They may then begin to ruminate on the idea that they are missing out on something, which in turn lowers their self-esteem and eventually may lead to a negative cycle of decreasing self-esteem and increasing FoMO.

The study further found that as age increased, the overall relationship between FoMO and self-esteem increased. This means that the college-aged group tended to report higher levels of FoMO as a function of lower self-esteem levels. Additionally, female participants were more likely to report FoMO elevations in conjunction with lower self-esteem. When broken down by group-gender, high school females had the strongest relationship between self-esteem and FoMO. This may be due to the intense need for belongingness in high school females as they are more prone to school bullying and cyber-bullying (Schneider, O'Donnell, Stueve, & Coulter, 2012).

Overall, self-esteem and social media abuse correlations were relatively equal across groups, meaning that middle school, high school, and college-aged subjects who reported higher levels of engagement in social media abuse also reported lower levels of self-esteem. Similar to the pattern observed between FoMO and self-esteem, high school females reported the highest level of correspondence between self-esteem and social media abuse. In a study conducted by Neto, Golz, and Polega (2015), high school females reported higher levels of loneliness and higher levels of social media use. Accordingly, high school females who are lonely and suffer from lower levels of self-esteem are more likely to engage in social media. They could be using social media out of boredom, as an escape, or even to look like they are busy so they do not appear lonely to their peers. Furthermore, the lonelier or lower high school females' self-esteem is, the more likely

they are to use social media to counteract their negative feelings, which can lead to abusive social media behaviors. However, this correlation could be an argument of the chicken and the egg. Are lower levels of self-esteem contributing to more abusive social media behaviors, or are abusive social media behaviors contributing to lower levels of self-esteem? The more frequently an individual uses social media, the more likely they are to engage in social comparison (Vogel, Rose, Roberts, & Eckles, 2014). Furthermore, social comparison has been reported as a mediating factor in the relationship between social media use and lower self-esteem levels (Vogel et al., 2014). When high school females participate in high levels of social media abuse, they could be engaging in upward social comparison, which results in lower levels of self-esteem. Future research could investigate the relationship between social media abuse and social comparison.

FoMO and Social Media Abuse

The study's second hypothesis was supported with a moderate correlation; as FoMO levels increased, the sample's levels of social media abuse also increased. This suggests that when individuals feel like they are missing out on something, they are more likely to engage in addictive behaviors towards social media. The constant availability of social media platforms through handheld devices, allows individuals to check and either confirm or deny their fear. Rather than sitting there without answers, social media allows individuals to confront their fears in a nondirective way (i.e., they do not have to confront the people leaving them out as they can see for themselves). This idea of checking social media to relieve anxiety or fear sounds similar to obsessive compulsive patterns of behavior. Accordingly, it would be interesting to specifically examine the relationship between FoMO, social media abuse, and Obsessive-Compulsive Disorder tendencies.

Although all correlations had moderate statistical significance, the analysis on group differences demonstrated that as age increased, the strength of the association between FoMO and social media abuse decreased. The direction of the relationship was still positive, but older participants were less likely to engage in social media abuse behaviors, the higher their self-reported levels of FoMO. One explanation for this could be that younger generations do not know any other way to confront their fears. Since older participants were not exposed to intense social media use until later in life, they had already likely had multiple opportunities to learn other ways to resolve conflict. Younger generations grew up in a time where technology allowed them to confront their fears behind a screen, as opposed to trying to solve issues face to face. Interestingly, when broken down by group-gender, middle school males tended to report the highest moderate correlation among FoMO and social media abuse. Further investigation on why this correlation exists is encouraged. Additionally, with the idea that social media has influenced the way individuals handle conflict, assessing conflict resolution styles across age groups in relation to social media usage and social media abuse would be intriguing for future research.

Parenting Styles and FoMO

Hypothesis three was only partially supported as students reporting growing up with neglectful parenting styles had the highest FoMO mean. This implies that participants who experienced a neglectful parenting style were more likely to report higher levels of feelings of FoMO. Participants who did not receive the care and attention they needed when they were younger, because of neglectful parenting, could have developed a core belief that they are regularly missing something. The feeling of not

belong loved can also extend into other areas of life to the point that they constantly fear they are missing out. To further explore this observation, future research could investigate what type of impact each parenting style has on an individual's core beliefs. Authoritative and neglectful parenting styles were significantly different from each other in relation to FoMO. Understandably, participants who had parents that were highly involved but also had high demands were less likely to experience feelings of FoMO than children of neglectful parents. This might be because participants of authoritative parents were more likely to learn autonomous thinking and were subconsciously taught that their conditions of worth did not revolve around others.

Gender analyses revealed that among female participants, neglectful parenting style was more likely to produced feelings of FoMO. The female population was consistent with the overall sample in that neglectful and authoritative parenting styles were significantly different. Group analyses were consistent with the original hypothesis in that middle school participants reported a statistically significant relationship between authoritarian parenting style and FoMO. This means that participants who had parents that were high in demand and low in warmth were more likely to experience FoMO. This is in alignment with previous research that showed authoritarian parenting styles was related to higher levels of anxiety (Gulley et al., 2014; Parvez & Irshad, 2013; Spokas & Heimberg, 2009). Additionally, as compared to indulgent parenting styles, participants who experienced authoritarian parenting styles were more likely to experience FoMO. Further, when compared to neglectful parenting styles, children who experienced authoritarian parenting styles were more likely to experience FoMO for the middle school

population. Analyses were not conducted on group-gender differences due to sample size limitations and the resulting lowering of statistical power.

Parenting Styles and Social Media Abuse

The exploratory analyses among parenting styles and both social media abuse components further identified statistically significant relationships. Subjects reported they were more likely to engage in social media addiction (SMA) if they experienced a neglectful parenting style. As mentioned previously, SMA was examined by Banyai et al. (2017) using a scale that measured six components of traditional addiction criteria: salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. Neglectful parenting style was significantly different from both authoritative and indulgent parenting styles. This means that participants of parents who were uninvolved were more likely to engage in SMA than participants of parents who were high in warmth and demand (authoritative) and parents who were high in involvement but low in demand (indulgent). As these findings are similar to other studies, "[i]t is clear that parents who are assertive and committed, and whose parenting techniques are supportive and explanative [...] are more likely to be receptive of and responsive to the needs of their children and shield them from compulsive behaviors" (Huang et al., 2010, p. 404). Gender and group analyses revealed that female and high school subjects of neglectful parents were more likely to engage in SMA. However, surprisingly, the female sample showed a significant difference between authoritarian and neglectful parenting styles. This means that subjects who had strict parents with little warmth (authoritarian) were less likely to engage in SMA than subjects who had uninvolved parents (neglectful). Daughters of strict parents may not have been allowed, or were restricted, when it came

to logging on to social media platforms. Therefore, this could have reduced their addictive behaviors. High school participants demonstrated a significant difference between neglectful and authoritative parenting styles. Subjects who had uninvolved parents were at greater risk for SMA than participants who had warm and demanding parents.

Social media disorder, again, is assessed based off of Internet Gaming Disorder criteria as researchers believe SMD and IGD both fall under the category of Internet addiction (Van den Eijnden et al., 2016). The nine criteria are preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict (Van den Eijnden et al., 2016). The present study found that neglectful parenting style had the strongest association with SMD. Subjects who had uninvolved parents were more likely than participants who had warm and demanding parents for SMD at a significant level. Interestingly, gender analyses reported that male participants had a significant relationship with SMD and females did not. Males who experienced neglectful parenting styles were most likely to engage in SMD. Uninvolved parents continued to result in more social media abusive behaviors. Among the male participants, neglectful and authoritative parenting styles shared a significant difference. Lastly, group analyses revealed that middle school participants were the only group that reported a statistical finding. Continuing the trend, neglectful parenting style was more likely to report experiencing and engaging in SMD. However, the only significant difference observed via post hoc test was between indulgent and neglectful parenting styles. This means that participants of uninvolved parents were at greater risk for SMD than participants of involved, but low in demand parents.

Limitations

One limitation of the study was the lack of diversity among the sample. Over 60 percent of the sample was Caucasian and over 65 percent was female. Additionally, the sample was composed of students from only two cities in the southern region of the United States. The minor participants were recruited from one public school district and the college students were recruited from a small private university. These demographics are not diverse enough to make the findings generalizable. Additionally, the study relies on self-reports from middle, high school, and college aged students. The reliability of the students' answers is questionable because they could be reporting on what they recall or even imagine, instead of recording what actually happened in real-time. Specifically, for the parenting styles measure, the retrospective method this study poses might not be the most reliable source in gathering data. Participants are having to rely on long-term memory as opposed to short-term; the longer something is a memory, the more time for information to be altered or changed. Memories have the capability of being altered based on the perspective individuals choose to comprehend them, as well as fabrications that take place from hearing others or even themselves retell/recall the events. It is easier to remember the facts of a situation the more closely the situation occurred. In regards to the measures, the parenting styles scale by Steinberg et al. (1994) may also have contributed to the limitations of this study. The classification of parenting variables only includes either the top or bottom tertiles from each subscale. With this, a major portion of the sample was omitted when conducting analyses that included parenting styles. This resulted in a substantial forfeiture of statistical power. Configuring an alternative

grouping system that would retain most of the sample for data analysis would have been ideal.

Clinical Implications

As practitioners in the helping professionals, investigating how growing trends are currently impacting society is vital for assessing current and future needs for medical and mental health communities. Social media usage is rapidly progressing to where it is becoming a necessity for individuals as opposed to a leisure activity, and especially amongst younger generations. With studies linking social media usage to aspects of psychological well-being (Baker et al., 2016; Woods & Scott, 2016) as well as abusive, addiction-like behaviors (Andreassen et al., 2016; Banyai, et al., 2017; Blackwell et al., 2017; Hormes et al., 2014), this study aimed to investigate an anxiety driven phenomenon (FoMO) and its link to social media abuse, as well as how parenting styles play a role in both FoMO and social media abuse.

The findings indicated that participants with lower self-esteem reported higher levels of FoMO and social media abuse. Accordingly, if one should suspect their client has an extreme elevation of FoMO or social media abuse, self-esteem should be a target goal of treatment. The idea is that as an individual's self-esteem increases, their levels of FoMO and social media abuse should decrease. Furthermore, parents can help alleviate feelings of FoMO and engagement in social media abuse the more they practice an authoritarian parenting style. As mentioned previously, authoritative parenting style is linked to less social anxiety through the conjunction of high warmth, high demandingness, and promotion of autonomy the authoritative style provides. Since FoMO is a socially anxiety driven phenomenon, it is predicted that an authoritative

parenting style would help reduce FoMO levels, which is also supported by the results of the current study. Additionally, parents who balance being supportive in the child's life in addition to being assertive can help facilitate healthy social media use (e.g., allowing them to engage in social media but require age restrictions, co-viewing, setting time limits, etc.).

Fortunately, the FoMO and social media abuse variables scales each have few items (FoMO = 10, SMA = 6, and SMD = 9). If a practitioner suspects their client is suffering from FoMO or social media abuse, they can deploy the variable measure in session with the option of scoring them immediately or waiting to provide results the next session. These measures provide a convenient, yet efficient way to measure for harmful levels of FoMO and engagement in social media abuse behaviors. However, if a practitioner does not have the scales on hand, they can easily memorize the basic concepts from each scale and assess the client's prospective problem through interview questions. For social media abuse, the questions would revolve around addiction criteria (e.g., withdrawal, problems, dependence, tolerance, etc.), and for FoMO, the questions would revolve around social anxieties (i.e., peers being non-inclusive, worries about missing things or not being "in the know," etc.).

The proposed theory for treatment of FoMO and social media abuse would be an integration of Cognitive Behavioral Therapy (CBT) and Motivational Interviewing (MI). The CBT model suggests that thoughts create feelings, feelings create behaviors, and behaviors reinforce the original thought. Therefore, treatment typically tries to identify negative automatic thoughts and reconstruct thought patterns in order to change one's feelings and behaviors which are associated with the thoughts. When an individual is

experiencing FoMO, they are ruminating on thoughts of being left out. If a practitioner can help a patient learn how to cope with thoughts of missing out, it would potentially help alleviate the anxiety associated with those thoughts. Furthermore, it could prevent patients who suffer from FoMO from engaging in or developing social media abuse behaviors. For social media abuse, MI is the proposed treatment as many studies have empirically proven that MI is effective for people suffering from addiction (DiClemente, Corno, Graydon, Wiprovnick, & Knoblach, 2017; Kaplan, 2017; & Miller, 2015). MI is a counseling method that helps client's work through ambivalent feelings and move towards finding motivation to change a behavior through collaboration, evocation, and autonomy.

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APPENDIX A

IRB Approval Letter

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

10/05/2017

Kylie Richter
Department of Psychology
934 EN 12th Abilene, TX 79601
Abilene Christian University

Dear Kylie,

On behalf of the Institutional Review Board, I am pleased to inform you that your project
titled FoMO, Social Media Abuse, and Parenting Styles

was approved by expedited review (46.110(b)(1) category 7) on 10/02/2017 for a period of
   one year   (IRB # 17-061). The expiration date for this study is 10/02/2018 . If you
intend to continue the study beyond this date, please submit the Continuing Review Form at
least 30 days, but no more than 45 days, prior to the expiration date. Upon completion of this
study, please submit the Inactivation Request Form within 30 days of study completion.

If you wish to make **any** changes to this study, including but not limited to changes in study
personnel, number of participants recruited, changes to the consent form or process, and/or
changes in overall methodology, please complete the Study Amendment Request Form.

If any problems develop with the study, including any unanticipated events that may change
the risk profile of your study or if there were any unapproved changes in your protocol,
please inform the Office of Research and Sponsored Programs and the IRB promptly using
the Unanticipated Events/Noncompliance Form.

I wish you well with your work.

Sincerely,

Megan Roth (Oct 3, 2017)

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Informed Consent

Title of Study: Fear of Missing Out, Social Media Abuse, and Parenting Styles

You may be eligible to take part in a research study. This form provides important information about that study, including the risks and benefits to you, the potential participant (Please note that if you are providing consent for another person, such as a minor or child under your guardianship, "you" refers to the person for whom you are giving consent). Please read this form carefully and ask any questions that you may have regarding the procedures, your involvement, and any risks or benefits you may experience. You may also wish to discuss your participation with other people, such as a friend or a family member.

Also, please note that your participation is entirely voluntary. You may decline to participate or withdraw from the study at any time and for any reason without any penalty or loss of benefits to which you are otherwise entitled.

Please contact either of the Principal Investigators if you have any questions or concerns regarding this study or if at any time you wish to withdraw. This contact information is provided at the end of this document. Dr. Roth, who is Director of the Office of Research and Sponsored Programs at Abilene Christian University, may also be contacted if you so desire.

Purpose and Procedures

Purpose of the Research—The purpose of this research is to investigate the relationship between the fear of missing out (FoMO) and multiple factors such as self-esteem, parenting styles, and behaviors relating to social media use. This survey is being conducted in order to try to understand how these factors are related to FoMO. The researchers hope to gain this understanding and potentially apply it in the field of psychology.

Expected Duration of participation— Survey should take between 15-20 minutes

Description of the procedures-- Once you consent to participation in the study, you will be asked to participate in the following procedures:

The completion of 6 questionnaires. You will be asked to answer questions about your demographic information (e.g., age, ethnicity), classification (8th grade, 10th grade, freshman…, etc.) and number of social media accounts. You will then take six separate questionnaires: three on social media and one on self-esteem, fear of missing out, and parenting styles. For the purpose of this study, the term "social media" will be referring to Facebook, Snapchat, Twitter, Instagram and the like.

Risks and Discomforts

There are minimal to no risks associated with this project including stress, psychological, social, physical, or legal risk, considered to be greater than any of those that are experienced in daily life. If, for any reason, you begin to experience discomfort or stress during this project, you may end your participation at any time without penalty or negative consequences. You may also request that any already gathered information be removed from the study.

The researchers have taken steps to minimize the risks associated with this study. However, if you experience any problems, you may contact Kylie Richter at kdr12b@acu.edu or Scott Perkins at perkinss@acu.edu

The researchers and ACU have no specific plan to pay for any injuries or problems you may experience as a result of your participation in this research. Supportive counseling services will be offered as requested through the Psychology Clinic.

The primary risk with this study is breach of confidentiality. However, we have taken steps to minimize this risk. We will not be collecting any personal identification data during the survey. However, Survey Monkey may collect information from your computer. You may read their privacy statements here: https://www.surveymonkey.com/mp/policy/privacy-policy/.

Potential Benefits

There are potential benefits to participating in this study. Such benefits may include gaining a better understanding of your own social media usage and behaviors. This study will also allow us to gain a better understanding of the connection between the fear of missing out and other factors. You may not experience any personal benefits from participating in this study. However, the researchers hope that the information learned from this study will help others in similar situations in the future.

Provisions for Confidentiality

Information collected about you will be handled in a confidential manner in accordance with the law. Some identifiable data may have to be shared with individuals outside of the study team, such as members of the ACU Institutional Review Board. The

Institutional Review Board of Abilene Christian University has the right to access the informed consent forms and study documents at any time. Aside from these required disclosures, your confidentiality will be protected by using a numerical system instead of your name. All recorded information will be stored securely and only individuals who are directly involved in the research process will have access to these items. All information will be kept as long as it is scientifically useful; most information of this sort is kept for five years after the publication of results. Results from this study may be presented at research festivals and conferences; this information may also be presented at professional meetings or in publications. You will not be identified individually; results will be analyzed by looking at the group as a whole. It is possible that consent forms, and data collected will be observed by research staff who are responsible for protecting the rights and well-being of the individuals who participate in research.

Participation is voluntary. At any time, you may decide not to share information or you may discontinue participating in the group altogether.

Costs and Compensation

There is no compensation for your participation. Extra credit and class incentives *may* be offered for participation upon specification by the specific teacher/professor.

Contacts

If you have any questions, concerns, or complaints you may contact the Principal Investigator of this study. The Principal Investigator is Kylie Richter, BS and may be contacted at kdr12b@acu.edu or 325-674-2783

If you are unable to reach the Principal Investigator or wish to speak to someone other than the Principal Investigator, you may contact Scott Perkins, Ph.D. and may be contacted at
perkinss@acu.edu, 325-674-2280, or ACU Box 28011 Abilene, TX 79699

If you have concerns about this study or general questions about your rights as a research participant, you may contact ACU's Chair of the Institutional Review Board and Director of the Office of Research and Sponsored Programs, Megan Roth, Ph.D. Dr. Roth may be reached at

megan.roth@acu.edu
(325) 674-2885
320 Hardin Administration Bldg, ACU Box 29103
Abilene, TX 79699

Consent Signature Section (For Adult Participants)

Please click the button below if you voluntarily agree to participate in this study. Click only after you have read all of the information provided and your questions have been answered to your satisfaction. If you wish to have a copy of this consent form, you may print it now. You do not waive any legal rights by consenting to this study.

Consent Signature Section (For Minor Participants)

Please sign this form if you voluntarily agree to participate in this study. Sign only after you have read all of the information provided and your questions have been answered to your satisfaction. If you wish to receive a copy of this signed consent form please specify at the bottom of this page. You do not waive any legal rights by signing this form.

_____   _____

Printed Name of Participant   Signature of Participant   Date

_____   _____

Printed Name of Surrogate   Signature of Surrogate   Date

Role of Surrogate: ___ Parent ___ Guardian ___ Legally Authorized Representative

**I would like a copy of this signed consent form: _____ Yes _____ no